

2.3.1 Student Centric Methods - Experiential learning, Participative learning and Problem solving methodologies

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2.3.1 EXPERIENTIAL LEARNING

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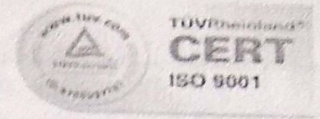
KINGS COLLEGE OF ENGINEERING

Punalkulam, Thanjavur-613 303

Accredited by NAAC

(An ISO 9001 Certified Institution)

DEPARTMENT OF CIVIL ENGINEERING



Mrs.R.Revathi, M.Tech.,

Date: 29.01.2019

HOD/CIVIL

Ref.No.:KCE/outward/letter/18-19

To

The General Manager,

Tamilnadu Cement Corporation Ltd (TANCEM),

Ariyalur.

Respected Sir/Madam,

Sub : Requisition letter to permit the students for one day Industrial Visit - reg.

Greetings from Kings College of Engineering.

Our Second year and Third year Civil Engineering students need to undergo an industrial visit as a part of Anna University curriculum. Hence in connection with that, we would like to visit the cement factory. As a Civil Engineering student this industrial visit will be very useful for them to gain practical knowledge about cement manufacturing and production process. So we kindly request you to grant permission for visiting the cement factory.

Proposed date of visit : **First or Second week of February** (As per your convenience)

No.of Students : **100**

No.of Staff Members : **06**

Thanks & Regards,

Revathi 29/1/19

Mrs.R.Revathi, M.Tech.,

HOD

Department of Civil Engineering
Kings College of Engineering,
Punalkulam, Thanjavur - 613 303

Place: Punalkulam

Date: 08.02.2019

From

K.Ranjith,
Assistant Professor,
Department of Civil Engineering,
Kings College of Engineering,
Punalkulam.

To

The Principal,
Kings College of engineering,
Punalkulam.

Respected madam,

Sub: Permission to Industrial Visit - Reg.

I wish to bring your kind information that in concern to Anna University Syllabus, the **Department of Civil Engineering** is planned to **visit the Cement factory (TANCEM)** in this semester for **our II year Civil Engineering students (Total no. of students = 41)** which is scheduled **on 13.02.2019 (Wednesday) at Ariyalur**. So I kindly request you to give permission to visit the factory in above mentioned Place & Date.

The following Staff members will go to cement factory along with students.

1. K.Ranjith,
2. S.Kamaraj,
3. V.Ishwariya.

Thanking You,

Forwarded to the Principal

Recd 8/2/19

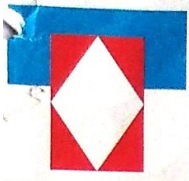
HOD/CIVIL

sub. to secretary & v
J. Monu
8/2/19

Recd
8/2/19

Yours faithfully,

K. Ranjith
8/2/19
(K.Ranjith)



TANCEM

தமிழ்நாடு சீமெண்ட் கழகம்

(தமிழ்நாடு அரசு நிறுவனம்)

TAMILNADU CEMENTS CORPORATION LIMITED

(A Government of Tamilnadu Undertaking)

அரியலூர் சீமெண்ட் ஆலை, அரியலூர் - 621 729 , அரியலூர் மாவட்டம், தமிழ்நாடு.

Ariyalur Cement Factory, Ariyalur - 621 729, Ariyalur District, Tamilnadu

Grams : TANCEM, ARIYALUR, website : www.tancem.com

E-mail : ari@tancem.com

Ref:

TANCEM / ACW / ADMN / INDL- VIST /2019

Date :

31.01.2019

The Head of the Department,
Department of Civil Engineering,
Kings College of Engineering,
Punalkulam,
Thanjavur -613 303.
Sir,



Sub: Estt.-TANCEM-Ariyalur Cement Works, Ariyalur-ADMN-
Industrial Visit-Permission granted-Reg.

Ref: Your letter dated.29.01.2019.

With reference to your letter cited above, we are pleased to inform that your college Department of Civil Students 50 and faculty 3 members are permitted to visit our factory on 13.02.2019 at 2.00 Pm. You may contact our Security Section office on arrival for further guidelines in this regard.

We also inform that they should strictly follow the Rules and Regulations of our Corporation during their visit at our factory.

Thanking you.

Yours faithfully,

For TANCEM / ARIYALUR WORKS

Dy. Manager (P&A) 1/3

CC: Security Section.

Regd. Office : Second Floor, L.L.A. Buildings, P.B.No.5205,735, AnnaSalai, Chennai - 600 002

Grams : TANCEM Phone: 28525461, 28525471 Telex:041-6080 Fax: 044-28523991

E-mail : md@tancem.com co@tancem.com Website : www.tancem.com

Area code : 033, TIN: 33460640087 Dt 1-4-95 GSTN : 33AABCT1819J1ZH

2.3.1_EXP_3



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR (2018 – 2019) EVEN SEMESTER
(BATCH 2017-2021)

YEAR/SEM: II / IV

STUDENT NAME LIST

TOTAL STRENGTH : 42

S.NO.	REGISTER NO.	NAME OF THE STUDENT	S.NO.	REGISTER NO.	NAME OF THE STUDENT
1	821117103001	AAKASH KRISHNA S	22	821117103027	SURENDAR KL
2	821117103002	ANTONY JOE N	23	821117103028	SURIYA PRASHATH KS
3	821117103004	BAGAVATHI R	24	821117103029	THAMILARASAN T
4	821117103006	BOOBALAN A	25	821117103032	YUVARAJ A
5	821117103007	GAYATHRI R	26	821117103301	AKASH V
6	821117103008	GOPALAKRISHNAN M	27	821117103302	AROKIA ALEX K
7	821117103009	GOWTHAMAN T	28	821117103303	ARUL STALIN A
8	821117103010	GURU SWATHIK KS	29	821117103304	BOOMIDURAI C
9	821117103011	JAYASURIYA K	30	811117103305	GURU HARAN S
10	821117103012	KAUSHIK SIVA V	31	821117103306	KABILAN S
11	821117103013	MAHESHWARAN G	32	821117103307	KARPAGAM S
12	821117103014	MARIYA K	33	821117103308	LOGESH A
13	821117103015	MOHAMED NAFEEES M	34	821117103309	NARESH VEKKALIDASAN K
14	821117103016	NAVANEETHAKRISHNAN S	35	821117103310	PREMNATH T
15	821117103018	NIVASH M	36	821117103311	RAJESH T
16	821117103020	RAM KUMAR C	37	821117103312	RASHIGA R
17	821117103021	RANJITH K	38	821117103313	SAHITTIYA L
18	821117103022	SANTHOSH ANANDH D	39	821117103314	SANTHOSH KANDHAN P
19	821117103023	SHALINI S	40	821117103315	SARAVANAN V
20	821117103024	SILAMBARASAN P	41	821117103316	VEVIYAN PAUL L
21	821117103025	SOUNDARIYA M	42	821117103317	VIGNESH R

CLASS COORDINATOR
(Mr.K.RANJITH)

HOD/CIVIL
(Mrs.R.REVATHI)



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2018-2019 (EVEN SEMESTER)
Industrial visit to Tamil Nadu Cement Factory (TANCEM), Ariyalur - REPORT

Date: 13th FEB 2019

Time: 10:00 – 04:30pm

Background & Objective

Department of civil Engineering has organised a one day Industrial visit to Tamil Nadu Cement Factory (TANCEM), Ariyalur for 2nd year students as per the curriculum of 2017 Regulations. Mr.S.Kamaraj AP/Civil organised the visit and Mr.K.Ranjith AP/Civil and Ms.V.Ishwarya AP/Civil accompanied the industrial visit. Cement is a major component in Civil Engineering field. Every Civil Engineering students should know about the manufacturing and production process of cement. Hence we have chosen this place for industrial visit.

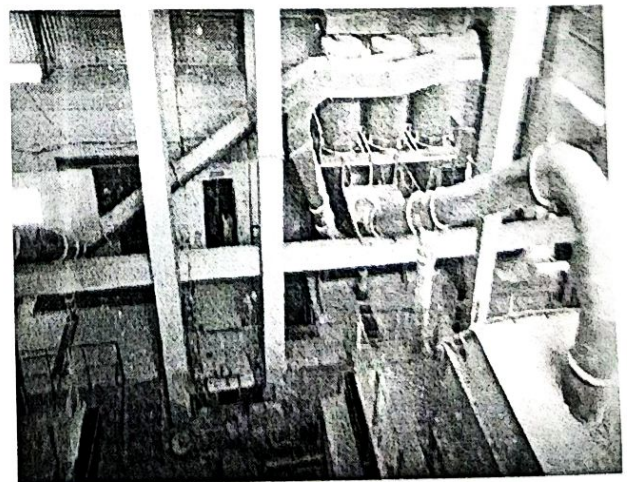
About the Visit

The Industrial Visit was planned on 13.02.2019 and management arranged for transportation through our college bus. The visit started from our college at 10:00 Am and reached the Tamil Nadu Cement Factory (TANCEM), Ariyalur by 01:00 Pm. The students were given explanation about the manufacturing process of cement. Then working process of each unit was shown.

Manufacturing Process



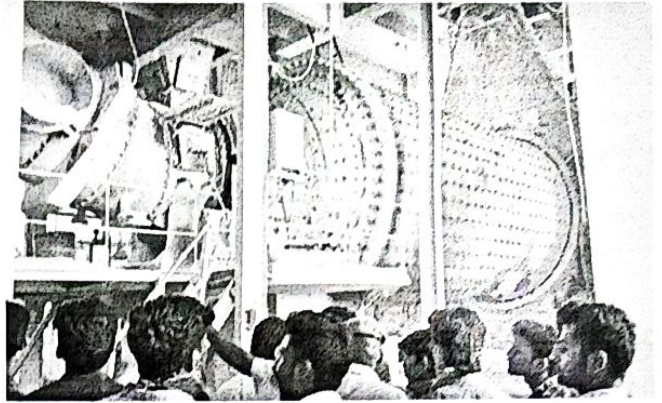
1.RAW MATERIALS COLLECTION



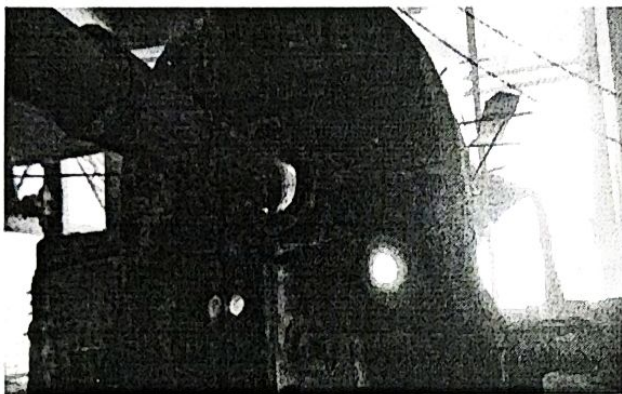
2.RAW MATERIALS CRUSHING UNIT



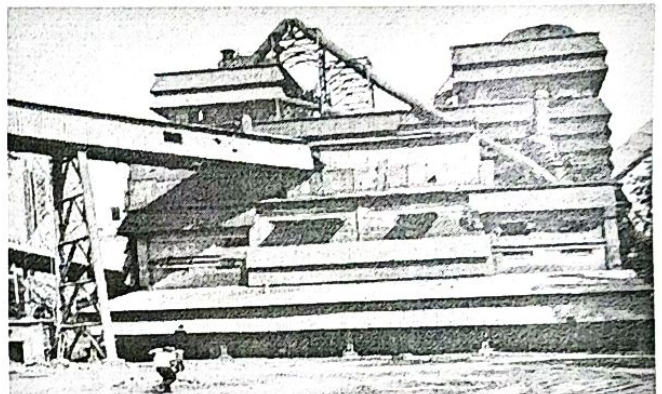
3. RAW MATERIALS STORAGE



4. RAW MATERIALS FINE GRINDING



5. HEATING PROCESS- ROTATRY KILN



6. COOLING UNIT



7. LOADING PROCESS



7. END OF VISIT

Outcome

The Industrial visit was very useful to the students, since the manufacturing and production process were clearly shown during the visit. Around 40 students of 2nd year Civil Engineering and 3 Staff members were benefited through this Industrial visit.

K. R. [Signature]
14/2/19
STAFF INCHARGE

[Signature]
14/2/19
HOD/CIVIL

J. [Signature]
14/2/19
PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING
INDUSTRIAL VISIT 2019-2020
FEEDBACK FORM

Student Name: Guruswathi K.S Name of the Company, Place : Aiyalur Cement Works

- | | Yes | No |
|---|-------------------------------------|--------------------------|
| 1. Whether this is your first Industrial visit? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Whether safety measures are adopted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Whether the supervisor explains the constructional activities in a sequential manner? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Whether the company performs Quality test on materials? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Would you recommend this company for your juniors? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Nature of Company? | | |
| Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> | | |
| 7. What is the language adopted in the company? | | |
| Hindi <input type="checkbox"/> English <input checked="" type="checkbox"/> Tamil <input checked="" type="checkbox"/> Others <input type="checkbox"/> | | |
| 8. How many labors were working in the company? | | |
| 10-25 <input type="checkbox"/> 26-50 <input type="checkbox"/> 51-100 <input type="checkbox"/> 100-200 <input type="checkbox"/> >200 <input checked="" type="checkbox"/> | | |
| 9. How much practical knowledge you gained from the training? | | |
| Excellent <input checked="" type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> | | |
| 10. How would you rate the technical ability of the company? | | |
| Excellent <input checked="" type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> | | |

Finally, what is your view and outcome in attending the Industrial visit?

Learned about the Cement Manufacturing process.



DEPARTMENT OF CIVIL ENGINEERING
INDUSTRIAL VISIT 2019-2020
FEEDBACK FORM

Student Name: S. Shalini

Name of the Company, Place: Arivalur Cement factory

- | | Yes | No |
|---|-------------------------------------|--------------------------|
| 1. Whether this is your first Industrial visit? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Whether safety measures are adopted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Whether the supervisor explains the constructional activities in a sequential manner? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Whether the company performs Quality test on materials? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Would you recommend this company for your juniors? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Nature of Company? | | |
| Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> | | |
| 7. What is the language adopted in the company? | | |
| Hindi <input checked="" type="checkbox"/> English <input type="checkbox"/> Tamil <input checked="" type="checkbox"/> Others <input type="checkbox"/> | | |
| 8. How many labors were working in the company? | | |
| 10-25 <input type="checkbox"/> 26-50 <input type="checkbox"/> 51-100 <input type="checkbox"/> 100-200 <input type="checkbox"/> >200 <input checked="" type="checkbox"/> | | |
| 9. How much practical knowledge you gained from the training? | | |
| Excellent <input checked="" type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> | | |
| 10. How would you rate the technical ability of the company? | | |
| Excellent <input checked="" type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> | | |

Finally, what is your view and outcome in attending the Industrial visit?

Detail of Manufacturing, packing process
of Cement.

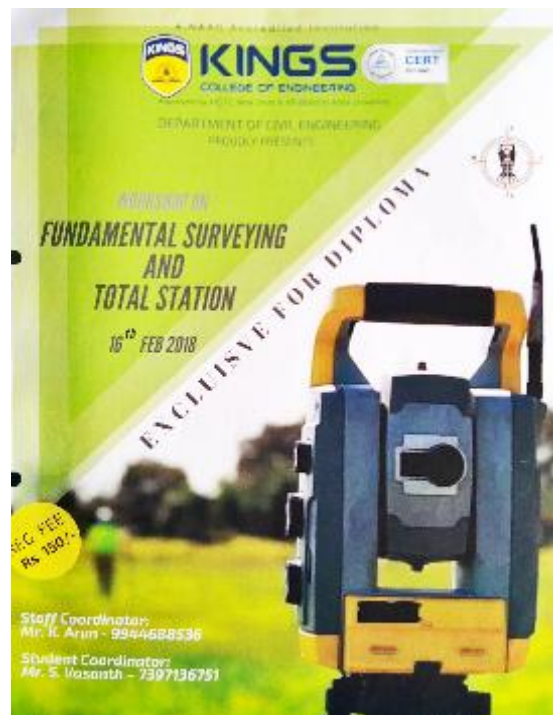


DEPARTMENT OF CIVIL ENGINEERING

ONE DAY WORKSHOP ON

“FUNDAMENTAL SURVEYING & TOTAL STATION”

16.02.2018



14.02.2018

From

M.Manimuhilan

Assistant Professor,

Department of Civil Engineering,

Kings College of Engineering,

Punalkulam,

Pudukkottai.

To

The Principal,

Kings College of Engineering,

Punalkulam

Pudukkottai.

Respected Madam,

Sub: Requesting permission for conducting One Day Workshop in CHERA HALL-reg,

With reference to the above subject we have planned to conduct a ONE DAY WORKSHOP on "FUNDAMENTAL SURVEYING AND TOTAL STATION" for the diploma Civil students on 16.02.2018 by 09:00 AM TO 4.30 PM. This workshop will be very useful for the Civil diploma students and we are expecting students from various polytechnic colleges, Hence we request your goodselves to kindly grant permission for conducting the workshop on the above said date and time in the CHERA HALL .


Thanking You,



Yours Sincerely,

MANIMUHILAN.M

Submitted to the Principal,


14/02/18
HOD/CIVIL


14/2/18

Kings College of Engineering, Ponalkulam - 613 303

Pallava Hall / AV Hall / Chera Hall Booking Form

Date: 14.2.2018

Faculty Name/Designation	M. MANIMUHLAN
Department	CIVIL
Hall required	Pallava Hall / AV Hall / Chera Hall
Purpose for booking	WORKSHOP / CIVIL
Duration for which the hall is to be engaged (Date & Time)	9.00am - 5.00pm (16/2/2018)
Facilities required (Tick)	PA System / LCD / Mike Video Conference (Cordless / Collar / Podium)


Signature


HOD 14/2/18


PRINCIPAL 14/2/18



DEPARTMENT OF CIVIL ENGINEERING

ONE DAY WORKSHOP ON "FUNDAMENTAL SURVEYING & TOTAL STATION" - 16.02.18
(EXCLUSIVE FOR DIPLOMA STUDENTS)

WORKSHOP COMMITTEE DETAILS

13.02.18

SNO	DESCRIPTION	STAFF NAME	STAFF SIGN
1	Reception, Kolam & Master of ceremony	Ms.D.Sharmila & Mrs.R.Revathi	
2	Registration & Certificate Distribution	Mrs.T.Bhuvaneswari & Ms.S.Vanathi	
3	Hall Arrangements, Flex & Certificate Design	Mr.K.Ranjith & Mr.M.Manimuthilan	
4	Lunch & Refreshments	Mr.S.R.Elwin Guru Chanth & Mr.M.Mohammed Ilyas	
5	Symposium Kit	Mr.G.Venkatesan	
6	Transportation Arrangements & Sign Boards	Mr.R.Jeevanesan	
7	Discipline Maintenance	Mr.P.Karthik & Mr.R.Sundharam	

13/2/18
WORKSHOP COORDINATOR

13/2/18
HOD/CIVIL

A NAAC Accredited Institution



KINGS

COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University



DEPARTMENT OF CIVIL ENGINEERING
PROUDLY PRESENTS



WORKSHOP ON
**FUNDAMENTAL SURVEYING
AND
TOTAL STATION**

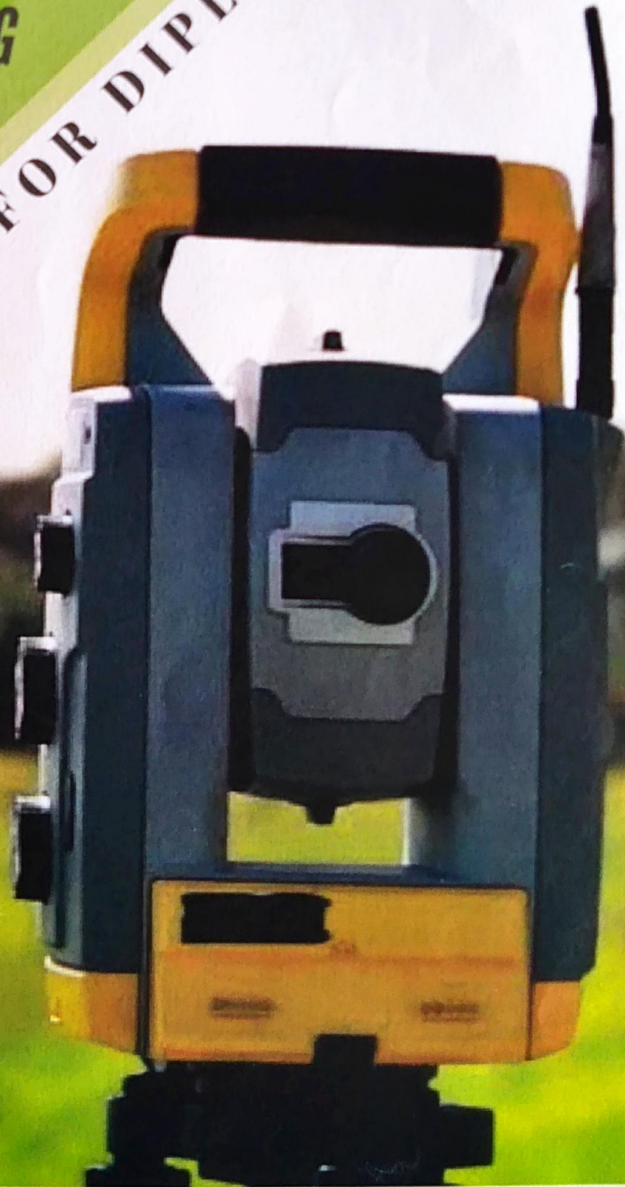
16th FEB 2018

EXCLUSIVE FOR DIPLOMA

**REG. FEE
Rs. 150/-**

Staff Coordinator:
Mr. K. Arun - 9944688536

Student Coordinator:
Mr. S. Vasanth - 7397136751



CHIEF PATRONS:

Dr.R.Rajendran
Secretary
Mr.T.R.S.Muthukumaar, MBA,
CEO

PATRONS:

Dr. J. Arputha Vijaya Selvi
Principal

CO-PATRONS:

Dr. S. Sivakumar
Vice Principal

ORGANIZING HEAD:

Dr. R. Saravanan
Professor and Head
Department of Civil Engineering

CO-PATRONS:

Mr. K. Arun
Assistant Professor/Civil

WORKSHOP CONTENT:

The workshop will be of two sessions:

SESSION I: Practical surveying.

SESSION II: Total Station.

ELIGIBILITY:

The students studying Diploma
in Civil Engineering and other
interested Diploma students.



CONTACT:

Mail ID: fsatscivil@kingsindia.net

Staff Coordinator:
Mr. K. Arun - 9944688536

Student Coordinator:
Mr. S. Vasanth - 7397136751



KINGS

COLLEGE OF ENGINEERING

A NAAC Accredited Institution

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION

Organized by

DEPARTMENT OF CIVIL ENGINEERING

EXCLUSIVE FOR
DIPLOMA STUDENTS

16
FEB
2018



About the Institution

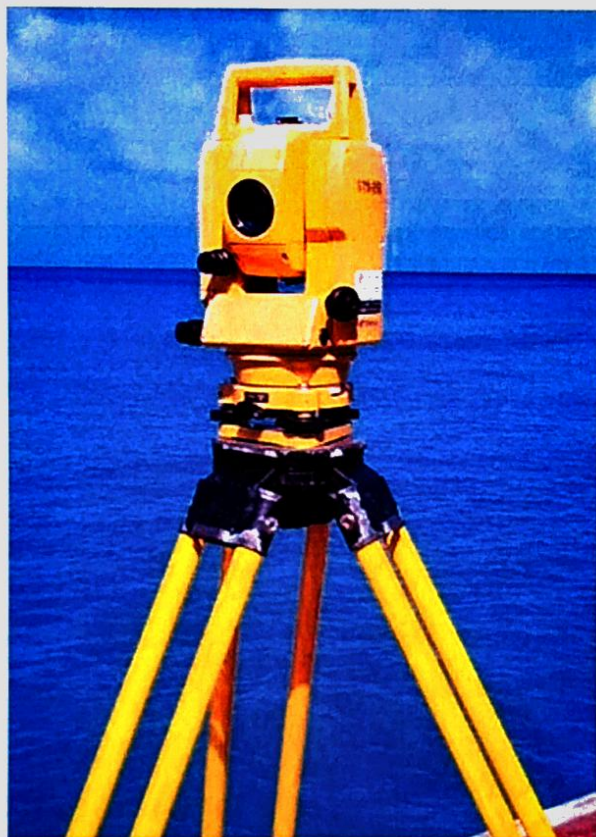
Kings College of Engineering (KCE) is an institution which was formed with the single aim of providing quality education to the poor and underprivileged students. KCE is approved by All India Council for Technical Education (AICTE), New Delhi and is affiliated with Anna University, Chennai. This institution was established in the year 2001 on the sprawling campus of around 60 acres on the Thanjavur - Pudukkottai Highways and run by Raj Educational Trust (RET), Chennai. The Institution offers six UG and five PG programmes and certified with ISO 9001:2008. The state of art teaching methodologies is used to impart high quality education to the students including e-learning.

About the Department

The Department of Civil Engineering was established in the year 2010, offering UG programme. It is well equipped with research laboratories and has dedicated staff members. The faculty members of the department have strong research experience in various fields of structural, soil Mechanics, Foundation Engineering, Environmental Engineering, Architecture, surveying and Remote Sensing and GIS. A faculty member has contributed to technical journals, conferences, R & D activities etc., in Civil Engineering. The Civil Engineering Association organizes various activities and events to unfold the prospects of Civil Engineering in the present day world. The department has been engaged in various activities involving industry - institute interaction, research and development of students and services to society etc.,

About the Workshop

The main objective of this workshop is to enrich the diploma students by providing a handful practical experience in surveying and Total station. Since surveying and Total station are most valuable topics in Civil Engineering, they add a bonus point for the guaranteed jobs. The workshop will be of two sessions in which the first session covers the field surveying and the second session covers the Total Station.



KINGS
COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION

REGISTRATION FORM

NAME:

YEAR OF STUDY:

INSTITUTION:

ADDRESS:

CONTACT:

MAIL ID:



KINGS

COLLEGE OF ENGINEERING

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(Approved by AICTE, New Delhi & Affiliated to Anna University - Chennai)



TÜV Rheinland
CERT
ISO 9001



DEPARTMENT OF CIVIL ENGINEERING

Proudly Presents

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION

16th FEB 2018

Dr. R. Rajendran

SECRETARY

RAJ EDUCATION TRUST

has kindly consented to deliver inaugural address

Dr. J. Arputha Vijaya Selvi

PRINCIPAL

KINGS COLLEGE OF ENGINEERING

has kindly consented to deliver chief guest address

Venue : Chera Hall

Time: 9.00 a.m

Dr. R. Saravanan

Professor & Head

Department of Civil Engineering

Mr. K. Arun

Coordinator

AP/Civil

2.3.1_EXP_16



DEPARTMENT OF CIVIL ENGINEERING
ONE DAY WORKSHOP ON "FUNDAMENTAL SURVEYING & TOTAL STATION" - 16.02.18
(EXCLUSIVE FOR DIPLOMA STUDENTS)

AGENDA

- ❖ 9:30 AM - PRAYER SONG
- ❖ 9:35 AM - INAUGURAL SESSION
- ❖ 9:45 AM - SESSION I - FUNDAMENTAL SURVEYING
- ❖ 10:30 AM - BREAK
- ❖ 10:45AM - SESSION II - SITE MARKING
- ❖ 1:00 PM - LUNCH BREAK
- ❖ 1:45 PM - SESSION III - TOTAL STATION (POWER POINT PRESENTATION)
- ❖ 2:30 PM - SESSION IV - TOTAL STATION (PRACTICAL SESSION)
- ❖ 3:45 PM - BREAK
- ❖ 4:00 PM - VALEDICTORY SESSION
- ❖ 4:30 PM - NATIONAL ANTHEM



DEPARTMENT OF CIVIL ENGINEERING

REGISTRATION FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

STUDENT NAME/மாணவர் பெயர்:

PARENT NAME/ பெற்றோர் பெயர்:

YEAR/ பயிலும் ஆண்டு:

DATE OF BIRTH / பிறந்த தேதி:

10th/ 12th MARKS / மதிப்பெண்:

COLLEGE NAME/ கல்லூரியின் பெயர்:

ADDRESS/ வீட்டு முகவரி:

COMMUNITY/ பிரிவு: OC / BC / MBC / SC / ST

MOBILE NUMBER/ அலைபேசி எண்: 1. PARENT/பெற்றோர்:

2. STUDENT/ மாணவர்:

WILLING TO JOIN ENGINEERING/ பொறியியல் படிப்பு சேர விருப்பம்: YES/ஆம் / NO/இல்லை

STUDENT'S SIGN/ மாணவர் கையெழுத்து



DEPARTMENT OF CIVIL ENGINEERING

FEEDBACK FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

NAME/பெயர்:

College/கல்லூரி:

S.NO	DESCRIPTION (விளக்கம்)	EXCELLENT (சிறந்தது)	VERY GOOD (மிகவும் நன்று)	GOOD (நன்று)	SATISFACTORY (திருப்தி)
1	விளக்கக்காட்சி எப்படி இருந்தது?				
2	செயல் விளக்கம் எப்படி இருந்தது?				
3	எங்களுடைய அனுபவமுறை				
4	உணவு மற்றும் பராமரிப்பு				
5	எங்களுடைய கல்லூரி கட்டமைப்பு				

மற்ற பரிந்துரை:

மாணவர் கையெழுத்து



DEPARTMENT OF CIVIL ENGINEERING

FEEDBACK FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

NAME/பெயர்:

College/கல்லூரி:

S.NO	DESCRIPTION (விளக்கம்)	EXCELLENT (சிறந்தது)	VERY GOOD (மிகவும் நன்று)	GOOD (நன்று)	SATISFACTORY (திருப்தி)
1	விளக்கக்காட்சி எப்படி இருந்தது?				
2	செயல் விளக்கம் எப்படி இருந்தது?				
3	எங்களுடைய அனுபவமுறை				
4	உணவு மற்றும் பராமரிப்பு				
5	எங்களுடைய கல்லூரி கட்டமைப்பு				

மற்ற பரிந்துரை:

மாணவர் கையெழுத்து



KINGS
COLLEGE OF ENGINEERING
(AAC Accredited Institution)
(Approved by AICTE, New Delhi. Affiliated to
Anna University, Chennai)



DEPARTMENT OF CIVIL ENGINEERING

REGISTRATION FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

STUDENT NAME/மாணவர் பெயர்: S. Kamatchi Sundaram

PARENT NAME/பெற்றோர் பெயர்: P. R. Sankar

YEAR/பயிலும் ஆண்டு: IInd Year - CIVIL

DATE OF BIRTH / பிறந்த தேதி: 04-10-2000

10th/12th MARKS/மதிப்பெண்: 410

COLLEGE NAME/கல்லூரியின் பெயர்: Government Polytechnic college Thakkurdi

ADDRESS/வீட்டு முகவரி:

2/1A Thamarai Street, Ezhil Nagar,
Trichy - 14.

COMMUNITY/பிரிவு: OC / ~~BC~~ / MBC / SC / ST

MOBILE NUMBER/அலைபேசி எண்: 1. PARENT/பெற்றோர்: 9750195901

2. STUDENT/ மாணவர்: 9750195901

WILLING TO JOIN ENGINEERING/பொறியியல் படிப்பு சேர விருப்பம்: YES/ஆம் / NO/இல்லை

STUDENT'S SIGN/மாணவர் கையெழுத்து S. K.

DEPARTMENT OF CIVIL ENGINEERING

FEEDBACK FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

NAME/பெயர்: K. Kamarnisha

College/கல்லூரி: Manasa Polytechnic College

S.NO	DESCRIPTION (விளக்கம்)	EXCELLENT (சிறந்தது)	VERY GOOD (மிகவும் நன்று)	GOOD (நன்று)	SATISFACTORY (திருப்தி)
1	விளக்கக்காட்சி எப்படி இருந்தது?		✓		
2	செயல் விளக்கம் எப்படி இருந்தது?		✓		
3	எங்களுடைய அணுகுமுறை		✓		
4	உணவு மற்றும் பராமரிப்பு		✓		
5	எங்களுடைய கல்லூரி கட்டமைப்பு		✓		

மற்ற பரிந்துரை: one day workshop ல் நான் பலனறிவானதாக தினத்தை பயன்படுத்தினேன். Thank you for kings college.

K. Kamarnisha
மாணவர் கையெழுத்து

DEPARTMENT OF CIVIL ENGINEERING

FEEDBACK FORM

WORKSHOP ON FUNDAMENTAL SURVEYING AND TOTAL STATION- 16.02.2018

NAME/பெயர்: M. ஜெகதீஸ்வரன்

College/கல்லூரி: Civil II year, அரசு பாஸிடெக் கல்லூரி, கீழங்கோட்டை

S.NO	DESCRIPTION (விளக்கம்)	EXCELLENT (சிறந்தது)	VERY GOOD (மிகவும் நன்று)	GOOD (நன்று)	SATISFACTORY (திருப்தி)
1	விளக்கக்காட்சி எப்படி இருந்தது?		✓		
2	செயல் விளக்கம் எப்படி இருந்தது?	✓			
3	எங்களுடைய அணுகுமுறை	✓			
4	உணவு மற்றும் பராமரிப்பு	✓			
5	எங்களுடைய கல்லூரி கட்டமைப்பு	✓			

மற்ற பரிந்துரை: இந்த கல்வியை நான் பயன்படுத்தினேன். Staffs அனைவரும் நன்றாக SURVEYING பற்றி எழுதினார்கள்.

TOTAL STATION-யை பற்றி நன்றாக

*construction and surveying
கட்டுமானப் பணி அளவியல்

அறிந்ததன்

M. Jagan
23.1 EXP 21
மாணவர் கையெழுத்து



DEPARTMENT OF CIVIL ENGINEERING

ONE DAY WORKSHOP ON

“FUNDAMENTAL SURVEYING & TOTAL STATION”

Venue: CHERA HALL, Kings College of Engineering

Date: 16.02.2018

BACKGROUND & OBJECTIVE

Department of Civil Engineering, Kings College of Engineering organised a One day workshop on “FUNDAMENTAL SURVEYING & TOTAL STATION” for diploma civil students on 16.02.2018. It aims to provide a platform for the diploma students to acquire basic knowledge about surveying and total station. The workshop also focuses to carry out practical sessions in site marking and to extend hands-on experience in total station.

INAUGURAL SESSION

The workshop was inaugurated by the Principal, Dr.J.Arputha Vijaya Selvi. As every function starts in a auspicious way, the workshop was inaugurated with the prayer song. As many as 209 participants from various polytechnic colleges participated in the workshop. The welcome address was given by Selvi.C.G.Nithya, of third year Civil Engineering. She welcomed the Dignitaries on the dais, faculty members and the students from various polytechnic colleges across the state. She also added that she is very much delighted to see more external participants from various reputed institutions.



Inaugural Session

HONOURING SESSION

The chief guest was felicitated by shawl and memento as sign of remembrance by Prof.Dr.R.Saravanan, HOD/Civil and Mrs.R.Revathi, AP/Civil.



Felicitating the Principal

PRESIDENTIAL ADDRESS

Dr.J.Arputha Vijaya Selvi, Principal graced the occasion as chief guest and delivered the presidential address. In her address, she elucidated the rising technology and various opportunities in civil Engineering field. She also insisted that the possibility is in every hand, the students have to make use of those various opportunities for their career. She also briefed the importance of Civil Engineering in various aspects. Finally while concluding, she encouraged the participants to make use of the college infra structure during the practical sessions.



Principal addressing the audience

The Session I was handled by Mr.K.Arun, AP/Civil. He presented about the Fundamental surveying and factors to be known by a Civil Engineering in construction site. He also detailed about measurements and Unit conversions. He also narrated the diagonal and right angle checking methods using thumb rule. Finally he finished the session by highlighting basic construction vastu for drawing plans.



Session I handled by Mr.K.Arun.AP/Civil

The Session II was handled by Mrs.R.Revathi, AP/Civil. She presented about the site marking as per the drawing. First she explained the aspects of site marking in white board, and after that she accompanied the participants to the site and handled practical sessions on site marking. A residential plan with centre line drawing was issued in the workshop kit. She briefed about the plan marking to be carried over at the site.



Session II handled by Mrs.R.Revathi, AP/Civil

SESSION III

Session III was practically handled in the site. Students were provided a residential plan with centre line drawing. With the help of Pegs, Tape and line powder participants marked the plan in the site and their doubts were clarified.



Session III - Practical Session on Site Marking

SESSION IV

The Session IV was handled by Mr.R.Sundharam, AP/Civil. He presented about the Total station and its functions. He briefed about the working principle behind total station and also stated the various uses of total station. With latest technologies the total station will play a major role in surveying and construction industry. Hence he insisted the participants to gain enough knowledge on total station. After that he guided the students to the site and handled practical session using total station. Students were given small assignments like horizontal measurement and area calculation using total station.



Session IV handled by Mr.R.Sundharam, AP/Civil

VALEDICTORY SESSION

The valedictory session was conducted in the evening which was graced by the Vice Principal Dr.S.Sivakumar. The session started with the sparkling speech from Vice Principal, who highlighted the civil engineering career opportunities. Next was the feedback session, in which the external participants gave their valuable feedbacks. Finally the participants were awarded with a certificate as a appreciation of their efforts during the workshop. The Symposium ended with a vote of thanks delivered by Selvan.S.Vasanth of third Year Civil Engineering who expressed his sincere thanks to the delegates for spending their precious time for the occasion. He heartily thanked the Management, Principal, all the faculty & Staff members and the students. He also lauded the participants for their passionate efforts with which they carried out the marvellous task of making the workshop a grand success.



Certificate Distribution in the Valedictory Session

SOME CHERISHING MOMENTS....



SOME CHERISHING MOMENTS....



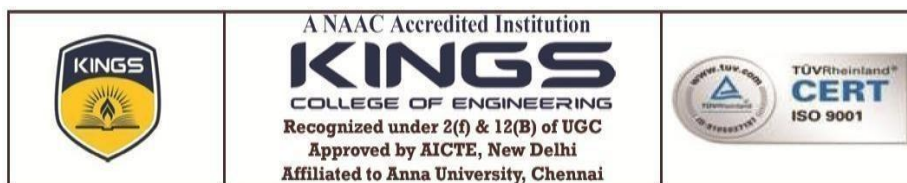
SOME CHERISHING MOMENTS....



[Signature]
26/2/18
WORKSHOP COORDINATOR

[Signature]
26/2/18
HOD/CIVIL

[Signature]
26/2/18
PRINCIPAL



DEPARTMENT OF COMPUTER SCIENCE &ENGINEERING

2.3.1 EXPERIENTIAL LEARNING

(FIELD VISIT, WORKSHOP, INTERNSHIP, PROJECT) (SAMPLE)



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2.	WORKSHOP	4-12
3.	INTERNSHIP	13-17
4.	PROJECT	18-21

FIELD VISIT



Sivakumar Janesh <janeshsivakumar@gmail.com>

Seeking Permission for Field Visit-Reg

3 messages

Sivakumar Janesh <janeshsivakumar@gmail.com>

27 January 2020 at 18:11

To: nittcoe@gmail.com

Cc: Uma Panneerselvam <hodcse@kingsindia.net>

Dear sir,

I am Dr.D.Sivakumar AP/CSE Dept. from kings college of Engineering, thanjavur.

As per Anna university norms, Engineering students should attend field visit at any reputed industry. Regarding this we have **(45 Students along with 2 staffs from II Year CSE)** planned to visit Siemens centre of excellence on **07-02-2020**. so we seek your permission to visit your Industry.

With regards

Dr.D.sivakumar

NITT COE <nittcoe@gmail.com>

4 February 2020 at 10:00

To: Sivakumar Janesh <janeshsivakumar@gmail.com>

Cc: Uma Panneerselvam <hodcse@kingsindia.net>

Greetings from Siemens Centre of Excellence in Manufacturing, NIT, Tiruchirappalli.

Dear Sir,

We have scheduled the date for the students and faculty members of kings college of Engineering, thanjavur to visit the Siemens Centre of Excellence in Manufacturing, NIT, Tiruchirappalli on 07.02.2020 between 2.00pm to 3.30pm.

For any further information please feel free to contact us 9486001131.

Kind regards,

Adil

[Quoted text hidden]

Sivakumar Janesh <janeshsivakumar@gmail.com>

27 January 2020 at 23:49

To: NITT COE <nittcoe@gmail.com>

Dear Sir,

Thank you so much for giving the permission to visit Siemens NIT Trichy.

[Quoted text hidden]

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Report on Industrial Visit / Even 2019-20

Name of the Event : Industrial Visit to Siemens Centre of Excellence in Manufacturing, NIT, Tiruchirappalli

Number of Beneficiaries : 45 (II Computer Science and Engineering students)

Date : 07.02.2020

Outcome : To provide a platform for young & energetic youth to learn advanced technology for AU, R2017.

Photos :



Students at Siemens Centre of Excellence, NIT, Tiruchirappalli during industrial visit

WORKSHOP

26.9.18

FROM

Head of the department
Computer Science & Engineering
Kings College of Engineering
Punalkulam

TO

The principal
Kings College of Engineering
Punalkulam

Website, facebook
cfbkings @ ~~kingindia~~ not
J. Perumal
26/9/18.

Respected Madam

SUB: Permission for ^{conducting} One day workshop on "IoT"

On behalf of CSE department we planned to organize one day workshop on "Internet of Things Using Arduino & Raspberry pi" on date (5.10.18) so kindly grant us to conduct workshop program

Thanking You

Submitted to
The principal
J 26/9/18

Yours faithfully
J 26/9/18

**ONE DAY
WORKSHOP ON
"Internet of Things Using Arduino
and Raspberry pi"**



05th -OCT'2018



KINGS COLLEGE OF ENGINEERING

NAAC Accredited Institution

(Approved by AICTE, New Delhi & Affiliated to Anna
University, Chennai)
www.kingsindia.net

Organized by,
Department of CSE
Kings College of Engineering
Contact: hodcse@kingsindia.net

ABOUT THE COLLEGE

Kings College of Engineering is an institution which was formed with the singular aim of providing quality education to the poor and under-privileged students. KCE is approved by All India Council of Technical Education, New Delhi (AICTE) and is affiliated to Anna University. The institution was established in the year 2001 on a sprawling campus of around 60 acres on the Thanjavur – Pudukkottai Highway and run by Raj Educational Trust. The institution offers six UG and four PG programmes and certified with ISO 9001:2008. Our steps are measured and taken with our goal in mind, which is to become a renowned institution where knowledge is a way of life.

ABOUT THE DEPARTMENT

The Department of Computer Science and Engineering was started in the year of 2001. We started offering Post Graduate course. we are offering M.E – Computer Science & Engineering since 2015. The Department possesses cutting edge technology and laboratories equipped with essential software. We are regularly conducting Symposium, FDP and Conferences to connect with recent technologies.

The Department has excellent infrastructure facilities with well equipped Computer Centre, Library, 100 Mbps broadband Internet facilities and well qualified and experienced faculty.

ABOUT THE WORKSHOP

The Internet of Things (IoT) is the next wave, world is going to witness. Internet of Things is a term given to the attempt of connecting objects to the internet and also to each other - allowing people and objects themselves to analyze data from various sources in real-time and take necessary actions in an intelligent fashion.

This workshop aims at providing an opportunity for participants to enrich their knowledge and skill in developing various solutions for solving engineering problems in the society. This program serves as a platform for research scholars, faculty, engineers and students to interact on cutting edge technologies in IoT. By connecting „things“ in the real world such as cars, buildings, and industrial equipment, IoT promises to revolutionize how we live and work.

SESSION OUTLINE

- Basics of IoT
- Introduction to Arduino
- Introduction to Raspberry pi
- Implementation of IoT in Real time

RESOURCE PERSON

Faculties from reputed institutions and industries.

WHO SHOULD ATTEND

Prefinal & Final UG(Engineering & Polytechnic) & PG students from the Department of CSE / IT / ECE/ MCA can attend this workshop.

REGISTRATION

Spot registration is permitted. Scanned copy of registration form must be sent through e-mail on or before 03.10.18

UG Students : Rs.150

PG Students : Rs.200

HOW TO APPLY

Applicants are requested to send the duly filled-in registration form along with the registration fee on or before 03.10.2018.

IMPORTANT DATES

Registration : 03.10.2018

Intimation : 04.10.2018

ORGANIZING COMMITTEE**Chief Patrons**

Dr.R.Rajendran.,Ph.D

Secretary

Mr.T.R.S.Muthukumaar, M.B.A
C.E.O

Patron

Dr. J.Arputha Vijayaselvi, B.E.,M.E.,Ph.D.,
Principal

Co- Patron

Dr. S. Sivakumar, B.E.,M.Tech.,Ph.D.,
Vice Principal

Convener

Dr.S.M.Uma.,M.E.,Ph.D.,
HOD/CSE

Coordinators

Mr.R.Sriramkumar., M.Tech
AP / CSE,
cell:, 9952537406

Mr.M.Arun., M.E
AP / CSE
cell:, 8110012246

REGISTRATION FORM

Name :

Institution /
Organization Name :

Designation :

Department :

Address
for Communication :

Email id :

Mobile No :

Date :

Signature of the candidate

CERTIFICATE

This is to certify that is a student of our institute and is permitted to attend the One Day Workshop on "Internet of Things Using Arduino and Raspberry pi"

Signature of Head of the Institution
(With office seal)

04.10.2018

From

S.M.Uma
HOD/CSE
Kings College of Engineering
Punalkulam, Thanjavur.

To

The Principal
Kings College of Engineering
Punalkulam, Thanjavur.

Respected Madam,

Sub : Permission for transport and power supply – reg.

We are planning to organize one day workshop in “Internet of Things using Arduino and Raspberry Pi” on **05.10.18** for the purpose we requesting you to provide transport facility to external participants and power supply during session. Kindly consider our request and give permission for transport facility and power supply. We are submitting the details about the workshop herewith.

Programme date	Title of the programme	Duration	Resource person details
05.10.18	Workshop on “Internet of Things using Arduino and Raspberry Pi” Venue : Chera Hall & CSE Lab I & II	(9.30 AM-4.30 PM) FN & AN	Mr.G.Karthick, Embedded System Developer, Live core Technologies, Trichy

Thanking you,

J. Mani
4/10/18

RGE
4/10/18

Yours sincerely

S. J
4/10

	KINGS COLLEGE OF ENGINEERING (NAAC Accredited Institution) (Approved by AICTE New Delhi Affiliated to Anna University Chennai)	 TUV Rheinland CERT ISO 9001
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
ONE DAY WORKSHOP IN "IoT Using Arduino & Raspberry Pi" ON
05.10.18

REGISTRATION ID	1
------------------------	----------

REGISTRATION FORM

Participant Name : R. Ponnai
 Branch/Year/Sem : ECE / AP
 College Name : KCE - ECE
 Mobile No : 9943325183
 Mail id : Pons-bee@yahoo.co.in
 Amount Paid : 150/-
 Amount Received : Yes / No


 Signature of Registration Committee Incharge

	KINGS COLLEGE OF ENGINEERING (NAAC Accredited Institution) (Approved by AICTE New Delhi Affiliated to Anna University Chennai)	 TUV Rheinland CERT ISO 9001
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
ONE DAY WORKSHOP IN "IoT Using Arduino & Raspberry Pi" ON
05.10.18

REGISTRATION ID	2
------------------------	----------

REGISTRATION FORM

Participant Name : M. MAYAPANDI
 Branch/Year/Sem : AP / EEE
 College Name : KCE
 Mobile No : 9789461102
 Mail id : josepharjun2009@gmail.com
 Amount Paid : 100
 Amount Received : Yes / No


 Signature of Registration Committee Incharge

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2018 - 2019 / ODD SEMESTER

One Day Workshop

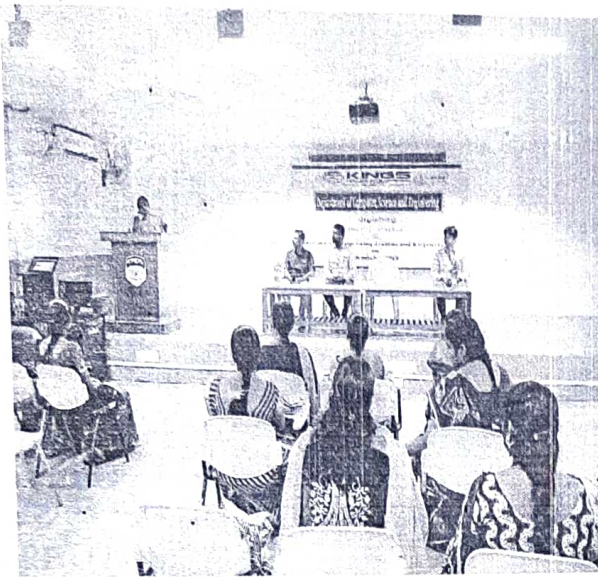
Programme Report

Title	:	Internet of Things Using Arduino and Raspberry Pi
Date	:	05.10.18
Venue	:	Pallava Hall
Participants	:	External Staffs and Students Internal Staffs and Students
Total No of Participants	:	25
Resource Persons	:	Mr.G.Karthick, Embedded and IoT Developer Live Core Technologies, Trichy. Mobile: 9894946363

SUMMARY:

The one day workshop was conducted on the title of '**Internet of Things Using Arduino and Raspberry Pi**' on 05.10.2018 for external and internal participants. Totally 25 participants were participated in the event. The main Objective of this event is to give better skills on Arduino & NodeMc. The program was planned as two session (FN & AN). Both sessions were conducted at the Pallava hall. HOD department of CSE inaugurated the workshop and exposes the importance of workshop. Mr.R.Sriramkumar (coordinator) introduced the resource person Mr.G.Karthick from Live Core Technologies. Mr.G.Karthick resource person have delivered the content of introduction about IoT and arduino during the forenoon session. In the afternoon session hands-on training about arduino and NodeMc was covered.

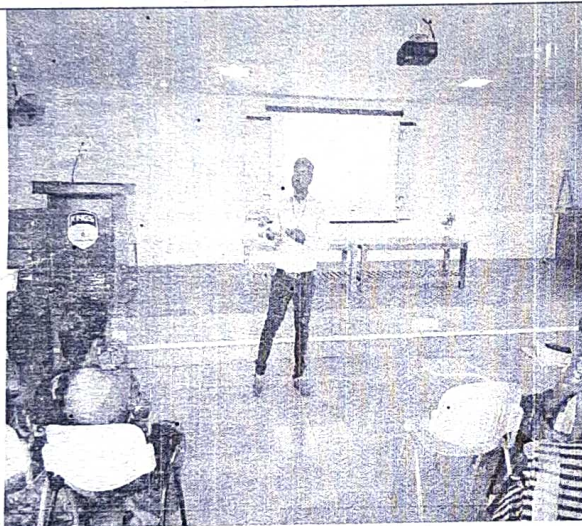
PHOTOS:



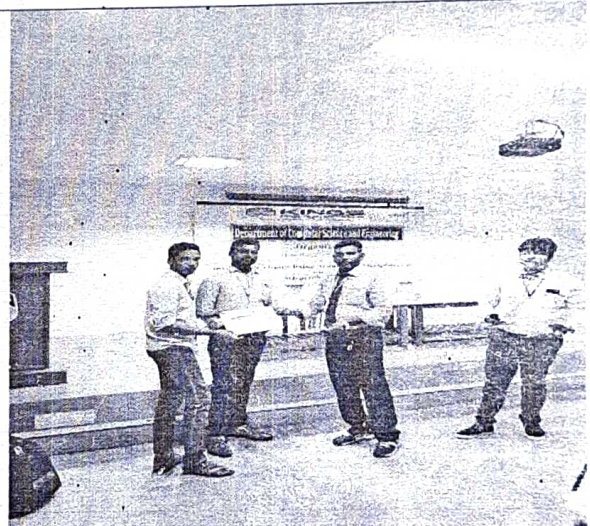
Welcome Address by Head of the department



Resource Person introduction



Mr.G.Karthick , Live Core Technologies delivered the content about IoT during workshop



Certificate Distribution

1. *[Signature]* (R. Srikanth Kumar)
2. *[Signature]* (M. Arun)
COORDINATOR

[Signature]
HOD/CSE

[Signature] 8/10/18
PRINCIPAL

fb, web site
update on
08.10.2018
8/10



KINGS

COLLEGE OF ENGINEERING

NAAC Accredited Institution

Approved by AICTE New Delhi, Affiliated to Anna university, Chennai



TÜVRheinland®
CERT
ISO 9001:2015

Department of Computer Science and Engineering

Certificate Of Participation

This is to certify that Mr/Ms _____

of _____

has participated in the one day workshop on "Internet of Things Using Arduino and Raspberry pi" organized by the department of computer science and engineering held on 5th october 2018.

COORDINATOR

HOD

PRINCIPAL

INTERNSHIP

Department of Computer Science & Engineering
Academic Year 2020-21 / Even Semester
Internship Details
Report Summary

R.No	Reg No.	Name of the Student	Topic	Company Name	Duration
1	821118104001	M. Abarna	Machine Learning	Internshala Trainings	6 weeks
2	821118104002	N. Abinaya	Java	Shiash Info Solutions Private Limited	Apr 21-Jun 21
3	821118104003	K. Abirami	Programming with Python	Internshala Trainings	6 weeks
4	821118104004	M. Abirami	Web Design Video Training	Caddesk, Jaipur	30 days
5	821118104005	P. Abirami	Android	KaaShiv Infotech	15 days
6	821118104006	T. Aburvanayaki	Android	KaaShiv Infotech	15 days
7	821118104007	K. Aiswarya	Industrial Embedded with Android Application Development using IoT	NSIC Technical Services Centre	18/1/21-1/2/21
8	821118104008	A. Archana	Web Designing	Fantasy Solutions, Trichy.	30/8/21-13/9/21
9	821118104009	G. Arunkumar	Web Design Video Training	Caddesk, Jaipur	15 days
10	821118104010	M. Babu	Web Design Video Training	Caddesk, Jaipur	15 days
11	821118104011	V. Deepika	Python	Uniq technologies	12/4/21-23/4/21
12	821118104012	T.R. Dharshini	Android	KaaShiv Infotech	15 days
13	821118104013	G. Divyabharathi	Android	KaaShiv Infotech	15 days
14	821118104014	J. Gayathri	Android	KaaShiv Infotech	15 days
15	821118104015	K. Gayathri	Web Development	Internshala Trainings	8 weeks
16	821118104016	B. Gunaseelan	Android	KaaShiv Infotech	15 days

17	821118104017	E. Hariharan	Web Designing and Development	Civil Engineers Association of TamilNadu	17/8/20-28/12/20
18	821118104018	S. Ishwarya	Web Designing	Fantasy Solutions, Trichy	30/8/21-13/9/21
19	821118104019	M. Jemima Esther Grace	Machine Learning	Internshala Trainings	6 weeks
20	821118104020	M. Kamalapriya	Web Design Video Training	Caddesk, Jaipur	30days
21	821118104022	V. Keerthana	Android	KaaShiv Infotech	15 days
22	821118104024	S. Nandha Kishore	Android	KaaShiv Infotech	15 days
23	821118104025	N. Nasrin Banu	Web Designing	Fantasy Solutions, Trichy	30/8/21-13/9/21
24	821118104026	N. Nathiya Devi	Web Designing	Fantasy Solutions, Trichy	30/8/21-13/9/21
25	821118104027	V. Naveen Sundhar	Web Design Video Training	Caddesk, Jaipur	15 days
26	821118104028	R. Pathmanaban	Web Design Video Training	Caddesk, Jaipur	15 days
27	821118104030	M. Priyadharshini	Web Designing	KaaShiv Infotech	24 days
28	821118104031	R. Priyadharshini	Internship and Job preparation	Internshala Trainings	4 weeks
29	821118104032	J. Ramya	Python	Uniq technologies	12/4/21-23/4/21
30	821118104033	T. Rathnakumar	Web Designing and Development	Civil Engineers Association of TamilNadu	17/8/20-28/12/20
31	821118104034	R. Sarathkumar	Android	KaaShiv Infotech	15 days
32	821118104035	T. Selvarani	Industrial based Embedded with Android Application Development using IoT	NSIC Technical Services Centre	18/1/21-1/2/21

33	821118104036	T. Sivaranjani	Core Java Video Training	Caddesk, Jaipur	15 days
34	821118104037	K. Sneha	Machine Learning	Fantasy Solutions	1/7/21-12/8/21
35	821118104038	S. Sneka	Python	Uniq technologies	12/4/21- 23/4/21
36	821118104039	K. Sowmiya	Python	Uniq technologies	12/4/21- 23/4/21
37	821118104040	C. Srinithi	Web designing	Fantasy Solutions	23/8/21-6/9/21
38	821118104042	R. Surya	Android	KaaShiv Infotech	15 days
39	821118104043	P. Vaishnavi	Web designing	Fantasy Solutions	23/8/21-6/9/21
40	821118104044	S. Vithyatharan	Programming with Python	Internshala Trainings	6 weeks
41	821118104301	D. Gopinathan	Core java video training	Caddesk. Jaipur	15 days
42	821118104701	R. Sindu	Web designing	Fantasy Solutions	1/8/21-29/8/21

G. C. D
IN-CHARGE 14/9/21

J. J. 14/9/21
HOD/CSE

J. J. 14/9/21
PRINCIPAL

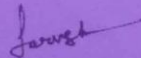
INTERNSHALA TRAININGS

Certificate of Training

Abarna M

from Kings College of Engineering, has successfully completed a 6-week online training on **Machine Learning**.
The training consisted of Introduction to Machine Learning, Data, Introduction to Python, Data Exploration and Pre-processing, Linear Regression, Introduction to Dimensionality Reduction, Logistic Regression, Decision Tree, Ensemble Models and Clustering (Unsupervised Learning) modules.

In the final assessment, Abarna scored 79% marks.
We wish Abarna all the best for the future endeavours.



Sarvesh Agarwal

FOUNDER & CEO, INTERNSHALA

Date of certification: 2024-09-10

Certificate no.: 4EED8216-BD2C-EA9C-7154-68EB3A81FBA8

For certificate authentication, please visit: https://trainings.internshala.com/verify_certificate

PROJECT



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2019-20 (ODD SEMESTER)
PROJECT WORK- ZEROth REVIEW -(2016-2020 BATCH)

Batch No.	Student Name	Guide	Title	Category	Type
1	K.Nathiya	Ms.G.Chandra Praba	Prediction and Analysis of Key Performance Indicator (KPI) for Student using Data Science	Application Oriented	In-House project
	P.Suriya Priya				
	M.Haritha				
2	G.Selvarani	Ms.R.Ranitha	IOT based Early Detection and Prediction of Unfavourable Pathogens in Cattle (Cow)	Innovative Project cum Real-time Project	In-House project
	V.Saranya				
	T.Bakyashri				
3	S.Girija	Ms.R.Sugantha Lakshmi	Automated Water Management and Leakage Detection System using IOT	Innovative Project cum Real-time Project	Industry-Siemens CoE
	S.Thilagavathi				
4	M.Sameena Farjiz	Mr.R.Sriram Kumar	Smart Self Defense & Monitoring System incorporating GPS and GSM Technologies	Innovative Project cum Real-time Project	In-House project
	M.S.Rakshana Begum				
	A.Anantha Pathma Priya				
5	K.Karthika	Ms.S.Puvaneswari	IOT Based Fire and Gas Accident Prevention System for Industries	Innovative Project cum Real-time Project	In-House project
	R.R.Gayathiri				
	S.Nandhini				
	M.Priyanka				
6	S.Vinodhini Joyce	Ms.K.Abhirami	IOT Based Paddy Crop Disease Identification and Prevention System	Innovative Project cum Real-time Project	Industry-Siemens CoE
	R.Pavithra				
	M.Subhiksha				
7	K.Priya	Dr.D.Sivakumar	IOT based Smart System Detecting Air Pollution Aiding Asthma Patient	Innovative Project cum Real-time Project	Industry-Siemens CoE
	R.Nithiya				
	S.Priyadharshini				
	S.Abirami				
8	P.Nithish Kumar	Ms.P.Nalayini	Mono Systematic Monitoring system handling multiple sequence of DB.	Application oriented project	Industry
	J.Thooyavan				
	K.Thayumanavan				
9	N.Bharani Dharan*	Mr.M.Arun	Customized APP with Enhanced Search Features Incorporating Security Aspects.	Application oriented project	Industry-Siemens CoE(*)
	A.Mohammed Abrar				
	C.Nivash				
	K.Makesh				

Batch No.	Student Name	Guide	Title	Category	Type
10	M.Bharathvaj	Mr.S.Rajarajan	Heart Arrhythmia Detection Using GPU Deep Learning	Application oriented project	In-House project
	S.Vignesh				
	I.Yazhthilipan				
11	K.Edwin Raj	Mr.K.Rajesh	Android App Handling Clinical Data Aiding Diagnosis	Application oriented project	In-House project
	G.Venkateshwaran				
12	S.Aravindh	Ms.B.Sangeetha	Forest Fire Detection Based on IOT	Innovative Project cum Real-time Project	In-House project
	R.Vidhyadar				
	M.Sambath Kumar				
13	M.Surya Prakash	Dr.S.M.Uma	IOT Based Transformer Monitoring System	Innovative Project cum Real-time Project	In-House project
	M.Venkateshwaran				

Category

Application oriented : 05

Innovative cum Real-time : 08

Type

In-House Project : 08

Industry : 01

Industry-Siemens CoE : 04


Project Coordinator


HoD/CSE

INDUSTRY VISIT REPORT

⑤
Inplant Training
5 days.

Batch no :5

Team Members : Karthika.K,Nanthini.S,Priyanka.M,Gayathiri.R.R

Project Guide : Puvaneshwari.S

Project Title : IOT based Gas and fire accident avoider system for
industries



Venue : Innovace Technologies
KK Nagar,Trichy

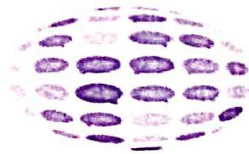
Course :Internet of Things

Instructor Name: Priya.R

Date of visit : 09.12.2019 – 13.12.2019

Internet of Things (IOT) refers to connecting various physical devices and objects throughout the world via internet. IOT was generally defined as dynamic global network infrastructure with self-configuring capabilities based on standards and communication protocols.

The Internet of Things (IOT) is the network of physical objects, devices, instruments, vehicles, buildings and other items embedded with electronics, circuits ,software, sensors and network connectivity that enables these objects to collect and exchange data. The Internet of Things allows objects to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency and accuracy.



Innovace Techno

Certificate of Completion

This is certify that R.R.GAYATHI.PT [321116104008]
has done Implant training in **IOT** from 09.12.2019
to 13.12.2019.

During the training Period the performance
of the trainee was found to be Good.


MANAGING DIRECTOR


PROJECT MANAGER

KK NAGAR, TRICHY.

Contact: 9585020057, mail id:innovacetechno@gmail.com



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

2.3.1: EXPERIENTIAL LEARNING

WORKSHOP, PROJECT WORK, INDUSTRIAL VISIT (FIELD VISIT), INTERNSHIP DETAILS



TABLE OF CONTENTS

SL.NO	PARTICULARS	PAGE NUMBER
1.	Workshop	01-18
2.	Project Work	19-23
3.	Industrial Visit(Field Visit)	24-34
4.	Internship	35-57

WORKSHOP

25.02.2019

From
T. Pasupathi
J. Niranjana Samuel
R&D Section
KCE

To
The Principal
KCE

Respected Madam,

Sub: Permission – Organizing workshop on Biomedical Interventions– reg.,

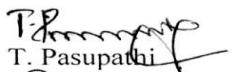
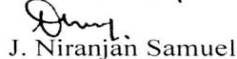
A workshop on “**Biomedical Interventions**” is organized on 27th & 28th February, 2019 by
Dept of ECE and R&D Section.


In this regard, we request you to kindly grant us permission towards:

- a) Utilization of Pallava Hall.
- b) LCD projectors & PA system at Pallava Hall.
- c) Utilization of College vehicle for resource persons, if required.
- d) Accommodation for participants at Hostel.
- e) Genset during power interruption.
- f) Utilization of Lamp.
- g) Providing lunch and refreshments for the participants at our college canteen at subsidized rate.

Thank you,

Yours faithfully,


T. Pasupathi

J. Niranjana Samuel


25/2/19


25/2/19

Registration Form

Kings College of Engineering
Punalkulam, Thanjavur - 613 303

Workshop on
Biomedical Interventions

1. Name (in block letters) :

2. Designation:.....

3. Institution / Organization:

4. Postal Address:

5. E-mail:

6. Phone No. / Mobile:

7. D.D No. Date:

Bank/Branch:

Signature of the applicant

Please send your registration form to:
The Coordinator,
Dept. of Electronics & Communication Engg.,
Kings College of Engg., Punalkulam- 613303.
Phone : 04362 - 282474

Organizing Committee

Chief Patrons:
Dr. R. Rajendran
Secretary

Mr.T.R.S.Muthukumar,
Chief Executive Officer

Patron:
Dr. J. Arputha Vijaya Selvi
Principal

Co-Patron:
Dr.S.Sivakumar
Vice Principal

Convenor:
Dr. D. Kumar
Professor/ECE

Co-ordinators:
Mr. T. Pasupathi
AP/ECE

Mr. J. Niranjan Samuel
JRF/ECE-R&D

Registration fees:

Registration fee has to be paid in the form of demand draft drawn in favour of Kings College of Engineering - IEEE Student Branch payable at Thanjavur. Registration fee includes course material, lunch and refreshment.

UG/ PG Students : Rs. 600/-
Faculty : Rs. 800/-

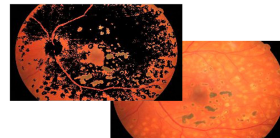
Last Date for Registration :18.02.2019
Confirmation of Acceptance:22.02.2019

For further information contact:
Mr. T. Pasupathi - 98941 04645
Mr. J. Niranjan Samuel - 99947 18168



National WORKSHOP on Biomedical Interventions

27th & 28th February, 2019



Jointly organised by
Department of Electronics & Communication Engg.,
R&D Section
Kings College of Engineering,
Punalkulam, Thanjavur - 613303.

About our Institution:

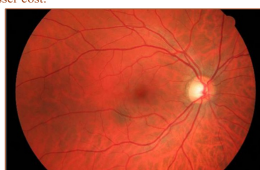
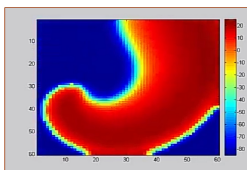
Kings College of Engineering (KCE), since its inception in the year 2001, provides quality education to the needy aspirants including under-privileged students of this region. KCE is approved by All India Council for Technical Education, New Delhi, affiliated to Anna University, Chennai and is a NAAC accredited institution. The institute offers five UG and four PG programmes. Situated on the Thanjavur – Pudukkottai Highway, the KCE campus spreads over 50 acres in a beautiful serene atmosphere, ideally suited for technical education with architecturally designed infrastructural facilities.

About R & D Section:

The Department of Electronics & Communication, Electrical & Electronics Engineering and Mechanical Engineering are recognized as research centres for collaborative research by Anna University, Chennai. A significant number of projects funded by various government and non government funding sectors namely DRDO, MCIT, AICTE, New Delhi, TNSCST, Chennai, Analog Devices, USA & Texas Instruments, USA are successfully carried out.

About the workshop:

The workshop will address the clinical management of Coronary Artery Diseases with newer tools, various ways and means by which information and communication technology applications in health care sector focusing on selective diagnosis, emergency & long-term clinical care to people and the regulatory requirements of medical devices. Machine Intelligence (MI) aims at mining relevant information directly from the derivative physiological data, leads to better performance in comparison to human that is suffered by status of mind and mental variability. Evolutions of new machine learning algorithms are helping the even disrupted pattern of raw physiological data in terms of better classification. MI has been playing many different roles in scientific research and the literature has shown that Artificial Intelligence (AI) is promising in solving complex problems in many applications, particularly in areas with huge amounts of data but very little theory. Thus, it can be supportive to develop new decision support system including the devices. Also this workshop will explore the possibility of reducing the cost & complexity involved in healthcare practices thereby benefiting healthcare professionals and ultimately aims to provide quality healthcare to people at a lesser cost.



Dr. G. Shanthi,
Scientist, Manager,
Preclinical/Microtherapeutics Research Labs,
Chennai
She attained her Doctorate degree from Madras University with specialization in Molecular Genetics and began her career as Scientist-Toxicology. She has more than one decade of experience, well trained in GLP principles and expertise in preclinical study designing and execution (executed more than 400 both in-vivo and in-vitro) for various regulatory submissions.



Dr. S. Shanthi,
Prof/Dept. of Electronics & Commn. Engg.,
Adithya Institute of Technology,
Coimbatore
Highly motivated Professor, Positive approach, consistently strive to create a challenging and engaging learning environment in which the students become life long scholars and learners, interested in continuing research in Bio medical engineering combined with artificial intelligence.



Prof. R. Malathy,
Prof/Dept. of Electronics & Instrumentation,
Annammalai University,
Chidambaram
Prof. R. Malathy, thrust areas are Computational Bioengineering, modeling of various physiological systems which includes, cancer cells, cardiac cell, ganglion cells. Her research area has pioneered with effects of sodium channels on Arrhythmia -A mathematical model of human cardiac ventricular cells. Her thesis won the best thesis award at IIT Madras



Dr. K. Damodaran
Sr. Consultant & Interventional Cardiologist
Apollo Hospitals,
Chennai
DM in Cardiology from Madras Medical College and Research Institute and over 17 years of a highly proficient experience in interventional cardiology. Postdoctoral Fellowship in National Board (FNB) from Escorts Heart Institute, Delhi. He is also a Fellow of FESC and the Fellow of FSCAI (USA). He has performed more than 15000 cardiac catheterisation procedures till date.



Dr. J. Arputha Vijaya Selvi, M.E., Ph.D.,
PRINCIPAL

Ref: KCE / PRL /invite/18-19

13.02.2019

To

Dr. K. Damodaran,
Senior Consultant Interventional Cardiologist
Apollo Hospitals,

Dear Sir,

Greetings to you from Kings College of Engineering

Kings College of Engineering (KCE) is an institution which was formed with the single aim of providing quality education to the needy, underprivileged and socially & economically weaker sections of students. KCE is accredited by NAAC, recognized by 2(f) and 12(B) act of UGC, approved by All India Council of Technical Education, New Delhi (AICTE) and is affiliated to Anna University, Chennai. The institution was established in the year 2001 on a sprawling campus of around 48 acres on the Thanjavur-Pudukkottai Highway and run by Raj Educational Trust (RET), Chennai. The institution offers five U.G and four P.G programmes and certified with ISO 9001:2008. The state of the art teaching methodologies are used to impart high quality education to the students including e-learning.

To expose our students to various industrial and technical skills, we organize seminars each semester. In this regard, we request you to make it convenient to be present and deliver lecture on **“Newer Modalities in the Management of Coronary Artery Disease”** in the National workshop on **“Biomedical Interventions”** on **27th February, 2019 (Forenoon session)**.

Thanking you and expecting your co-operation in this regard.

Regards,

Dr. J. Arputha Vijaya Selvi,
Principal

PRINCIPAL
Kings College of Engineering
Punalkulam- 613 303.



Dr. J. Arputha Vijaya Selvi, M.E., Ph.D.,
PRINCIPAL

Ref: KCE / PRL /invite/18-19

13.02.2019

To

Dr. S. Shanthi,

Professor & Head

Dept. of Electronics & Communication Engineering,

Adithya Institute of Technology, Coimbatore

Dear Madam,

Greetings to you from Kings College of Engineering

Kings College of Engineering (KCE) is an institution which was formed with the single aim of providing quality education to the needy, underprivileged and socially & economically weaker sections of students. KCE is accredited by NAAC, recognized by 2(f) and 12(B) act of UGC, approved by All India Council of Technical Education, New Delhi (AICTE) and is affiliated to Anna University, Chennai. The institution was established in the year 2001 on a sprawling campus of around 48 acres on the Thanjavur-Pudukkottai Highway and run by Raj Educational Trust (RET), Chennai. The institution offers five U.G and four P.G programmes and certified with ISO 9001:2008. The state of the art teaching methodologies are used to impart high quality education to the students including e-learning.

To expose our students to various industrial and technical skills, we organize seminars each semester. In this regard, we request you to make it convenient to be present and deliver lecture on **“Machine Learning in Biomedical Engineering”** in the National workshop on **“Biomedical Interventions”** on **28th February, 2019 (Afternoon session)**.

Thanking you and expecting your co-operation in this regard.

Regards,

Dr. J. Arputha Vijaya Selvi,
Principal

PRINCIPAL
Kings College of Engineering
Punalkulam- 613 303.

Brief Profile

Dr.G.Shanthi, working as Quality Assurance Manager, at Micro Therapeutics Research Labs Pvt. Ltd. Chennai.(MTR). She attained her Doctorate degree from Madras University with specialization in Molecular Genetics and began her career as scientist-Toxicology She has more than one decade of experience, well trained in GLP principles and expertise in preclinical study designing and execution (executed more than 400) both *in vivo* and *in vitro*) for various regulatory submissions.

She designed a study model to identify the Blood clotting effect of drug which is accepted in the USFDA regulatory. She established the Preclinical Research Unit Facility at MTR as per the GLP Quality System and got GLP certification from National GLP Compliance Monitory Authority (NGCMA) DST, New Delhi for the Laboratory. She participated in many National and International level workshops, symposium and published many research articles. Her strength is commitment towards the task with adherence to Quality and Ethics.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Workshop on “BIOMEDICAL INTERVENTIONS”

LIST OF PARTICIPANTS

S.No	Name of the Participant	Branch	College
1.	S.Rutharesh	B.Tech Bio Medical Engineering	Rajiv Gandhi College of Engineering and Technology
2.	S.Sakthidharan		
3.	P.Sasvath		
4.	K.Suresh		
5.	Thivakar.B		
6.	S.Santhiya	B.Tech Bio Technology	Periyar Maniammai Institute of Science & Technology, Vallam, Thanjavur
7.	Anushya.P		
8.	C.Bathira		
9.	J.Kokila		
10.	K.Dinesh pandi		
11.	M.Nidesh		
12.	J.Pradeep		
13.	B.Tamizhini		
14.	M.Thasaleema parven		
15.	M.Vivek		
16.	ABARNA. R	ECE	Kings College of Engineering, Punalkulam
17.	ABINAYAKARTHIKA.T		
18.	AGALYA. S		
19.	ARCHANA.T		
20.	ARIYAVARSHINI.J		
21.	DHANAHARSHINI. S		
22.	DHANASEKARAN.S		
23.	DHIVYA DHARSHINI. R		
24.	DHURKA. K		
25.	DIVAKAR.S		
26.	ELAKIYA KOWSHIKA. A		
27.	HARINI. M		
28.	ILANKHATIR.E		
29.	INDHUJA. J		
30.	JENIFER.X		
31.	KOWSALYA. M		
32.	MEERA.K		
33.	MEGALA.M		
34.	RASIKA. M		
35.	SANTHAKUMARI. J		
36.	SANTHIYA.R		
37.	SEDHUPATHI.M		
38.	SOWMIYA.R		
39.	SUTHA.M		

40.	TAMILAZHAGI. T	ECE	Kings College of Engineering, Punalkulam
41.	VIDHYA. K		
42.	VINITHA. K		
43.	VITHYASRI. U.K		
44.	PONNI R		
45.	THANDAYUTHAPANI R		
46.	MANGAIYARKARASI N		
47.	GEETHABAI P		
48.	JEYASEELAN T		
49.	SATHYARAJ R		
50.	CHANDRASEKAR S		
51.	SRIVIDHYA N		
52.	FRANKLIN VIJAY S		
53.	PRIYADHARSHINI. G		
54.	RANJITHA.C		
55.	SOFIYA JENNIFER J		
56.	T. SHANTHI		
57.	R. PONNI		
58.	P. GEETHABAI		
59.	K. SUDARSANAN		
60.	S. RAMARAJAN		
61.	R. SATHYARAJ		
62.	T. JEYASEELAN		
63.	P.RAJAPIRIYAN		



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KINGS
COLLEGE OF ENGINEERING

Recognized by UGC 2(f) & 12B

Approved By AICTE, New Delhi & Affiliated to Anna University, Chennai



IEEE
MADRAS SECTION
STB16621

Department of Electronics & Communication Engineering
&
R&D Section

Cordially invite you to the two days

National Workshop
on
Biomedical Interventions

27th & 28th February, 2019

Dr. K. Damodaran

Sr. Consultant & Interventional Cardiologist
Apollo Hospitals,
Chennai

has consented to deliver the Inaugural Address

Staff Members
Department of ECE
KCE

Venue: Pallava Hall

Time: 10.00 a.m.



Workshop on Biomedical Interventions

Date: 27.02.2019 & 28.02.2019

Venue: Pallava Hall

10.00 a.m.	Invocation Song	
10.02 a.m. – 10.05 a.m.	Welcome Address	Prof. N. Mangaiyarkarasi HOD(i/c)/ECE, KCE
10.06 a.m. – 10.10 a.m.	Introducing Guest	Dr. D. Kumar Professor/ECE, KCE
10.11 a.m. – 10.15 a.m.	Honouring the Guest	Dr. J. Arputha Vijaya Selvi Principal, KCE Dr. S. Sivakumar Vice Principal, KCE
10.16 a.m. – 10.20 a.m.	Presidential Address	Dr. J. Arputha Vijaya Selvi Principal, KCE
10.21 a.m. – 10.25 a.m.	Felicitation	Dr. S. Sivakumar Vice Principal, KCE
10.26 a.m. – 10.45 a.m.	Inaugural Address	Dr. K. Damodaran Sr. Consultant & Interventional Cardiologist Apollo Hospitals, Chennai
10.45 a.m. – 11.00 a.m.	Tea Break	
11.01 a.m. – 12.55 p.m.	Session – I	Dr. K. Damodaran Sr. Consultant & Interventional Cardiologist Apollo Hospitals, Chennai
12.55 p.m. – 01.00 p.m.	Vote of Thanks	Mr. T. Pasupathi AP/ECE, KCE
01.00 p.m. – 02.00 p.m.	Lunch Break	
02.01 p.m. – 02.05 p.m.	Honoring & Introducing the Guests	Mr. R. Balakrishnan AP/ECE, KCE
02.06 p.m. – 03.10 p.m.	Session – II	Dr. Baskaran Biomedical Engineer Gentech Marketing Pvt. Ltd., New Delhi
03.16 p.m. – 03.30	Tea Break	
03.36 – 04.30	Session – II Continues	Dr. Kiran George Assoc. Professor /EIE Annamalai University, Chidambaram
04.31 p.m – 04.35 p.m.	Vote of Thanks	Mr. P. Raja Pirian AP/ECE, KCE



Dr. J. Arputha Vijaya Selvi, M.E., Ph.D.,

PRINCIPAL

Ref: KCE / PRL /Thanks /071/ 18-19

28.02.2019

To

Dr. S. Shanthi,

Professor & Head

Dept. of Electronics & Communication Engineering,

Adithya Institute of Technology, Coimbatore

Dear Madam,

On behalf of the Management, Staff and Students, I express my sincere thanks for your visit to our campus for delivering lecture in the workshop on **"Biomedical Interventions"** on 28-02-2019 inspite of your busy schedule. The lecture was very informative and all the participants got benefited. I sincerely thank you for the efforts you have taken to make this workshop fruitful.

Regards,

J. Arputha Vijaya Selvi
28/2/19

Dr. J. Arputha Vijaya Selvi

PRINCIPAL

Kings College of Engineering
Punalkulam- 613 303.



Recognized under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Punalkulam, Gandarvakottai Taluk, Pudukkottai Dist. - 613 303.

National Workshop on "Biomedical Interventions"

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. / Ms. _____ of _____ has participated in the National Workshop on "Biomedical Interventions" on 27th & 28th February, 2019, jointly organized by IEEE Student Branch (STB16621) and Research & Development Section, Kings College of Engineering, Punalkulam.

Dr. D. Kumar
CONVENER

Dr. J. Arputha Vijaya Selvi
PRINCIPAL

THE HINDU 12.03.2019 PAGE 5



Kings College of Engineering at Punalkulam near Thanjavur organised a two-day national workshop on 'Biomedical Interventions' recently. Dr.K.Damodaran, Senior Consultant and Interventional Cardiologist, Apollo Hospital, Chennai, inaugurated the workshop. Dr.J.Arputha Vijaya Selvi, Principal, presided. Dr.S.Baskaran, Biomedical Engineer, Gentech Marketing Pvt.Ltd, New Delhi, Dr. Kiran George, Associate Professor, Electronics and Instrumentation Engineering, Annamalai University and Dr. G.Shanthi, Scientist, Manager Preclinical, Microtherapeutics Research Labs, Chennai, spoke.

Dr. G. Shanthi, Scientist, Manager Preclinical, Microtherapeutics Research Labs, Chennai, delivered a lecture on synthetic biomaterials and its applications, Biocompatibility Regulatory Testing and its biological effects. She concluded her lecture with a case study on biomaterial implantation in animals. **Dr. S. Shanthi**, Professor & Head/ECE, Adithya Institute of Technology, Coimbatore delivered a lecture. In her lecture, she briefed that MI plays various roles in scientific research. Artificial Intelligence (AI) provides promising solutions in solving complex problems in many applications, particularly in areas with huge amounts of data but very little theory. It helps to develop new decision support system including the devices.

A total of 63 participants from various institutions situated at U.T of Pondicherry, Karnataka and Andhra Pradesh, Tamil Nadu participated in the programme and got benefitted.



Dignitaries on the Dias



Ceremonial Lighting of the Lamp



Mrs. N. Mangairyarkarasi, HOD(i/c)/ECE welcoming the gathering



Dr. D. Kumar, Professor/ECE introducing Dr. K. Damodaran, Chief Guest



Dr. J. Arputha Vijaya Selvi, Principal
honouring Dr. K. Damodaran,
Interventional Cardiologist



Dr. J. Arputha Vijaya Selvi delivering
presidential address



Dr. K. Damodaran, Interventional
Cardiologist, Apollo Hospital, Chennai
delivering Inaugural Address



Dr. K. Damodaran, during invited lecture
session



Dr. Kiran George during invited lecture
session



Dr. S. Baskar during demonstration
session



Dr. G. Shanthi during invited lecture session



Dr. S. Shanthi during invited lecture session



Students during the activity session



Participant during feedback session



Participants receiving certificates from dignitaries

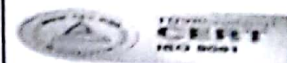


Mr. T. Pasupathi during workshop summary and vote of thanks

PROJECT WORK



A NAAC Accredited Institution
KINGS
 COLLEGE OF ENGINEERING
 Recognized under 2(F) & 12(B) of UGC
 Approved by AICTE, New Delhi
 Affiliated to Anna University, Chennai



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2019 - 2020 (ODD)

IDENTIFICATION OF PROJECT TITLES AND CONFIRMATION

Date: 19.12.2020

Batch No : 7
 Year / Sem / Section : IV / VIII
 Batch Members : 3

S. No	Register Number	Student Name	Email id / Contact Number	Signature of the Student
1.	821117106013	S. HEMAMALINI	8610104086	S. Hemamalini
2.	821117106029	K. RAJALAKSHMI	9384467854	K. Rajalakshmi
3.	821117106046	M. VEERALAKSHMI	6383782733	M. Veeralakshmi

Name of the Proposed Guide: Mrs. N. MANGAIYARKARASI.

Guide Specialization : Communication Systems.

Domain chosen to work : REAL TIME SYSTEM.

Identified project titles :

1. Design & Implementation of safety Ambiband for women.	6. An Efficient low-cost secure s/m for women safety using GSM & GPS.
2. Location tracking based women safety system with electric shock.	7. Self defence system for women safety using electric gun.
3. Real time safety system for women.	8. Women's safety using IoT.
4. Smart security solution for women based on IoT.	9. IoT Based women safety in public places.
5. Safe public places : Rethinking design for women safety.	10. An efficient method for preventing chain from snatching.

CONFIRMATION

We Confirm the Title REAL TIME SAFETY SYSTEM FOR WOMEN USING GSM (HEVERA)

as the IV year Project work for the above mentioned Batch

Signature of Project Guide

Signature of Project Co-ordinator

Signature of HoD/ECE



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2019 - 2020 (ODD)
GUIDE CONSENT FORM


Date: 19.12.2020

I, Dr./Mr./Ms N. MANOMAIYARKARASI (Name in Capital Letters)


(Designation) Hereby convey my willingness to guide the below mentioned group of students in the Domain REAL TIME SYSTEMS

Title of the Project REAL TIME SAFETY SYSTEM FOR WOMEN USING GSM
 Batch Members (HEVERA)

S. No	Register Number	Student Name	Student Signature
1.	821117106013	S. HEMAMALINI	S. Hemamalini
2.	821117106029	K. RAJALAKSHMI	K. Rajalakshmi
3.	821117106046	M. VEERALAKSHMI	M. Veeralakshmi


 Signature of the Project Guide 19/12/2020


 Signature of Project Coordinator


 Signature of the HoD/ECE 19/12/2020

Checklist for guides

- To meet the students regularly
- To educate students to work in New techniques for societal needs
- To motivate students to publish paper in Conferences, Journals at the end of the Project
- To motivate students to get "Best Project Award"
- To check the format of Presentation slides and Report documentation



REAL TIME SAFETY SYSTEM FOR WOMEN USING GSM (HEVERA)

A PROJECT REPORT

Submitted by

HEMAMALINI S (821117106013)

RAJALAKSHMI K (821117106029)

VEERALAKSHMI M (821117106046)

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

KINGS COLLEGE OF ENGINEERING

ANNA UNIVERSITY:: CHENNAI 600 025

APRIL 2021

ANNA UNIVERSITY: CHENNAI



**AMAR
TECH**

SIEMENS
Ingenuity for life

siemenscoe.nitt.edu

Certificate

This is to certify that **K. Priyadharshini**, 8th semester, **B.E, Electronics and Communication Engineering** student of **Kings College of Engineering, Pudukkottai** bearing registration number **CoE/IoT/122019/292** has participated and successfully completed the course **Internet of Things** conducted at the Siemens Centre of Excellence in Manufacturing, NIT Trichy from **16.12.2019** to **20.12.2019** for a duration of **40** hours.

Siemens Industry
Software Pvt. Ltd

AMAR Tech

Siemens CoE
NIT, Trichy

INDUSTRIAL VISIT (FIELD VISIT)

Dr. J. Arputha Vijaya Selvi, M.E., Ph.D.,
PRINCIPAL

Ref: KCE / PRL /IV/64/18-19

19.02.2019

To
The General Manager,
Bharat Sanchar Nigam Limited,
Thanjavur.

Dear Sir,

As part of our curriculum the following students of second year Electronics and Communication Engineering department wish to undergo industrial visit at your esteemed organization. We believe that, this visit will help them to acquire more practical experience to supplement their theoretical knowledge in Communication Engineering. We hereby request you to permit them to visit your place during the month of February, 2019. During this visit they have been asked to strictly abide by the rules and regulations of your organization. The name list of staff and students are enclosed.

Thank you,

Regards,

Dr. J. Arputha Vijaya Selvi
PRINCIPAL
Kings College of Engineering
Punalkulam- 613 303.

Encl. Name list

Recd.
M.R. Manjunath
SDE (OCB)

Got Permission
Thro' Phone.



उप मंडल 22/2/19 (मोतीनी)
Punalkulam, Gandarvakottai Taluk, Pudukkottai District, Tamil Nadu - 613 303. Ph : 04362 - 282474,
बीएसएनएल Email : contact@kingsindia.net, Thanjavur Information Centre : - 04362-279779
BSNL Telephone Exchange
तंजावूर / Thanjavur - 613001



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2018-2019 EVEN SEMESTER



REPORT
ON
INDUSTRIAL VISIT
DATE:22.02.2019



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2017-2018 EVEN SEMESTER
REPORT ON INDUSTRIAL VISIT

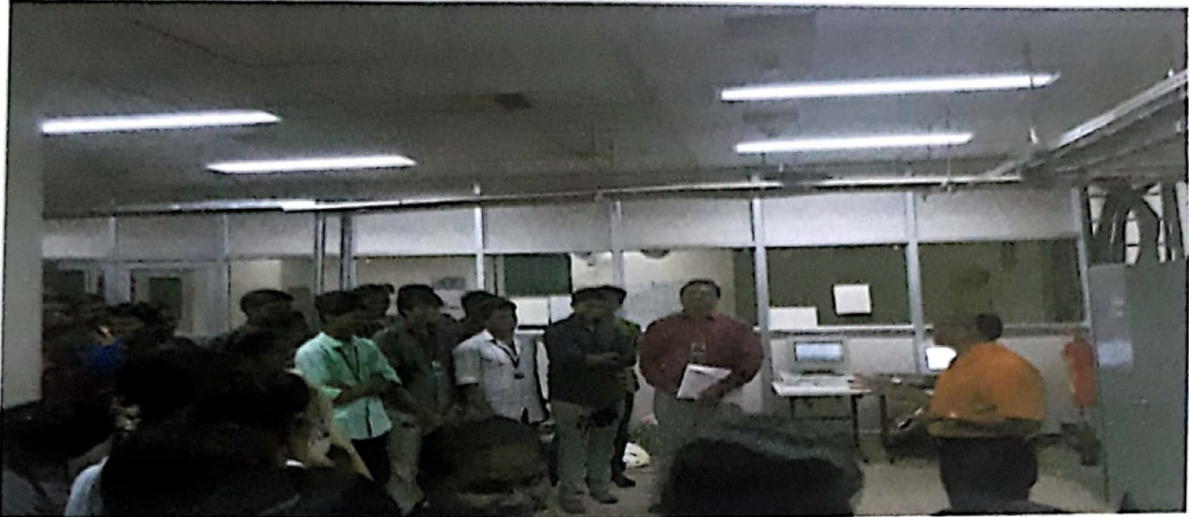
ECE has organized a one day industrial visit to BSNL in Thanjavur for second year ECE students on 22th February. The main objective of this visit is to improve the real time exposure for students in the field of digital and analog communication systems. Batches of 49 students along with three faculty members Mr.R.Balakrishnan, Mr.R.Ramarajan & Ms.P.Thirumagal have visited the BSNL telephone exchange, thanjavur.

Mr.Gunasekaran, DGM, BSNL, given full lecturer on recent trends in digital communication systems, The sessions conducted were very educational and gave the students the exposure as to how the industry and the outside market works. The students were benefited with the technical terms and the knowledge of how a call setup is made using Landline and mobile phones. The company outreach plus opportunities were discussed which motivated the students to progress in their



This second Session primarily focussed on call setup using Mobile switching system. This session explained about, how the mobile is working by switching system and switches are connected. the process and stages of switching, played an important to make or break connections. At the initial stages, the switching systems were operated manually. These systems were later automated. The following flowchart shows how the switching systems were classified.

Third session focused on main distribution frame. There are three basic types of distribution system designs: Radial, Loop, or Network. As you might expect, you can use combinations of these three systems, and this is frequently done. The Radial distribution system is the cheapest to build, and is widely used in sparsely populated areas.



Final session focused on power generation system. The "BSNL POWER PLANT MANAGEMENT SYSTEM" is an innovative device to monitor the mobile phone towers and BSNL Power Plants. It can operate on 40 to 60 volts DC and it is rated for 60V at 60 volts DC, 50-Hz, and operates on a wide range of input voltages (40-60V DC).



It was a Wonderful experience for all students as well for staff. Every student was very co-operative to each other as well to the faculties, Students were acquainted of communication technologies in BSNL

At last we thanked our principal Mam, for arranging this wonderful Industrial visit which will help us to develop projects in communication system through the feedback. To the whole the visit was really informative and enjoyable.

Thank you so much!

[Signature]
24.2.19

IHT. Co. coordinator.

[Signature]
24/2/2019.

[Signature]
24.2.19

HOD/RC.



FIELD VISIT REPORT

Project Title

DESIGN OF AN INTELLIGENT WHEELCHAIR SYSTEM USING ARDUINO

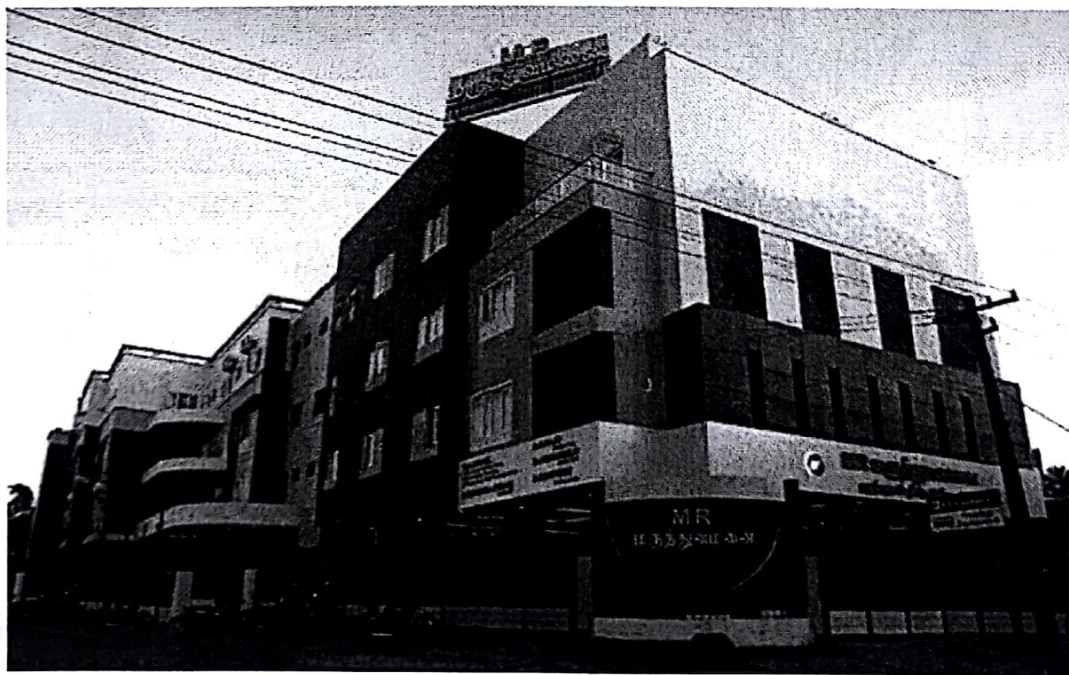
R.SIVAKUMAR

M.VIGNESHWARAN

M.A.YUVANKISHORE

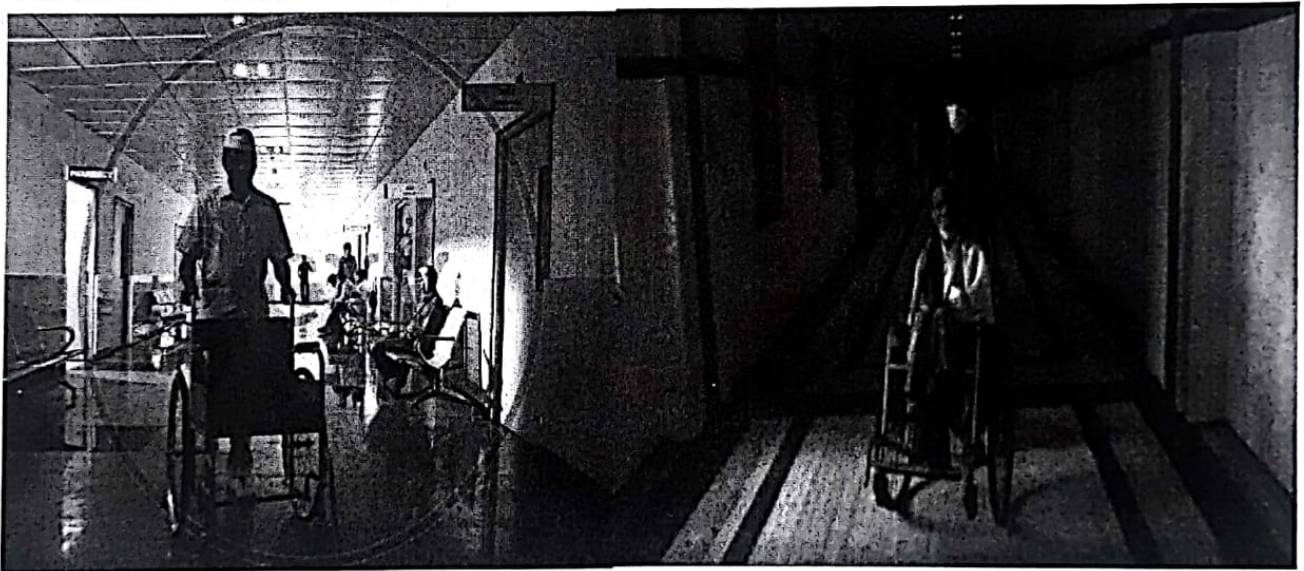
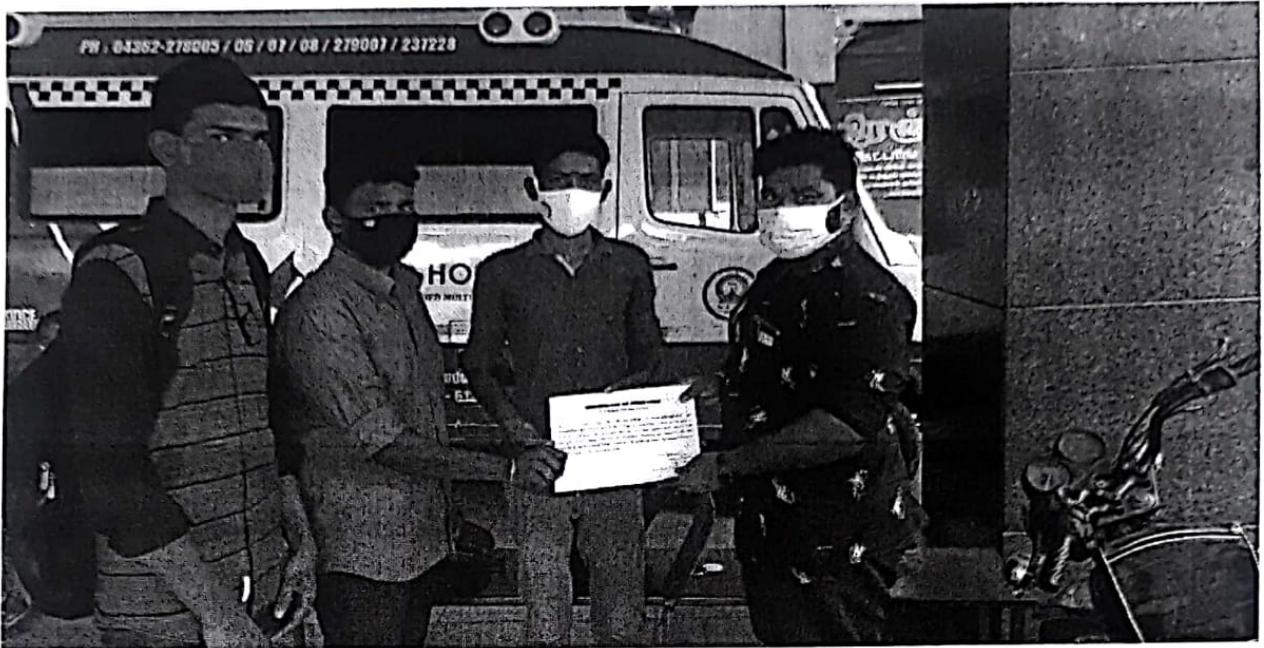
Guided by

Mrs. D.VENNILA ,AP/ECE



We visited the M.R hospital in Thanjavur on 23/03/2021, the manager helped as to visit the hospital . The main objectives of the visit was to identify problems on wheelchair faced by patients in the hospital. Wheelchairs is used in hospital to move patients from one ward to another ward. A wheelchair is manually operated in the hospital designed primarily for use by an individual with a mobility disability for the main purpose of indoor, or outdoor, locomotion. wheelchair user are freedom to move around, allowing the user to access day to day physical activity. Specific objectives were as follows,

- To get information about the problems faced by wheelchair users in the hospital.
- To identify techniques and method used for patient in hospitals.
- To get information about the manually operated wheelchair user.



FEEDBACK

We had visited to Industrial visit to Bharat Sanchar Nigam Limited (BSNL) on 22.2.19 at Thanjavur with our staff members Mr. S. Ramarajan, Mr. R. Balakrishnan and Mrs. P. Thirumagal.

At BSNL, one senior most staff give us introduction about telecommunication and wired media network. He also give instruction about recruitment of BSNL.

There we had seen about optical fibre networking. They are very sensitive network system and had huge advantages.

They clearly explained about how the calls are received from the customer and its connected to other substations then how it received by receiver.

They shown the MDF section for us. All the individuals are completely seen the all sections. The BSNL had a proper power consumption. They are the primary consumer for power substations.

There we had seen power plant. They had large no. of Batteries and they convert the AC into DC and then give supply to the network section.

BSNL is the 11KV power consumer. They has two high capacity diesel power generator with 1000 lt capacity.

Totally it is very interesting and very useful for us.

Abirami. D.

Juliyat.

Sivakumar. R.



चारभा निगम लिमिटेड/BHARAT SANCHAR NIGAM LIMITED
भारत सरकार का उद्यम/A GOVT. OF INDIA ENTERPRISE
कार्याबीएसएनएल, महाप्रबंधक / तंजावूर-613007
OFFICE OF THE GENERAL MANAGER, BSNL, THANJAVUR-613 007

No. AGM(HR&A)/TNJ/060/2018-19

CERTIFICATE

This is to Certify that S/Sri./Kum. ABIRAMI D

*Student of KINGS COLLEGE OF ENGINEERING, PUNAKULAM
has undergone Industrial Visit at BSNL, Thanjavur on 22.02.2019. The
students are given the overview of Digital Communication, Optical Fibre
concepts and Broadband Technology.*

Thanjavur

Date : 22.02.2019

[Signature] 22/2/19
AGM (HR & Admn.)
O/o GM, BSNL
Thanjavur-613 007



INTERNSHIP

COVER LETTER

E.ILANKHATIR
DOOR NO 86, 7th AVENUE
SIRAJPUR, NK ROAD
THANJAVUR
TAMIL NADU
PIN: - 613006

24th APRIL 2019

THE H.R.MANAGER
L&T DEFENCE STRATEGIC ELECTRONICS CENTRE
OLD MADRAS ROAD
CV RAMAN NAGAR
BANGALORE
KARNATAKA

SUB: - "REQUESTING FOR INTERNSHIP AT LARSEN & TOUBRO (ELECTRONIC DIVISION)
BANGALORE"

SIR\MA'AM

I'm a pre-final year student of "KINGS COLLEGE OF ENGINEERING" affiliated with ANNA UNIVERSITY, CHENNAI. I'm having ELECTRONICS AND COMMUNICATION as a major subject of my research and studies.

I'm known to my friends and family as hardworking, disciplined and energetic. I can be a great asset to your company. I can guarantee you that I will work till my extent to serve my best for the company.

Our university has a demand on student to attend internship over any ELECTRONICS based company for environmental exposure. I heard that LARSEN & TOUBRO is providing technical support to defence. This drives me to reserve my position at LARSEN & TOUBRO for internship. It will be my pleasure to have internship in a government based reputed company like LARSEN & TOUBRO.

I'm doing my under graduation in Tamil Nadu but I'm going to be in BANGALORE from MAY 5 to JUNE 5 (i.e. one month) to serve for LARSEN & TOUBRO. For additional details I had also attached my RESUME and also provided BONIFIED CERTIFICATE issued by my college.

WILL BE EAGERLY WAITING FOR YOUR RESPONSE
THANKING YOU FOR SPENDING YOUR VALUABLE TIME


Signature
(24th APRIL 2019)




LARSEN & TOUBRO LIMITED
APPLICATION FOR SHORT-TERM TRAINING
SUMMER/INPLANT/VACATION/PROJECT
(Fill in the form carefully in your own handwriting)

CATEGORY		SR. No.
<input type="checkbox"/>	Diploma Eng.	(For office use only)
<input checked="" type="checkbox"/>	Graduate Eng.	
<input type="checkbox"/>	Post Grad. Eng.	

FULL NAME IN BLOCK LETTERS ILANKHATIR ELANGIOVAN			<input type="checkbox"/> Mechanical <input checked="" type="checkbox"/> Electronics <input type="checkbox"/> Metallurgy	<input type="checkbox"/> Electrical <input type="checkbox"/> Chemical <input type="checkbox"/> Others (Specify)
FIRST	MIDDLE	SURNAME		

PRESENT MAILING ADDRESS <u>ilankhatir123@gmail.com</u> <u>ilankhatir123@gmail.com</u>	AREA OF SPECIALISATION ELECTRONIC BASED SYSTEMS
---	---

CONTACT PHONE NO (IF ANY) 8072574925 (M)/9943958789 (F)	
LANGUAGES KNOWN <u>a) English</u> <u>c) Tamil</u>	
(Please underline your mother tongue) <u>b) Hindi</u>	


DATE OF BIRTH 25/05/1998	PLACE OF BIRTH THANJAVUR	STATE TAMIL NADU	DOMICILE STATE TAMIL NADU
NATIONALITY INDIAN	RELIGION HINDU	SEX MALE <input checked="" type="checkbox"/> FEMALE <input type="checkbox"/>	

THE PRESENT COURSE YOU ARE UNDERGOING: B.E./ELECTRONICS AND COMMUNICATION ENGINEERING	
DURATION OF COURSE (YEARS/SEMESTERS) 4 YEARS / 8 SEMESTERS	NO. OF YEARS/SEMESTERS COMPLETED AT THE TIME OF STARTING THE TRAINING 3 YEARS/6 SEMESTERS

AREAS OF INTEREST (TRAINING) ELECTRONIC BASED PRODUCT AND THEIR QUALITY ASSESSMENT	DURATION OF TRAINING REQUIRED (MONTHS/WEEKS) FROM: 06/05/2019 TO: 06/06/2019
--	--

OCCUPATIONAL DETAILS OF YOUR FAMILY MEMBERS			
NAME	RELATIONSHIP	OCCUPATION	NATURE OF BUSINESS/WORK / NAME OF THE ORGANISATION
G. ELANGIOVAN	FATHER	Ex-ARMY	DEFENCE (ARMY)
E. ABINMOZHIT	MOTHER	HOUSE-WIFE	-
E. ABISHAK	BROTHER	STUDENT	-

PRE-ENGINEERING				
EXAMINATIONS PASSED	INSTITUTION	MONTH/ YEAR	% MARK	CLASS
SSC/EQUIVALENT	ARMY PUBLIC SCHOOL (PUNE) (CBSE)	2014	72.61%	1 st
HSC/EQUIVALENT	DTMA DELHI PUBLIC SCHOOL (KOTA) (CBSE)	2016	56.78%	2 nd
OTHERS				

ENGINEERING				NON-ENGINEERING DEGREE				
DEGREE <input checked="" type="checkbox"/> DIPLOMA <input type="checkbox"/>				(SPECIFY)				
NAME OF COLLEGE/INSTITUTE				DURATION				
KJSS COLLEGE OF ENGINEERING				FROM		TO		
				2016		2020		
BRANCH OF ENGINEERING:								
<input type="checkbox"/> Mechanical <input type="checkbox"/> Electrical <input checked="" type="checkbox"/> Electronics <input type="checkbox"/> Chemical <input type="checkbox"/> Metallurgy <input type="checkbox"/> Others								
YEAR	SEMESTER	% MARKS OR SPI/SGPA	SEMESTER	% MARKS OR SPI/SGPA	YEARWISE MARKS % / CPI/CGPA	CLASS/DIV	RANK OR POSITION IN THE CLASS	No. OF STUDENTS IN THE CLASS
2017	1st	6.808	2nd	5.958	6.4	2nd	20	55
2018	3rd	6.3	4th	6.727	6.43	2nd	18	56
2019	5th	7.14	6th	ATTENDED	6.58	1st	12	54
	7th		8th					
DO/DID YOU HAVE ATKT: No								
IF YES GIVE DETAILS								
ELECTIVES/SPECIAL SUBJECTS/PROJECT WORK								
-								
POST GRADUATE DEGREE/DIPLOMA IN ENGINEERING								
NAME OF COLLEGE/INSTITUTION/UNIVERSITY				DURATION				
				FROM		TO		
AREA OF SPECIALISATION AND SUBJECTS IN THE FINAL YEAR								
YEAR	SEMESTER	% MARKS OR SPI/SGPA	SEMESTER	% MARKS OR SPI/SGPA	YEARWISE AGGREGT. MARKS % / CPI/CGPA	CLASS/DIV	RANK OR POSITION IN THE CLASS	No. OF STUDENTS IN THE CLASS
RELATIVES FRIENDS IN L&T GROUP OF COMPANIES								
NAME		RELATIONSHIP		POSITION		COMPANY/DEPARTMENT		
I hereby affirm that my answers to the foregoing questions are true and correct and I understand that any misrepresentation or omission of facts called for in this application, or other company records may results in immediate dismissal without any notice if subsequently employed.								
I authorise an inquiry with regards to my character, ability and habits to any and all persons and agree to hold such persons harmless with respect to any information that they may give.								
DATE: 30/07/2019								
PLACE: THANDAVUR				SIGNATURE OF THE APPLICANT				
Please attach a certificate from your college stating that you are a bonafide student of the college and that this training is in partial fulfillment of the requirement of your course. Do not attach any other testimonial or copies of the certificates.								



ILANKHATIR E <ilankhatire123@gmail.com>

Requesting for permission regarding Internship extension.

1 message

ILANKHATIR E <ilankhatire123@gmail.com>
To: principal@kingsindia.net


Mon, May 27, 2019 at 9:37 PM

maam

I'm interning at LAURSEN & TOUBRO limited over Bangalore. Due to project in-completion, I need to extend my internship duration till 5th july. So I kindly request you to grant me permission. I'm attaching mail conversation with HR for your reference purpose.

THANK YOU

E ILANKHATIR
(ECE, FINAL YEAR)

 INTERNSHIP REQUEST LETTER.pdf
719K



ILANKHATIR E <ilankhatire123@gmail.com>

INTERNSHIP EXTENSION

4 messages

ILANKHATIR E <ilankhatire123@gmail.com>

Mon, May 27, 2019 at 9:49 AM

To: Rajesh Kumar <rajesh.kumar@larsentoubro.com>

SIR

I need more time to work on my project. So, I kindly request you to extend my INTERNSHIP period by ONE MONTH (TILL 5th JULY).

THANK YOU

E.ILANKHATIR

Rajesh Kumar <Rajesh.Kumar@larsentoubro.com>

Mon, May 27, 2019 at 10:45 AM

To: "ilankhatire123@gmail.com" <ilankhatire123@gmail.com>

Dear ILANKHATIR,

We accept your request and you may continue to work on the project assigned till 5th July 2019.

Thanks & Regards,



K. Rajesh Kumar | Human Resources

L&T-Defence, Bangalore | Mobile: +91-9986042683

From: E Jerald Melwin

Sent: Monday, 27 May, 2019 9:52 AM

To: Rajesh Kumar <Rajesh.Kumar@larsentoubro.com>

Subject: RE: INTERNSHIP EXTENSION

Yes.

This Email may contain confidential or privileged information for the intended recipient (s). If you are not the intended recipient, please do not use or disseminate the information, notify the sender and delete it from your system.



image001.jpg
5K

ILANKHATIR E <ilankhatire123@gmail.com>
To: Rajesh Kumar <Rajesh.Kumar@larsentoubro.com>

Mon, May 27, 2019 at 11:27 AM

Dear sir
Thank you so much for your support.
I kindly request you to sent a letter regarding my internship extension date. So that I can forward the same to my college Principal and HOD.

THANK YOU

E ILANKHATIR
[Quoted text hidden]

Rajesh Kumar <Rajesh.Kumar@larsentoubro.com>
To: ILANKHATIR E <ilankhatire123@gmail.com>

Mon, May 27, 2019 at 11:32 AM

Hi,

Kindly forward this letter as token of acceptance from our end.

We issue internship completion letter at the end of the training.

[Quoted text hidden]
[Quoted text hidden]



image001.jpg
5K

27-05-2019, 09:14 pm

INTERNSHIP TRAINING

NSIC-NATIONAL SMALL INDUSTRIAL CORPORATION

85
12/05

एन एस आई सी
NSIC

**National Small Industries
Corporation**

STUDENTS.

M.MEGALA

K.AKALYA

J.ARIYA VARSHINI

RSANTHIYA

M.HARINI -



Day 1

BASICS OF ELECTRICAL & ELECTRONICS

ELECTRONICS:

- ❖ ELECTRONICS IS THE STUDY OF FLOW AND CONTROL OF ELECTRONS.
- ❖ IT IS THE RANCH OF PHYSICS AND TECHNOLOG CONCERNED WITH THE BEHAVIOUR AND MOVEMENT OF ELECTRONS IN A SEMICONDUCTOR, VACUM, OR GAS.
- ❖ EXAMPLE:TELEVISION,LAPTOP,DVD PLAYERS,MOBILE PHONES.

ELECTRICAL:

- ❖ ELECTRICITY IS THE PRESENCE AND FLOW OF ELECTRIC CHARGE.USING ELECTRICITY WE CAN TRANSFER ENERGY IN WAYS THAT ALLOWS US TO ACCOMPLISH COMMON CHORES.

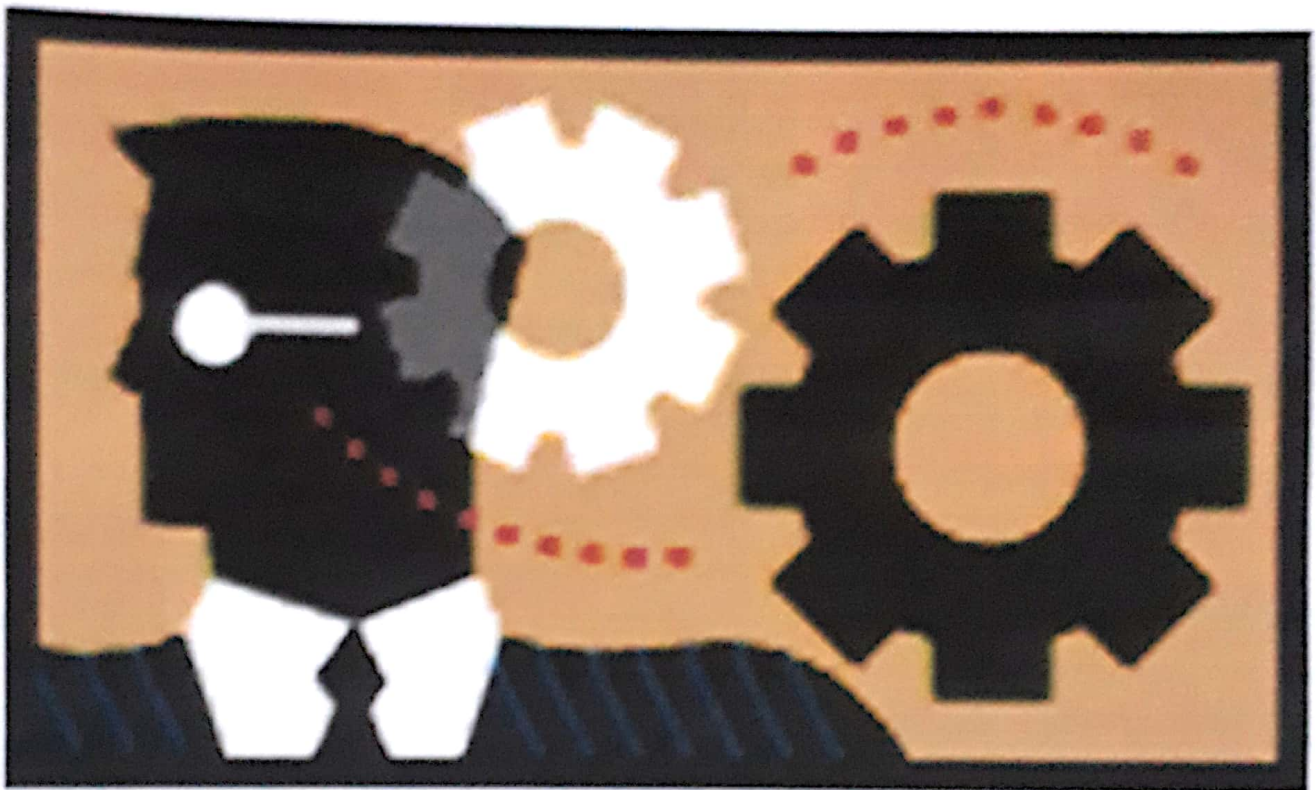
EXAMPLES:LIGHTS, BULB, VACCUMS.

PARAMETERS OF ELECTRONICS:

ACTIVE ELEMENTS : TRANSISTER, DIODE, LED.

PASSIVE ELEMENTS: LDR, RESISTOR, CAPACITOR.

THANKING YOU



~~283~~
12/21/19.

2019

REAL-TIME OBJECT DETECTION USING TENSORFLOW AND YOLO

E.ILANKHATIR

88
12/7/19



LARSEN & TOUBRO

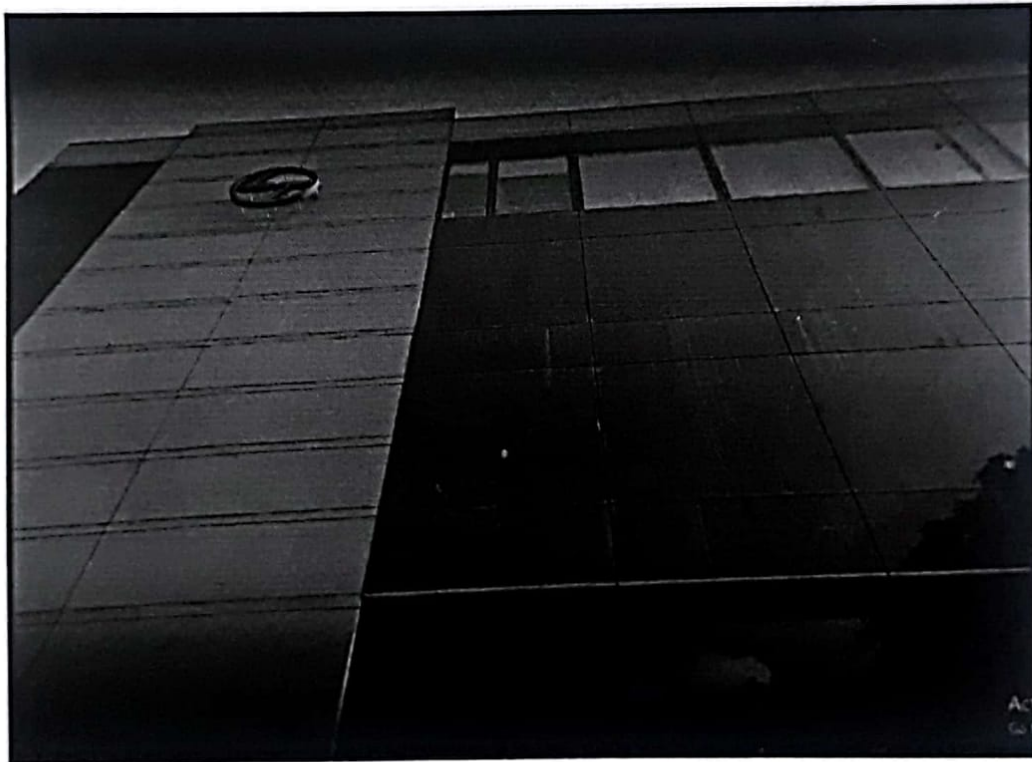
[INTERNSHIP REPORT]

DISCLAIMER :- This disclaimer informs readers that the views, thoughts, and opinions expressed in the text belong solely to the authors and few contents are replaced to obey the company policies.

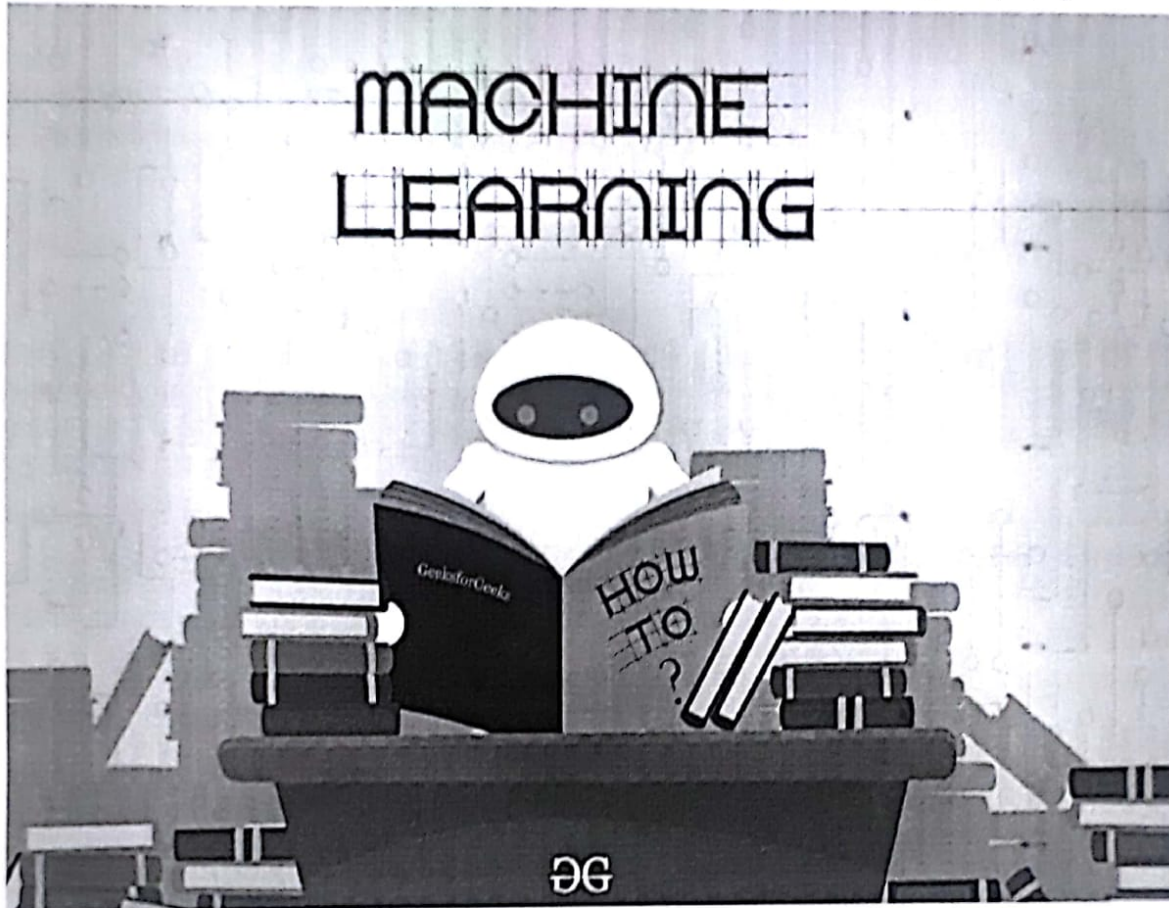
ABOUT COMPANY

L&T is one of India's leading companies for supply of Defence Equipment and Systems in the private sector, with over 30 years of experience in this field. L&T provide indigenous, design-to-delivery solutions across the defence spectrum – from land-based weapon launch systems, air defence and artillery systems and upgrades, to naval weapon launch systems with fire control solutions, bridging systems, communication, avionics, C4I and missile systems.

The division operates at the upper end of the technology spectrum and has been at the forefront of introducing new processes, products and materials into manufacturing sector, for over six decades. L&T capability spectrum not only covers in-house engineering, R&D centres and world class fabrication facilities, but also includes a highly experienced team, committed to a safe and sustainable work culture.



WHAT IS MACHINE LEARNING???



Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves.

The process of learning begins with observations or data, such as examples, direct experience, or instruction, in order to look for patterns in data and make better decisions in the future based on the examples that we provide. The primary aim is to allow the computers learn automatically without human intervention or assistance and adjust actions accordingly.

CLASSIFICATION OF MACHINE LEARNING

The major types of machine learning algorithms are mentioned below:-

- **Supervised machine learning algorithms:-**

Supervised learning is the Data mining task of inferring a function from labeled training data. The training data consist of a set of training examples. In supervised learning, each example is a pair consisting of an input object (typically a vector) and a desired output value (also called the supervisory signal).

- **Unsupervised machine learning algorithms:-**

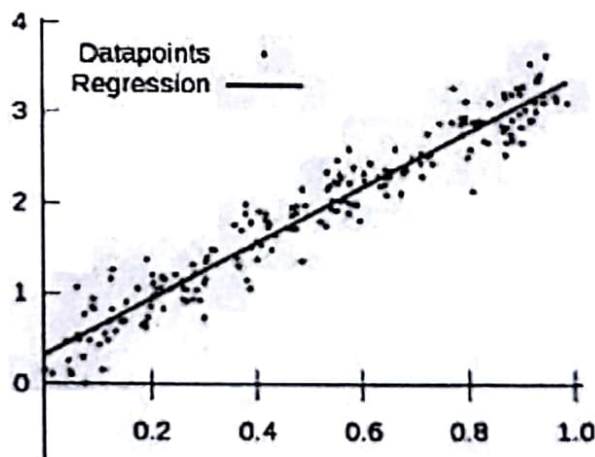
Unsupervised learning is the training of machine using information that is neither classified nor labeled and allowing the algorithm to act on that information without guidance. Here the task of machine is to group unsorted information according to similarities, patterns and differences without any prior training of data.

- **Reinforcement machine learning algorithms:-**

Reinforcement learning is an area of Machine Learning. Reinforcement. It is about taking suitable action to maximize reward in a particular situation. It is employed by various software and machines to find the best possible behavior or path it should take in a specific situation.

ALGORITHMS OF SUPERVISED MACHINE LEARNING

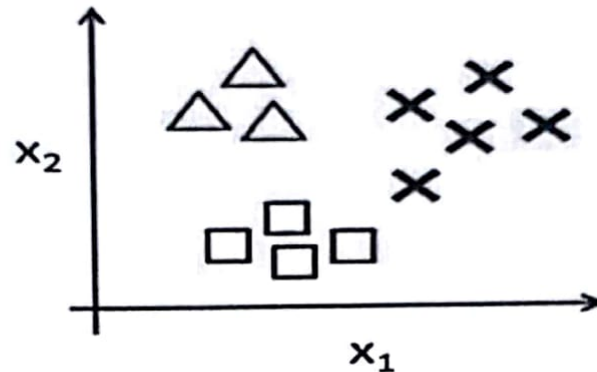
- **Regression machine learning:-**



It performs a regression task. Regression models a target prediction value based on independent variables. It is mostly used for finding out the relationship between variables and forecasting. Different regression models differ based on – the kind of relationship between dependent and independent variables, they are considering and the number of independent variables being used.

- **Classification machine learning:-**

Multi-class classification:



Classification is a technique for determining class the dependent belongs to based on the one or more independent variables.

EVOLUTION OF MACHINE LEARNING

- Machine learning was born from pattern recognition and the theory that computers can learn without being programmed to perform specific tasks, researchers interested in artificial intelligence wanted to see if computers could learn from data.
- The iterative aspect of machine learning is important because as models are exposed to new data, they are able to independently adapt. They learn from previous computations to produce reliable, repeatable decisions and results.
- It's a science that's not new – but one that has gained fresh momentum.
- While many machine learning algorithms have been around for a long time, the ability to automatically apply complex mathematical calculations to big data – over and over, faster and faster is a recent development.

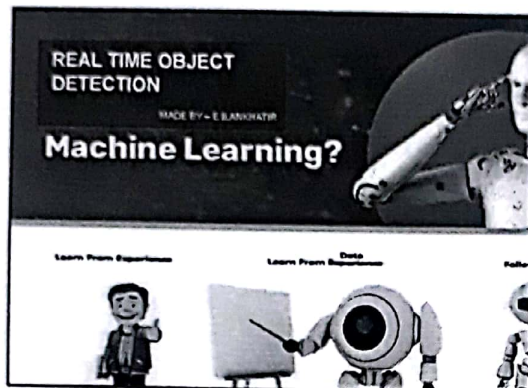
WHY MACHINE LEARNING IS IMPORTANT ??

- Resurging interest in machine learning is due to the same factors that have made data mining and Bayesian analysis more popular than ever.
- Things like growing volumes and varieties of available data, computational processing that is cheaper and more powerful, and affordable data storage.

PPT PRESENTATION.
AT COLLEGE

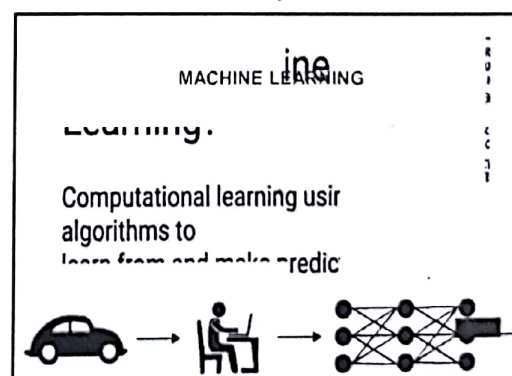
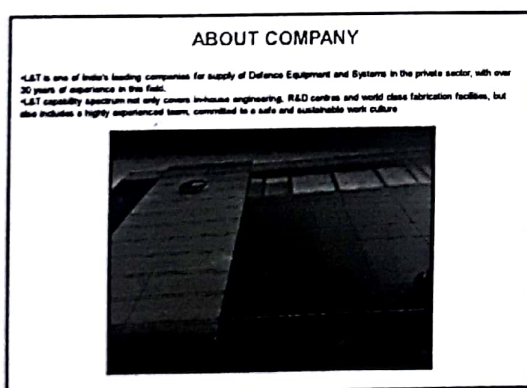
7/7/2019

12/12/17

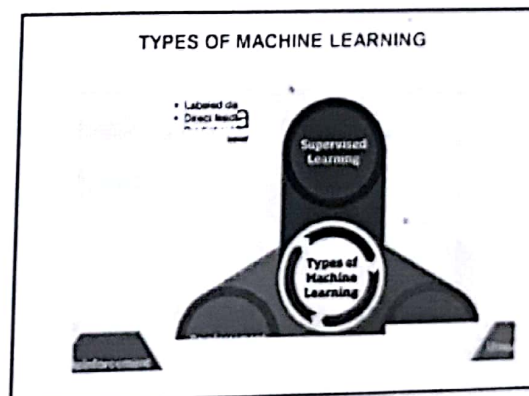
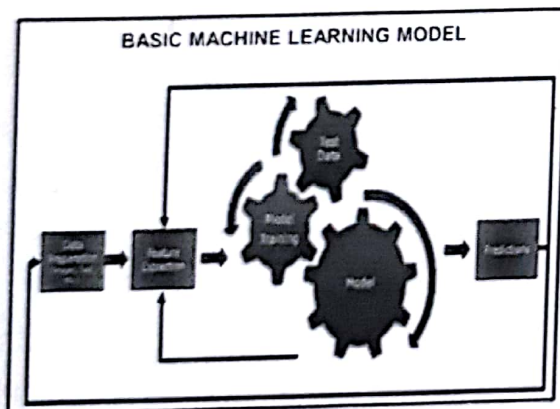
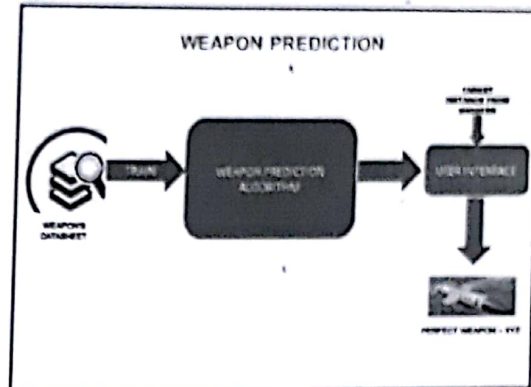
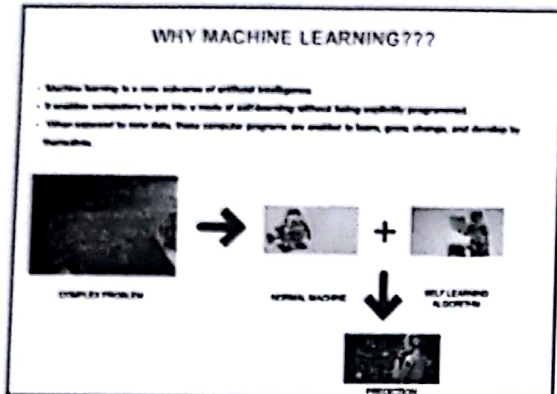


DISCLAIMER

This disclaimer informs audience that the views, thoughts, and opinions expressed in the presentation belong solely to the author and few contents are replaced to obey the company policies.



7/7/2019



RECEIVED THRO'
MAIL.

INTERNSHIP FEEDBACK

Registration Number: -

821116106019

Name: -

E.ILANKHATIR

Company Visited: -

Larsen & Toubro, Swami Vivekananda Rd,
Rajana Colony, C V Raman Nagar,
Bengaluru, Karnataka 560093

Time Period: -

From -> 06 May 2019

Till -> 04 July 2019

Project Assigned: -

Real Time Object Detection Using Tensorflow
and Yolo.

Concepts learned During Internship :-

- Hands on experience with Python3
- Worked on Linux based environment (Ubuntu 18).
- Gained knowledge about sensors.
- Worked on machine learning concepts like classification and detection over real-time.
- Gained knowledge on how to self learn concepts using online resources.
- Processed data before training the model.
- Explore different models to increase the accuracy of the model over real time.
- Understood different methodology like transfer learning and gradient descent.
- Used different frameworks to maximize the response time of model.

Concepts that were useful for my projects:-

- My final year project was fully based on machine learning and data science. The topic as a team we selected was "Initial stage lung cancer cell detection".
- Working on python 3 helped me to successfully analyze and modify the codes available online.
- We used the concept of transfer learning and grid based detection to increase the models accuracy as learned from the internship.

Conclusion: -

The major concepts of machine learning and its expertise were experienced and learned with the help of internship itself. Understood companies work culture and got adopted to it.

Defence-IC/SEC-HR/KCE/90905284

Date: 04 July, 2019

CERTIFICATE OF TRAINING

(TO WHOMSOEVER IT MAY CONCERN)

NAME	: E. Ilankhatir
College/Institution	: Kings College of Engineering
Branch	: B.E (Electronics & Communication)
Category	: Internship Training
Date of Joining	: 06/05/2019
Date of Leaving	: 04/07/2019
Place of Training	: L&T-Strategic Electronics Center, Bangalore
Department	: "Design & Engineering"
Project Details	: Worked on "Real-time Object Detection using Tensor flow & YOLO"

for STRATEGIC ELECTRONICS CENTER



(Rajesh Kumar K)
Manager - Human Resources

राष्ट्रीय लघु उद्योग निगम लिमिटेड

NATIONAL SMALL INDUSTRIES CORPORATION LIMITED

(A Govt. of India Enterprise)

NSIC - TECHNICAL SERVICES CENTRE,
Sector B-24, Guindy Industrial Estate, Ekkaduthangal, Chennai - 600 032

CERTIFICATE

This is to certify that Mr./Ms. **M. MEGALA** S/o/ D/o
Shri. **D. MANOHARAN** student of III year B.E(ECE),
Kings College of Engineering, Thanjavur, has undergone
Internship Training on **REALTIME EMBEDDED
SYSTEM DEVELOPMENT FOR INDUSTRIAL
APPLICATIONS** at our centre for a period of **Two
Weeks** from 13.05.2019 to 24.05.2019.



[Signature]
COURSE CO-ORDINATOR

[Signature]
CENTRE HEAD

राष्ट्रीय लघु उद्योग निगम लिमिटेड

NATIONAL SMALL INDUSTRIES CORPORATION LIMITED
(A Govt. of India Enterprise)

NSIC - TECHNICAL SERVICES CENTRE,
Sector B-24, Guindy Industrial Estate, Ekkaduthangal, Chennai - 600 032

CERTIFICATE

This is to certify that Mr./Ms. **K. AKALYA** S/o/ D/o
Shri. **C. KANNAN** student of III year B.E(ECE), Kings
College of Engineering, Thanjavur, has undergone
Internship Training on **REALTIME EMBEDDED
SYSTEM DEVELOPMENT FOR INDUSTRIAL
APPLICATIONS** at our centre for a period of **Two
Weeks** from 13.05.2019 to 24.05.2019.



[Signature]
COURSE CO-ORDINATOR

[Signature]
CENTRE HEAD



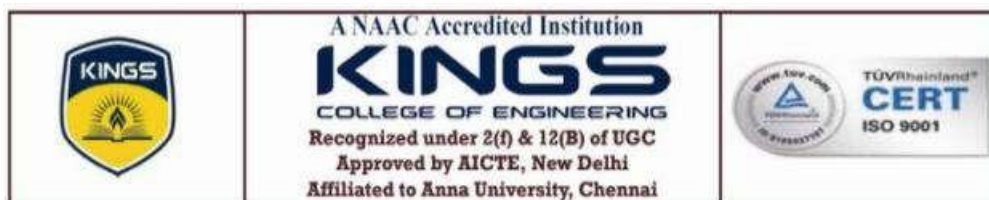
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

2.3.1: EXPERIENTIAL LEARNING



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5.	In-House Training	83



INDEX

CRITERION: 2.3.1

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Project Work (UG Project – Academic Year: 2019-20)

S.No	Content	Page No.
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2.	Acceptance for the Guidance Form	4&6
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20.	Third Review Circular with Guide and Students Name List	39
21.	Third Review Schedule	41
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23.	Third Review Evaluation Sheet – Expert-1, Expert-2, Expert-3 & Expert-4	44
24.	Third Review Consolidated Project Evaluation Form	48
25.	Students Project PPT	49

Workshop (Academic Year: 2017-2018)

Workshop Title: "Embedded Controllers in Internet of Things"		
S.No.	Content	Page No.
1.	Permission Letter	54
2.	Department Circular with List of Faculty In-Charge	55
3.	Agenda	58
4.	Workshop Brochure Circulator Letter	59
5.	Workshop Brochure	60
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7.	Detailed Report	62

Industrial Visit (Academic Year: 2019-2020)

Place Visited: "NLC, Neyveli (Thermal Power Station-I)"		
S.No.	Content	Page No.
1.	Permission Letter	66
2.	Acceptance Letter from Industry	69
3.	Letter of Undertaking for Industrial Visit given by Parents/Guardian	70
4.	Student Name List	72
5.	Detailed Report	73
6.	Feedback Form	78

Field Visit (Academic Year: 2018-2019)

Place Visited: "Campus UK, Trichy"		
S.No.	Content	Page No.
1.	Acceptance Letter from Industry	79
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In-House Training (Academic Year: 2017-2018)

S.No.	Content	Page No.
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FORMAT FOR PROJECT PROPOSAL

1. Name of the Programme : Bachelor of Engineering (EEE)
2. Specialization : Electrical and Electronics Engineering
3. Name of the Students :
1. H. Jaisairam
2. J. Mohamed kalifa
3. T. Veeramani
4. Roll Numbers : 02, 04 & 12
5. Registration Numbers : 821116105004, 821116105010 &
821116105018
6. Mobile Number of Students : 8248031085, 7867068164
8940911278
7. Email of Students : jaisairam@gmail.com
mohamedkalifa@gmail.com
Veeramani07@gmail.com
8. Name of the Guide : Mrs. N. Arulmozhi
9. Email of the Guide : arul_eer@kingsindia.net
10. Title of the Project : "Automatic fish feeder using an
Intelligent feeding controller"

Signature of the Students

: 

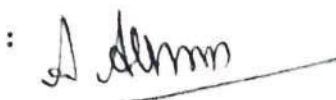
Signature of the Guide

: 

Signature of the Project Coordinator

:  11/11/2020 -

Signature of the HoD

: 



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACCEPTANCE FOR THE GUIDANCE

I, Dr./Mr./Ms. N. ARULMOZHI (Name in capital letters)
Assistant Professor (Designation). Hereby convey my
 willingness to guide Mr./Ms. H. Jaisairam, J. Mohamed Kalifa
T. Veeramani (Name of the students) in
 the topic "Automatic fish feeder using an Intelligent
feeding controller"
 _____ (Title of the project)

During the period December 19 to April 2020. I also agree to adhere to the
 deadline Specified by the Department for the completion of the project. I further
 agree to submit/produce details of assessment/mark etc. to the department in
 time.

N. Arulmozhi
 Signature of the Guide




Prasanna Kumar
 Project Coordinator

[Signature]
 Signature of the HOD

Checklist for guides

- Advised to check for the formatting of the presentation and the documentation.
- Check for the attendance of the students
- Conduct regular meeting with the students for the discussion and verify/update the works carried out for the project in the project diary.
- Advise the students to contribute some new techniques and advise them to publish a paper towards the end of the project.
- The presentation should have maximum of 15-20 slides and presentation will be 15 minutes.

FORMAT FOR PROJECT PROPOSAL

1. Name of the Programme : Bachelors of Engineering
2. Specialization : Electrical and Electronics Engineering
3. Name of the Students : 1. P. Aravindhnan
2. S. Parthiban
3. A. Praveenkumar
4. Roll Numbers : 01, 06 & 13
5. Registration Numbers : 821116105001, 821116105012
& 821116105501
6. Mobile Number of Students : 9865382133, 9786280605
8925206865
7. Email of Students : aravindantj2016@gmail.com
Parthibanappa21998@gmail.com
Prempraveen1425@gmail.com
8. Name of the Guide : Mr. R. Sundaramoorthi
9. Email of the Guide : facultyseekings@gmail.com
10. Title of the Project : "Implementation of battery Monitoring System and Smart charging Stations Using Iot for Electric Vehicle Applications"
- Signature of the Students : 1. P. Aravindhnan
2. S. Parthiban
3. A. Praveenkumar
- Signature of the Guide :  11/01/2020
- Signature of the Project Coordinator :  11/01/2020
- Signature of the HoD : 



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACCEPTANCE FOR THE GUIDANCE

I, Dr./Mr./Ms. ✓ R. SUNDARAMOORTHY (Name in capital letters)
 _____ (Designation). Hereby convey my
 willingness to guide Mr./Ms. 1. P. Aravindhan 2. S. Parthiban &
A. Praveen Kumar (Name of the students) in
 the topic "Implementation of Battery Monitoring System
and Smart charging Stations using IoT for Electric Vehicle"
 _____ (Title of the project)

During the period Dec' 2019 to April '2020 I also agree to adhere to the
 deadline Specified by the Department for the completion of the project. I further
 agree to submit/produce details of assessment/mark etc. to the department in
 time.

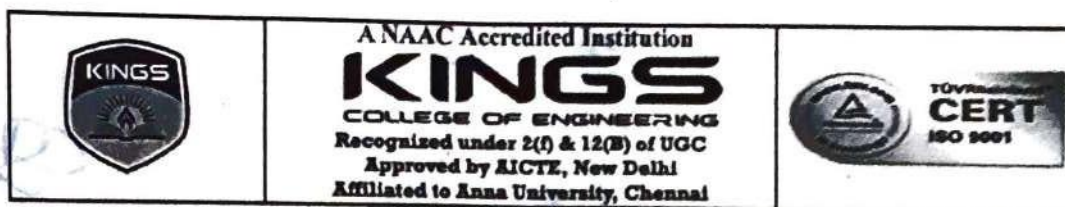
R. Sundaramoorthy
11/05/2020
 Signature of the Guide

R. Sundaramoorthy
11/05/2020
 Project Coordinator

A. Aravindhan
 Signature of the HOD

Checklist for guides

- Advised to check for the formatting of the presentation and the documentation.
- Check for the attendance of the students
- Conduct regular meeting with the students for the discussion and verify/update the works carried out for the project in the project diary.
- Advise the students to contribute some new techniques and advise them to publish a paper towards the end of the project.
- The presentation should have maximum of 15-20 slides and presentation will be 15 minutes.



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER

CIRCULAR 02 - UG PROJECT

Date : 10.09.2019

This is to inform that the project work zeroth review for final year students will be conducted on 12.09.2019 (FN). The students are informed to submit the following details during review after getting approval from the respective guides without fail.

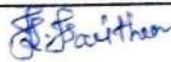






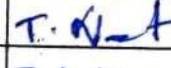




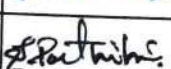

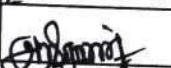
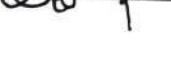
1. Power point presentation - Both soft copy and Hard copy (Handouts)
2. Power point presentation should include
 - i) Project title
 - ii) Aim / Abstract
 - iii) Existing System
 - iv) Limitations of existing system
 - v) Proposed system
 - vi) Block diagram of proposed system
 - vii) Circuit diagram
 - viii) List of components with ratings and price
 - ix) Budget
 - x) Advantages
 - xi) Conclusion
 - xii) References

P. S. S. S. S.
10/09/19
Project Coordinator

[Signature]
Head of the Department

Encl:





1. Guide name list
2. Students name list

S. NO	BATCH NUMBER	NAME OF THE STUDENT	SIGNATURE OF THE STUDENT	NAME OF THE INTERNAL GUIDE	SIGNATURE OF THE GUIDE
1	I	PAVITHRA. R		DR.S.SIVAKUMAR Professor/ EEE	
2		RASIKA. M			
3		SAKTHI SRI DEVI. R			
4	II	JAI SAI RAM. M		Mrs.N.ARULMOZHI AP / EEE	
5		MOHAMED KALIFA. J			
6		VEERMANI. T			
7	III	MUTHARASAN. T		Mr.J.AROKIJARAJ AP / EEE	
8		PAVITHRAN. A			
9		PRAVIN. G			
10	IV	ARAVINDHAN. P		Mr.R.SUNDARAMOORTHY AP / EEE	
11		PARTHIBAN. S			
12		PRAVEEN KUMAR.A			

UG PROJECT - GUIDE LIST

YEAR : IV / SEMESTER : VII

BATCH : 2016-2020

S.NO	BATCH NUMBER OF STUDENTS	NAME OF THE INTERNAL GUIDE	SIGNATURE
1	I	Dr.S.SIVAKUMAR	
2	IV	Mr.R.SUNDARAMOORTHY	
3	III	Mr.J.AROKIARAJ	
4	II	Mrs.N.ARULMOZHI	


PROJECT COORDINATOR


HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER
UG PROJECT ZEROth REVIEW SCHEDULE

YEAR/SEM : IV/VII

BATCH : 2016 - 2020

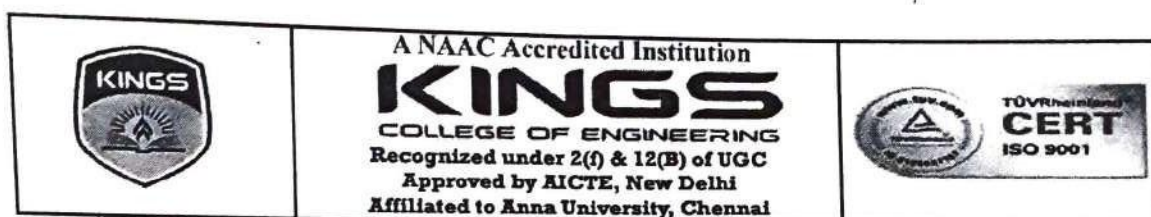
VENUE : PSS LAB

REVIEW DATE : 12.09.2019

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	TIME
1	I	821116105013	PAVITHRA. R	9.30 AM - 10.00 AM
2		821116105016	RASIKA. M	
3		821116105017	SAKTHI SRI DEVI. R	
4	II	821116105004	JAI SAI RAM. M	10.00 AM - 10.30 AM
5		821116105010	MOHAMED KALIFA. J	
6		821116105018	VEERMANI. T	
7	III	821116105011	MUTHARASAN. T	10.30 AM - 11.00 AM
8		821116105014	PAVITHRAN. A	
9		821116105015	PRAVIN. G	
10	IV	821116105001	ARAVINDHAN. P	11.00 AM - 11.30 AM
11		821116105012	PARTHIBAN. S	
12		821116105501	PRAVEEN KUMAR.A	

[Signature]
 PROJECT COORDINATOR

[Signature]
 HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 /ODD SEMESTER
UG PROJECT ZEROth REVIEW ATTENDANCE SHEET

YEAR/SEM : IV/VII

BATCH : 2016 - 2020

VENUE : PSS LAB

REVIEW DATE : 12.09.2019

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	SIGNATURE
1	I	821116105013	PAVITHRA. R	<i>[Signature]</i>
2		821116105016	RASIKA. M	<i>[Signature]</i>
3		821116105017	SAKTHI SRI DEVI. R	<i>[Signature]</i>
4	II	821116105004	JAI SAI RAM. M	<i>[Signature]</i>
5		821116105010	MOHAMED KALIFA. J	<i>[Signature]</i>
6		821116105018	VEERMANI. T	<i>[Signature]</i>
7	III	821116105011	MUTHARASAN. T	<i>[Signature]</i>
8		821116105014	PAVITHRAN. A	<i>[Signature]</i>
9		821116105015	PRAVIN. G	<i>[Signature]</i>
10	IV	821116105001	ARAVINDHAN. P	<i>[Signature]</i>
11		821116105012	PARTHIBAN. S	<i>[Signature]</i>
12		821116105501	PRAVEEN KUMAR.A	<i>[Signature]</i>

[Signature]
 PROJECT COORDINATOR

[Signature]
 HEAD OF THE DEPARTMENT

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER

UG PROJECT EVALUATION SHEET - ZEROOTH REVIEW

Year / Sem : IV / VII

Review Date : 12.09.2019

Panel Member (Expert 1) : Dr.A.Albert Martin Ruban, HoD/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	9	4	21
2		821116105016	RASIKA. M	4	4	9	3	20
3		821116105017	SAKTHI SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	3	3	8	3	17
5		821116105010	MOHAMED KALIFA. J	3	4	8	3	18
6		821116105018	VEERMANI. T	3	4	7	3	17
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	3	8	3	18
9		821116105015	PRAVIN. G	4	4	8	4	20
10	IV	821116105001	ARAVINDHAN. P	3	3	8	3	17
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR. A	4	4	8	4	20


 + SIGNATURE OF EXPERT 1


 HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER

UG PROJECT EVALUATION SHEET - ZEROth REVIEW

Year / Sem : IV / VII

Review Date : 12.09.2019

Panel Member (Expert 2) : Mr.R.Sundaramoorthi AP/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	9	3	20
2		821116105016	RASIKA. M	4	4	9	3	20
3		821116105017	SAKTHI SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	3	4	8	3	18
5		821116105010	MOHAMED KALIFA. J	3	4	8	3	18
6		821116105018	VEERMANI. T	3	4	7	3	17
7	III	821116105011	MUTHARASAN. T	4	4	8	4	20
8		821116105014	PAVITHRAN. A	4	4	8	3	19
9		821116105015	PRAVIN. G	4	4	9	4	21
10	IV	821116105001	ARAVINDHAN. P	4	4	7	3	18
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR.A	4	4	8	4	20

R. Sundaramoorthi
 12/09/19
 SIGNATURE OF EXPERT 2

[Signature] 12/09/19
 HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER

UG PROJECT EVALUATION SHEET - ZEROth REVIEW

Year / Sem : IV / VII

Review Date : 12.09.2019

Panel Member (Expert 3) : Mrs.N.Rajeswari AP/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	10	4	22
2		821116105016	RASIKA. M	4	4	9	4	21
3		821116105017	SAKTHI-SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	4	4	7	2	17
5		821116105010	MOHAMED KALIFA. J	4	4	7	3	18
6		821116105018	VEERMANI. T	4	4	7	2	17
7	III	821116105011	MUTHARASAN. T	4	4	8	4	20
8		821116105014	PAVITHRAN. A	4	4	7	3	18
9		821116105015	PRAVIN. G	4	4	9	4	21
10	IV	821116105001	ARAVINDHAN. P	4	4	7	3	18
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR.A	4	4	9	4	21

N.Rajeswari
 SIGNATURE OF EXPERT 3

[Signature]
 HEAD OF THE DEPARTMENT



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER**

UG PROJECT EVALUATION SHEET - ZEROOTH REVIEW

Year / Sem : IV / VII

Review Date : 12.09.2019

Panel Member (Expert 4) : Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	5	8	4	21
2		821116105016	RASIKA. M	4	5	8	3	20
3		821116105017	SAKTHI SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	4	4	7	3	18
5		821116105010	MOHAMED KALIFA. J	4	4	8	3	19
6		821116105018	VEERMANI. T	4	4	7	3	18
7	III	821116105011	MUTHARASAN. T	4	4	8	4	20
8		821116105014	PAVITHRAN. A	4	4	7	3	18
9		821116105015	PRAVIN. G	4	4	7	4	19
10	IV	821116105001	ARAVINDHAN. P	4	4	7	3	18
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR. A	4	4	8	4	20

[Signature]
17/9/19

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER
PROJECT DETAILS

YEAR / SEM : IV / VII

Review :Zeroth Review

Project evaluation form : UG

Date : 12.09.2019

Panel Members :

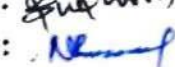
1. Dr.A.Albert Martin Ruban, HoD / EEE - Expert 1
2. Mr.R.Sundaramoorthi, AP / EEE - Expert 2
3. Mrs.N.Rajeswari, AP / EEE - Expert 3
4. Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	EXPERT 1 (25)	EXPERT 2 (25)	EXPERT 3 (25)	GUIDE (25)	TOTAL (100)
1	I	821116105013	PAVITHRA. R	21	20	22	21	84
2		821116105016	RASIKA. M	20	20	21	20	81
3		821116105017	SAKTHI SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	17	18	17	18	70
5		821116105010	MOHAMED KALIFA. J	18	18	18	19	73
6		821116105018	VEERMANI. T	17	17	17	18	69
7	III	821116105011	MUTHARASAN. T	21	20	20	20	81
8		821116105014	PAVITHRAN. A	18	19	18	18	73
9		821116105015	PRAVIN. G	20	21	21	19	81
10	IV	821116105001	ARAVINDHAN. P	17	18	18	18	71
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR. A	20	20	21	20	81


Signature

Expert 1 : 

Expert 2 : 

Expert 3 : 


 Signature of the Project Coordinator


 Signature of the HoD

Note: - Expert 1 may be HoD or Nominee by HoD. Other experts are senior faculties from the Department, deputed by HoD. Project coordinator is responsible for conducting reviews and submitting the evaluation form and related activities.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / ODD SEMESTER

PROJECT DETAILS

YEAR / SEM : IV / VII

Review :Zeroth Review

Project evaluation form : UG

Date : 12.09.2019

Panel Members :

1. Dr.A.Albert Martin Ruban, HoD / EEE - Expert 1
2. Mr.R.Sundaramoorthi, AP / EEE - Expert 2
3. Mrs.N.Rajeswari, AP / EEE - Expert 3
4. Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	EXPERT 1 (25)	EXPERT 2 (25)	EXPERT 3 (25)	GUIDE (25)	TOTAL (100)
1	I	821116105013	PAVITHRA. R	21	20	22	21	84
2		821116105016	RASIKA. M	20	20	21	20	81
3		821116105017	SAKTHI SRI DEVI. R	0	0	0	0	0
4	II	821116105004	JAI SAI RAM. M	17	18	17	18	70
5		821116105010	MOHAMED KALIFA. J	18	18	18	19	73
6		821116105018	VEERAMANI. T	17	17	17	18	69
7	III	821116105011	MUTHARASAN. T	21	20	20	20	81
8		821116105014	PAVITHRAN. A	18	19	18	18	73
9		821116105015	PRAVIN. G	20	21	21	19	81
10	IV	821116105001	ARAVINDHAN. P	17	18	18	18	71
11		821116105012	PARTHIBAN. S	0	0	0	0	0
12		821116105501	PRAVEEN KUMAR.A	20	20	21	20	81


 Signature of the Project Coordinator


 Signature of the HoD


 17/9/19

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
 ACADEMIC YEAR 2019 - 2020/ EVEN SEMESTER
PROJECT WORK-(2016-2020 BATCH)
FIELD VISIT REPORT-Dec/Jan'19

S. No	Batch number	Register number	Name of the students	Name of the Internal Guide	Title	Area	Suggested Industry/ Organization for learning	Industry/ sector visited	Period	outcome
1	I	821116105013	PAVITHRA. R	Dr.S.SIVAKUMAR Professor/ EEE	Prediction of fault and Protection of single phase motor.	Electrical machines	KCE/NIT, Trichy	Siemens CoE, NIT, Trichy <i>Good</i>	16.12.19 to 17.12.19	Understood how to protect single phase motor and types of fault at Electrical machines lab and Siemens lab, NIT
2		821116105016	RASIKA. M							
3		821116105017	SAKTHI SRI DEVI. R							
4	II	821116105004	JAI SAI RAM. M	Mrs.N.ARULMOZHI AP / EEE	Automatic Fish feeder Using an Intelligent feeding Controller	Automation	Automation Industry/ NIT Trichy	Armada Industrial Automation	16.12.19 to 17.12.19	Gained knowledge about Intelligent controller and requirement of hardware components.
5		821116105010	MOHAMED KALIFA. J							
6		821116105018	VEERMANI. T							
7	III	821116105011	MUTHARASAN. T	Mr.J.AROKIARAJ AP / EEE	Implementation of GSM based control and Monitoring of Substation.	Power system	NIT, Trichy/ Substation	Scion Research and Development	23.12.19 to 24.12.19	Learnt how to monitor substation using Automation
8		821116105014	PAVITHRAN. A							
9			RAGURAMAN. R							
10	IV	821116105001	ARAVINDHAN. P	Mr.R.SUNDARA MOORTHY AP / EEE	Implementation of Battery Monitoring System and smart charging stations using IOT for Electric Vehicle Applications	Battery Management system	Automation Industry/ NIT Trichy	Armada Industrial Automation	23.12.19 to 24.12.19	Gained knowledge about Battery Management system.
11		821116105012	PARTHIBAN. S							
12		821116105501	PRAVEEN KUMARA							

Prof. S. S. Sivasankar
 Project Coordinator

S. S. Sivasankar
 Head of the Department

sem
 Principal



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

CIRCULAR 03 - UG PROJECT

Date : 07.01.2020

This is to inform that the project work first review for final year students will be conducted on 11.1.2020 (FN). The students are informed to submit the following details during review after getting approval from the respective guides without fail.

1. Power point presentation – Both soft copy and Hard copy (Handouts)

2. Power point presentation should include

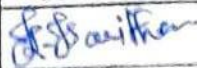
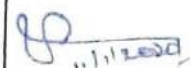
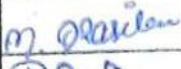




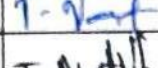



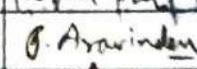
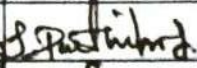
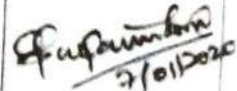


- i) Project title
- ii) Aim / Abstract
- iii) Existing System
- iv) Limitations of existing system
- v) Proposed system
- vi) Block diagram of proposed system
- vii) Circuit diagram
- viii) List of components with ratings and price
- ix) Budget
- x) Advantages
- xi) Conclusion
- xii) References

[Signature]
Project Coordinator 07/01/2020

[Signature] 07/01/20
Head of the Department

Encl:

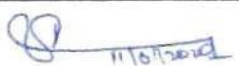
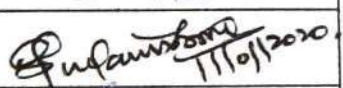
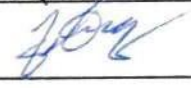

1. Guide name list
2. Students name list

S. NO	BATCH NUMBER	NAME OF THE STUDENT	SIGNATURE OF THE STUDENT	NAME OF THE INTERNAL GUIDE	SIGNATURE OF THE GUIDE
1	I	PAVITHRA. R		DR.S.SIVAKUMAR Professor/ EEE	
2		RASIKA. M			
3		SAKTHI SRI DEVI. R			
4	II	JAI SAI RAM. M		Mrs.N.ARULMOZHII AP / EEE	
5		MOHAMED KALIFA. J			
6		VEERAMANI. T			
7	III	MUTHARASAN. T		Mr.J.AROKIARAJ AP / EEE	
8		PAVITHRAN. A			
9		RAGURAMAN.R			
10	IV	ARAVINDHAN. P		Mr.R.SUNDARAMOORTHII AP / EEE	 7/01/2020
11		PARTHIBAN. S			
12		PRAVEEN KUMARA			


UG PROJECT - GUIDE LIST

YEAR : IV / SEMESTER : VII

BATCH : 2016-2020

S.NO	BATCH NUMBER OF STUDENTS	NAME OF THE INTERNAL GUIDE	SIGNATURE
1	I	Dr.S.SIVAKUMAR	
2	IV	Mr.R.SUNDARAMOORTHY	
3	III	Mr.J.AROKIARAJ	
4	II	Mrs.N.ARULMOZHI	


PROJECT COORDINATOR


HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

UG PROJECT FIRST REVIEW SCHEDULE

YEAR/SEM : IV/VIII

BATCH : 2016 - 2020

VENUE : PSS LAB

REVIEW DATE : 11.01.2020

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	TIME
1	I	821116105013	PAVITHRA. R	10.00 AM - 10.30 AM
2		821116105016	RASIKA. M	
3		821116105017	SAKTHI SRI DEVI. R	
4	II	821116105004	JAI SAI RAM. M	10.30 AM - 11.00 AM
5		821116105010	MOHAMED KALIFA. J	
6		821116105018	VEERAMANI. T	
7	III	821116105011	MUTHARASAN. T	11.00 AM - 11.30 AM
8		821116105014	PAVITHRAN. A	
9			RAGURAMAN. R	
10	IV	821116105001	ARAVINDHAN. P	11.30 AM - 12.00 PM
11		821116105012	PARTHIBAN. S	
12		821116105501	PRAVEEN KUMAR. A	

[Signature]
PROJECT COORDINATOR

[Signature]
HEAD OF THE DEPARTMENT

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 – 2020 /EVEN SEMESTER

UG PROJECT FIRST REVIEW ATTENDANCE SHEET

YEAR/SEM : IV/VIII

BATCH : 2016 – 2020

VENUE : PSS LAB

REVIEW DATE :

11.01.2020

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	SIGNATURE
1	I	821116105013	PAVITHRA. R	<i>[Signature]</i>
2		821116105016	RASIKA. M	<i>[Signature]</i>
3		821116105017	SAKTHI SRI DEVI. R	<i>[Signature]</i>
4	II	821116105004	JAI SAI RAM. M	<i>[Signature]</i>
5		821116105010	MOHAMED KALIFA. J	<i>[Signature]</i>
6		821116105018	VEERAMANI. T	<i>[Signature]</i>
7	III	821116105011	MUTHARASAN. T	<i>[Signature]</i>
8		821116105014	PAVITHRAN. A	<i>[Signature]</i>
9			RAGURAMAN.R	<i>[Signature]</i>
10	IV	821116105001	ARAVINDHAN. P	<i>[Signature]</i>
11		821116105012	PARTHIBAN. S	<i>[Signature]</i>
12		821116105501	PRAVEEN KUMAR.A	<i>[Signature]</i>

[Signature]
19/01/2020
PROJECT COORDINATOR

[Signature]
HEAD OF THE DEPARTMENT



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER**

UG PROJECT EVALUATION SHEET - FIRST REVIEW

Year / Sem : IV / VIII

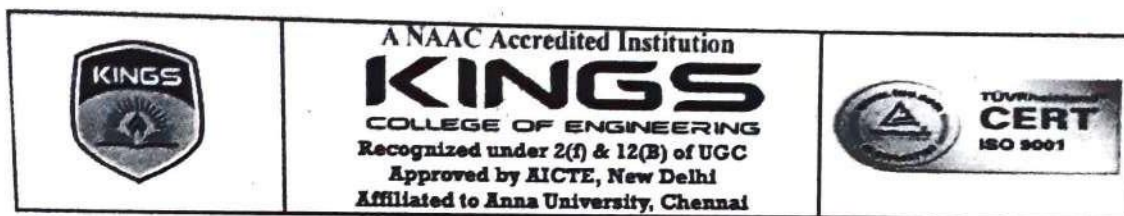
Review Date : 11.01.2020

Panel Member (Expert 1) : Dr. A. Albert Martin Ruban, HoD/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	9	4	21
2		821116105016	RASIKA. M	4	4	9	4	21
3		821116105017	SAKTHI SRI DEVI. R	4	4	8	4	20
4	II	821116105004	JAI SAI RAM. M	4	4	8	4	20
5		821116105010	MOHAMED KALIFA. J	4	4	8	4	20
6		821116105018	VEERMANI. T	4	4	8	4	20
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	4	8	4	20
9			RAGURAMAN. R	4	4	8	4	20
10	IV	821116105001	ARAVINDHAN. P	4	4	9	4	21
11		821116105012	PARTHIBAN. S	4	4	9	4	21
12		821116105501	PRAVEEN KUMAR. A	4	4	9	4	21


SIGNATURE OF EXPERT 1


HEAD OF THE DEPARTMENT



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER**

UG PROJECT EVALUATION SHEET - FIRST REVIEW

Year/ Sem : IV / VIII

Review Date : 11.01.2020

Panel Member (Expert 2) : Mr.R.Sundaramoorthi AP/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	3	8	4	19
2		821116105016	RASIKA. M	4	3	8	4	19
3		821116105017	SAKTHI SRI DEVI. R	4	3	8	4	19
4	II	821116105004	JAI SAI RAM. M	4	4	8	4	20
5		821116105010	MOHAMED KALIFA. J	4	4	8	4	20
6		821116105018	VEERMANI. T	4	4	8	4	20
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	4	8	4	20
9			RAGURAMAN.R	4	4	8	4	20
10	IV	821116105001	ARAVINDHAN. P	4	4	8	4	20
11		821116105012	PARTHIBAN. S	4	4	9	4	21
12		821116105501	PRAVEEN KUMAR.A	4	4	9	4	21

R. Sundaramoorthi
11/1/2020
SIGNATURE OF EXPERT 2

A. Arumugam
HEAD OF THE DEPARTMENT



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER**

UG PROJECT EVALUATION SHEET - FIRST REVIEW

Year / Sem : IV / VIII

Review Date : 11.01.2020

Panel Member (Expert 3) : Mrs.N.Rajeswari AP/EEE

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	9	4	21
2		821116105016	RASIKA. M	4	4	8	4	20
3		821116105017	SAKTHI SRI DEVI. R	4	4	8	4	20
4	II	821116105004	JAI SAI RAM. M	4	4	8	4	20
5		821116105010	MOHAMED KALIFA. J	4	4	8	4	20
6		821116105018	VEERMANI. T	4	4	8	4	20
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	4	8	4	20
9			RAGURAMAN.R	4	4	8	4	20
10	IV	821116105001	ARAVINDHAN. P	4	4	8	4	20
11		821116105012	PARTHIBAN. S	4	4	8	4	20
12		821116105501	PRAVEEN KUMAR.A	4	4	9	4	21


SIGNATURE OF EXPERT3


HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

UG PROJECT EVALUATION SHEET - FIRST REVIEW

Year/ Sem : IV / VIII

Review Date : 11.01.2020

Panel Member (Expert 4) : Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	3	7	3	17
2		821116105016	RASIKA. M	4	3	7	3	17
3		821116105017	SAKTHI SRI DEVI. R	4	3	7	3	17
4	II	821116105004	JAI SAI RAM. M	4	3	7	4	18
5		821116105010	MOHAMED KALIFA. J	4	4	9	4	21
6		821116105018	VEERMANI. T	4	4	8	4	20
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	4	8	4	20
9			RAGURAMAN. R	4	4	8	4	20
10	IV	821116105001	ARAVINDHAN. P	4	4	8	4	20
11		821116105012	PARTHIBAN. S	4	4	9	4	21
12		821116105501	PRAVEEN KUMAR. A	4	4	9	4	21

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

PROJECT DETAILS

YEAR / SEM : IV / VII

Review : First Review

Panel Members :

1. Dr.A.Albert Martin Ruban, HoD / EEE - Expert 1
2. Mr.R.Sundaramoorthi, AP / EEE - Expert 2
3. Mrs.N.Rajeswari, AP / EEE - Expert 3
4. Guides

Project evaluation form : UG

Date : 11.01.2020

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	EXPERT 1 (25)	EXPERT 2 (25)	EXPERT 3 (25)	GUIDE (25)	TOTAL (100)
1	I	821116105013	PAVITHRA. R	21	19	21	17	78
2		821116105016	RASIKA. M	21	19	20	17	77
3		821116105017	SAKTHI SRI DEVI. R	20	19	20	17	76
4	II	821116105004	JAI SAI RAM. M	20	20	20	18	78
5		821116105010	MOHAMED KALIFA. J	20	20	20	21	81
6		821116105018	VEERAMANI. T	20	20	20	20	80
7	III	821116105011	MUTHARASAN. T	21	21	21	21	84
8		821116105014	PAVITHRAN. A	20	20	20	20	80
9			RAGURAMAN. R	20	20	20	20	80
10	IV	821116105001	ARAVINDHAN. P	21	20	20	20	81
11		821116105012	PARTHIBAN. S	21	21	20	21	83
12		821116105501	PRAVEEN KUMAR. A	21	21	21	21	84

Signature

Expert 1 :

Expert 2 :

Expert 3 :

Signature of the Project Coordinator

Signature of the HoD

Note: - Expert 1 may be HoD or Nominee by HoD. Other experts are senior faculties from the Department, deputed by HoD. Project coordinator is responsible for conducting reviews and submitting the evaluation form and related activities.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER
PROJECT WORK-(2016-2020 BATCH)
CONFERENCE PARTICIPATION REPORT

S. No	Batch number	Register number	Name of the students	Name of the Internal Guide	Title	Area	Name of the College Participated	Conference Type	Period
1	I	821116105013	PAVITHRA. R	Dr.S.SIVAKUMAR Professor/EEE	Prediction of fault and Protection of single phase motor.	Electrical machines	Arasu Engineering College ,Kumbakonam	International Conference	20.2.2020& 21.2.2020
2		821116105016	RASIKA. M						
3		821116105017	SAKTHI SRI DEVI. R						
4	II	821116105004	JAI SAI RAM. M	Mrs.N.ARULMOZHI AP/EEE	Automatic Fish feeder Using an Intelligent feeding Controller	Automation	St.Joseph's College of Engg and Tech, Thanjavur	International Conference	9.3.2020
5		821116105010	MOHAMED KALIFA. J						
6		821116105018	VEERMANI. T						
7	III	821116105011	MUTHARASAN. T	Mr.J.AROKIAARAJ AP/EEE	Implementation of GSM based control and Monitoring of Substation.	Power system	St.Joseph's College of Engg and Tech, Thanjavur	International Conference	9.3.2020
8		821116105014	PAVITHRAN. A						
9			RAGURAMAN.R						
10	IV	821116105001	ARAVINDHAN. P	Mr.R.SUNDARA MOORTHY AP/ EEE	Implementation of Battery Monitoring System and smart charging stations using IOT for Electric Vehicle Applications	Battery Management system	Arasu Engineering College ,Kumbakonam	International Conference	20.2.2020& 21.2.2020
11		821116105012	PARTHIBAN. S						
12		821116105501	PRAVEEN KUMAR.A						


Project Coordinator


Head of the Department


Principal



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

CIRCULAR 04 - UG PROJECT

Date : 20.02.2020

This is to inform that the project work second review for final year students will be conducted on 22.2.2020 (FN). The students are informed to submit the following details during review after getting approval from the respective guides without fail.

1. Power point presentation - Both soft copy and Hard copy (Handouts)
2. Power point presentation should include
 - i) Project title
 - ii) Aim / Abstract
 - iii) Existing System
 - iv) Limitations of existing system
 - v) Proposed system
 - vi) Block diagram of proposed system
 - vii) Circuit diagram
 - viii) List of components with ratings and price
 - ix) Budget
 - x) Advantages
 - xi) Conclusion
 - xii) References

[Signature]
Project Coordinator

[Signature] 20/2/20
Head of the Department

Encl:

1. Guide name list
2. Students name list



UG PROJECT - GUIDE LIST

YEAR : IV / SEMESTER : VII

BATCH : 2016-2020

S.NO	BATCH NUMBER OF STUDENTS	NAME OF THE INTERNAL GUIDE	SIGNATURE
1	I	Dr.S.SIVAKUMAR	
2	IV	Mr.R.SUNDARAMOORTHY	<i>R. Sundaramoorthy</i> 24/02/2020
3	III	Mr.J.AROKIARAJ	<i>J. Arokia Raj</i> 24/2/2020
4	II	Mrs.N.ARULMOZHI	<i>N. Arulmozhi</i>

R. Sundaramoorthy
24/02/2020
PROJECT COORDINATOR

A. Arumugam
22/2/20
HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER
UG PROJECT SECOND REVIEW SCHEDULE

YEAR/SEM : IV/VIII

BATCH : 2016 - 2020

VENUE : PSS LAB

REVIEW DATE : 22.02.2020

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	TIME
1	I	821116105013	PAVITHRA. R	10.00 AM - 10.30 AM
2		821116105016	RASIKA. M	
3		821116105017	SAKTHI SRI DEVI. R	
4	II	821116105004	JAI SAI RAM. M	10.30 AM - 11.00 AM
5		821116105010	MOHAMED KALIFA. J	
6		821116105018	VEERAMANI. T	
7	III	821116105011	MUTHARASAN. T	11.00 AM - 11.30 AM
8		821116105014	PAVITHRAN. A	
9			RAGURAMAN.R	
10	IV	821116105001	ARAVINDHAN. P	11.30 AM - 12.00 PM
11		821116105012	PARTHIBAN. S	
12		821116105501	PRAVEEN KUMAR.A	

[Signature]
PROJECT COORDINATOR

[Signature] 22/2/20
HEAD OF THE DEPARTMENT



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

CIRCULAR 05 - UG PROJECT

Date : 5.3.2020

This is to inform that the project work third review for final year students will be conducted on 7.3.2020 (FN). The students are informed to submit the following details during review after getting approval from the respective guides without fail.

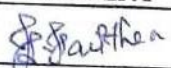

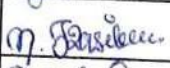
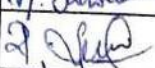
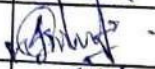

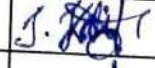
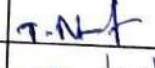


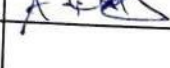

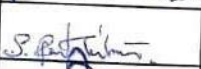



1. Power point presentation – Both soft copy and Hard copy (Handouts)
2. Power point presentation should include
 - i) Project title
 - ii) Aim / Abstract
 - iii) Existing System
 - iv) Limitations of existing system
 - v) Proposed system
 - vi) Block diagram of proposed system
 - vii) Circuit diagram
 - viii) List of components with ratings and price
 - ix) Budget
 - x) Advantages
 - xi) Conclusion
 - xii) References

P. S. S. S. S. S.
Project Coordinator 5/3/2020.

[Signature]
Head of the Department

Encl:

1. Guide name list
2. Students name list

S. NO	BATCH NUMBER	NAME OF THE STUDENT	SIGNATURE OF THE STUDENT	NAME OF THE INTERNAL GUIDE	SIGNATURE OF THE GUIDE
1	I	PAVITHRA. R		DR.S.SIVAKUMAR Professor/ EEE	
2		RASIKA. M			
3		SAKTHI SRI DEVI. R			
4	II	JAI SAI RAM. M		Mrs.N.ARULMOZHI AP / EEE	
5		MOHAMED KALIFA. J			
6		VEERAMANI. T			
7	III	MUTHARASAN. T		Mr.J.AROKIJARAJ AP / EEE	
8		PAVITHRAN. A			
9		RAGURAMAN.R			
10	IV	ARAVINDHAN. P		Mr.R.SUNDARAMOORTHY AP / EEE	
11		PARTHIBAN. S			
12		PRAVEEN KUMAR.A			

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

UG PROJECT EVALUATION SHEET - THIRD REVIEW

Year / Sem : IV / VIII

Review Date : 7.3.2020

Panel Member (Expert 4) : Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	Content of the Project (5)	Slide Preparation (5)	Presentation (10)	Viva (5)	Total (25)
1	I	821116105013	PAVITHRA. R	4	4	9	4	21
2		821116105016	RASIKA. M	4	4	8	4	20
3		821116105017	SAKTHI SRI DEVI. R	4	4	7	4	19
4	II	821116105004	JAI SAI RAM. M	4	4	8	4	20
5		821116105010	MOHAMED KALIFA. J	4	4	8	4	20
6		821116105018	VEERMANI. T	4	4	7	4	19
7	III	821116105011	MUTHARASAN. T	4	4	9	4	21
8		821116105014	PAVITHRAN. A	4	4	8	4	20
9			RAGURAMAN. R	0	0	0	0	0
10	IV	821116105001	ARAVINDHAN. P	4	4	8	4	20
11		821116105012	PARTHIBAN. S	4	4	9	4	21
12		821116105501	PRAVEEN KUMAR. A	4	4	9	4	21

P. Anantharaman
9/3/2020.
Project Co-ordinator

A. Kumar
10/3/20
Signature of the HoD

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER

PROJECT DETAILS

YEAR / SEM : IV / VIII

Review: Third Review

Project evaluation form : UG

Date : 07.3.2020

Panel Members :

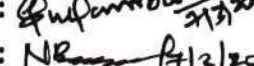
1. Dr.A.Albert Martin Ruban, HoD / EEE - Expert 1
2. Mr.R.Sundaramoorthi, AP / EEE - Expert 2
3. Mrs.N.Rajeswari, AP / EEE - Expert 3
4. Guides

S. NO	BATCH NUMBER	REGISTER NUMBER	NAME OF THE STUDENT	EXPERT 1 (25)	EXPERT 2 (25)	EXPERT 3 (25)	GUIDE (25)	TOTAL (100)
1	I	821116105013	PAVITHRA. R	22	20	20	21	83
2		821116105016	RASIKA. M	21	20	20	20	81
3		821116105017	SAKTHI SRI DEVI. R	20	20	20	19	79
4	II	821116105004	JAI SAI RAM. M	20	19	19	20	78
5		821116105010	MOHAMED KALIFA. J	20	20	20	20	80
6		821116105018	VEERAMANI. T	19	19	19	19	76
7	III	821116105011	MUTHARASAN. T	22	21	21	21	85
8		821116105014	PAVITHRAN. A	20	20	19	20	79
9			RAGURAMAN.R	0	0	0	0	0
10	IV	821116105001	ARAVINDHAN. P	20	20	20	20	80
11		821116105012	PARTHIBAN. S	21	21	20	21	83
12		821116105501	PRAVEEN KUMAR.A	21	21	20	21	83


Signature

Expert 1 : 

Expert 2 : 

Expert 3 : 


 Signature of the Project Coordinator


 Signature of the HoD

Note: - Expert 1 may be HoD or Nominee by HoD. Other experts are senior faculties from the Department, deputed by HoD. Project coordinator is responsible for conducting reviews and submitting the evaluation form and related activities.

AUTOMATIC FISH FEEDER USING AN INTELLIGENT FEEDING CONTROLLER

Created By

Jai Sai Ram.M
Mohamed Kalifa.J
Veeramani.T

GUIDED BY

Mrs.N.ARULMOZHIA P/EEE

AIM:

An automatic fish feeder is a device that automatically feed the Fish at a Predetermined time. In a way, it is to control the fish Feeding Activity by Using a fish feeder that combined the Mechanical system And electrical System to form a device instead of manually feeding the Fish by hand.

ABSTRACT:

♦ Auto fish feeders are a perfect device to ensure a consistent feeding regimen for fish in the aquarium even when you are not around to feed them. But what if you have the luxury of having a fish pond and still want to maintain a reliable feeding schedule even in your absence Surely, you cannot use one or more automatic aquarium feeders for the purpose. What you need is a high-capacity, automatic pond fish feeder.

♦ In this article, we will look at some of the best automatic pond fish feeders and directional pond fish feed casters to buy for your fish pond. Standard pond feeders are suitable for extra-large aquariums and backyard fish ponds and water gardens, while heavy-duty feed casters are primarily meant for larger ponds. We will also look at some of the factors to consider while picking the best automatic pond fish feeders for your needs and share our top picks. Finally, we will look at some of the accessories to consider along with these automatic fish feeders.

Our Plan of POC



INTRODUCTION:

An automatic fish feeder is a type of machine that allows the user to set the preferred time to allow the machine to automatically feed the fish at the specific time set. There are various ways to achieve this goal of allowing the user to set the preference time such as using an external timer, a timing belt and many others. This project involves designing and building a prototype of an automatic fish feeder for cultivation pond usage. This means that the basic concept of the machine is to be able to feed the fish at a specific time set and also able to cover the whole pond area which comes in various sizes.

KEYWORDS:

- Fish Pond
- Automatic Fish Feeder
- Fish and Aquaculture
- Control System
- Preference Testing

The objectives of this project:

- ❑ To design an automatic fish feeder for cultivation pond.
- ❑ To create a prototype of the designed automatic fish feeder.
- ❑ To use the PLC as a controller to the prototype machine.

EXISTING SYSTEM:

There are two systems in existing system they are Non Technical and technical System. Non technical system is fully under the MANUAL CONTROL. So there is lot of drawbacks. To reduce this problems they go for technical system using HARDWARE CONTROL. Here Relays with electrical timers and counters are used to achieve the desired level of automation.

STEPS IN FISH FEEDER

- Manual Feeding
- Semi automatic feeding
- Automatic feeding

Most automatic fish feeder had problem of controlling the amount of Fish feed released. However, this device does come with their own drawback. Too much and it will pollute the water in the tank and too little will led To starvation.

Another drawback is the lack of monitoring and instant feedback From the fish feeder.

To date, many of the fish farmers still use the old system for example manual feeding system. By utilizing the manual feeding system, it means that many work would needed by the fish farmer in order to cover the many jobs such as cleaning the feeder, refilling the pellet and also repair or maintenance operation. All these activities are required more energy and time compare to the automatic fish feeder. However, for large area of agriculture, the traditional manual feeding system users will certainly face difficulty in managing the entire feeding schedule. Some methods were developed or designed to detect left over feed in order to stop feeding. In previous years, some methods that used in feeding system has an own advantages and capability to feeding the pellets. Nowadays, many entrepreneurs have implemented this feeding system to their production and their feedback from this system is better and more efficiency from the traditional method. Below are the latest technologies that people out there use for their feeding system or machine.

SCHEMATIC DIAGRAM OF EXISTING SYSTEM

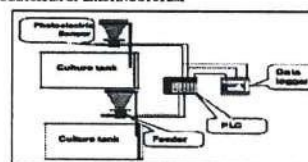


Fig : Automated Fish Feeder

A modified feeding system was developed based on the preliminary results. A control system was then attached to this device allowing the fish to be fed at the right cycle time as required or predefined by user or entrepreneur. Timer was employed in this device to control the motor rotation attached to sphere former, which dispense the pellets into the water.

LIMITATIONS OF EXISTING SYSTEM:

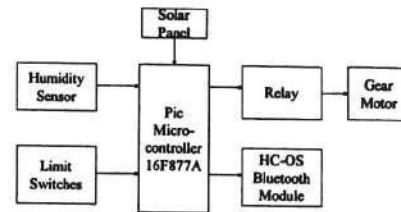
- However, this device does come with their own drawback.
- Most automatic fish feeder had problem of controlling the amount of Fish feed released.
- Too much and it will pollute the water in the tank and too little will led To starvation.
- Another drawback is the lack of monitoring and instant feedback From the fish feeder.

PROPOSED SYSTEM:

- Subsequently, this research was proposed to design an automatic fish Feeder system using an Intelligent feeding controller.
- The device developed combines mechanical and electrical system in Controlling fish feeding activity.
- This device, basically consist of pellet storage, former, stand, DC motor and Microcontroller.

In this project we will make all the machines to work on its own with the help of inputs received from the sensors which are helpful devices for precision aquaculture. An automatic fish feeder is an electronic device that is Designed to feed fish at regular intervals. There are many different kinds of Automated fish feeders from which consumers can choose. We aim to Design a feeder that improved upon these current systems. The proposed system will help the user feeding their fish every Day, even when they far from their home. Subsequently, this research was proposed to design an automatic fish Feeder system using an Intelligent feeding controller. The device developed combines mechanical and electrical system in Controlling fish feeding activity.

BLOCK DIAGRAM :



SOLAR PANEL:

- Solar radiation , often called the solar resource , is a general term for the Electromagnetic radiation emitted by the sun.
- Solar radiation can be captured and turned into useful forms of energy, such as heat and electricity, using a variety of technologies.
- Used to generate power 12V/2A



RELAY:

- A relay is an electrically operated switch.
- Relay is used to opening & closing purpose of the trash can.
- Many relays use an electromagnet to operate a switching mechanism but other operating principles are also used.
- Relay has 5 pins (2 coil, 1 no, 1 nc, 1 common pin).



MICRO CONTROLLER

- The microcontroller used here is PIC which is initially referred is PERIPHERAL INTERFACE CONTROLLER.
- Micro controller is used to control the input and output units.
- PICs have high performance RISC CPU as it operating frequency DC 20Mhz clock input and 200 ns instruction cycle.



HUMIDITY SENSOR

- Humidity is the amount of water vapor in the air, expressed as a percentage of the maximum amount that the air could hold at the given temperature.
- To build a humidity sensor can be difficult because of their wide dynamic range and sensor's drive requirement.
- But we can build the humidity sensor with reasonable accuracy within the chosen range by customize the circuit. To customize the circuit by carefully selecting the devices that comprises the analog front end.



Fig : Humidity Sensor

GEAR MOTOR

A *gear motor* is a specific type of electrical motor that is designed to produce high torque while maintaining a low horsepower, or low speed, motor output. Gear motors can be found in many different applications, and are probably used in many devices in your home.



Fig : Gear Motor

BLUETOOTH MODULE

The Particular module that I have can be powered from 3.6 to 6 volts , because it comes on breakout board which contains a voltage regulator. However, the logic voltage level of the data pins is 3.3V. So, the line between the Arduino TX (Transmit pin, which has 5V output) and the Bluetooth module RX (Receive pin, which supports only 3.3V) needs to be connected through a voltage divider in order not to burn the module.

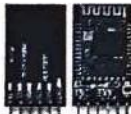


Fig : Bluetooth module

LIMIT SWITCHES

In electrical engineering a limit switch is a switch operated by the motion of a machine part or presence of an object. They are used for controlling machinery as part of a control system, as a safety interlocks, or to count objects passing a point. A limit switch is an electromechanical device that consists of an actuator mechanically linked to a set of contacts. When an object comes into contact with the actuator, the device operates the contacts to make or break an electrical connection.



Fig : Limit Switches

CIRCUIT DIAGRAM

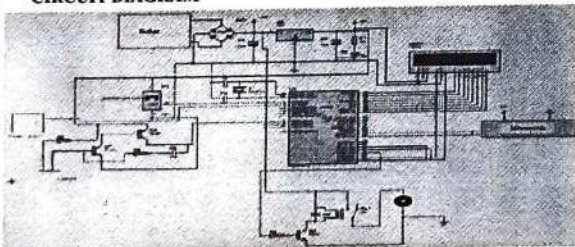


Fig : Circuit Diagram of Proposed System

ADVANTAGES:

- Reduce cost
- Improve agriculture sector
- Increase productivity
- Encourage the growth of agriculture sector
- Economy growth

DISADVANTAGES:

The drawbacks to an automatic fish feeder are three fold: First, automatic fish feeders can fail. When they fail, they either Don't dispense food, or they dispense way too much food...

CONCLUSION:

A smart automatic fish feeder is successfully constructed And implemented to satisfy the user objectives at home or workplace. This Research was conducted to study and improve the current automatic fish Feeder machine with better materials and low cost. The materials selected Must be good in water and temperature resistance. There were DC motors is used to functioning the machine. It requires a lot of research and Reading. I already did some literature review to get the idea on the Component used to make this device. I select the possible components to be Used in the next review, this project will continue the creation of the Devices.

REFERENCES :

1. Smart Fish Feeder, Sabari Akilesh K, Savitha V, Vinithra N , Dhanaekar J International Journal of Scientific Research in Computer Science, Engineering and Information Technology © 2017 IJSRCSEIT | Volume 2 | Issue 2 | ISSN : 2456-3307
2. An Intelligent Approach Of The Fish Feeding system, Mohammed M. Alammam and Ali Al-Ataby, 2018.
3. Automated Fish Feeder, Mackenzie Banker, Charlie Brooks, Jake Halverson, Rachel Huntley, 2018.
4. A Model of Mobile Application for Automatic Fish Feeder Aquariums System , D. Prangchumpol International Journal of Modeling and Optimization, Vol. 8, No. 5, October 2018

5. Smart Automatic Fish Feeder, K. Prenalatha, P. Maithili, J.J. Nandhini, International Journal of Computer Sciences and Engineering Volume-5, Issue-7 E-ISSN: 2347-2693
6. Development of Automatic Home-Based Fish Farming Using the Internet of Things, Satien Janpla, Nisanart Tachpetpaiboon, Chaiwat Jowpanich International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-2, July 2019
7. Developing fish feeder system using Raspberry Pi Hidayatul Nur Binti Hasim, Mriitha Ramalingam, Ferda Ernawan 3rd International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB17)
8. Arduino UNO Microcontroller Based Automatic Fish Feeder , Emmanuel Gbenga Dada, Ph.D.1*, Nnoli Chukwukelu Theophine, B.Sc., and Adebinpe Lateef Adekunle, M.Sc.
9. Development of an intelligent feeding controller for indoor intensive culturing of eel, C.M. Changa, W. Fanga,*, R.C. Jacob, C.Z. Shyue, I.C. Liao



From

R. Sundaramoorthi AP/EEE

N. Rajeswari AP/EEE

Department of EEE

Kings College of Engineering

Punalakulam.

To

The principal

Kings College of Engineering

Punalakulam

Through: Head of the Department, EEE

Respected Madam,

Sub: Requisition for permission to conduct Mee & Dept workshop. Reg.

We are glad to inform you that, Department of EEE have planned to conduct two workshop on "Modelling of power Converters using proteus and Matlab Software (for My credit course) on February 2nd 2018 and Internet of Things (IoT) on Embedded controllers on February 15th 2018. This workshop aims to build technical environment among our students and make them to know about practical applications. Hence we kindly request you to give permission to conduct the both workshop.

Thanking you.

Submitted to the Principal

A. Ahmm
25/01/18Submitted to Secretary
J. Prasad
25/01/18

Yours faithfully,

P. Parthiban

25/01/18

Proper procedure
and discipline to
be maintained
25/01/18



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2017-2018 / EVEN SEMESTER

CIRCULAR

Date: 8.2.18


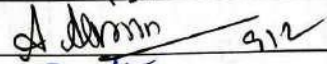

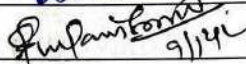



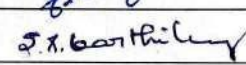

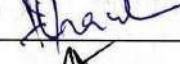




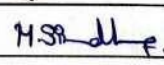
This is to inform that our department is going to organize the one day workshop on "Embedded Controllers in Internet of Things" on 15.2.2018. The in-charges for various activities of workshop has been formed and enclosed with this. The in-charges are requested to cooperate for the success conduct of the workshop.


18/2/18
Coordinator


9/2/18
Head of the Department

- Encl : 1. Staff name list
2. Workshop activities in-charges list

LIST OF STAFF MEMBERS

S.NO	NAME OF THE STAFF	SIGNATURE
TEACHING STAFF		
1	Dr.S.Sivakumar	
2	Prof.A.Albert Martin Ruban	
3	Mrs.N.Hemavathi	
4	Mr.R.Sundaramoorthi	
5	Mrs.N.Rajeswari	
6	Mr.C.Balaji	
7	Mr.J.Arokiaraj	
8	Mr.S.R.Karthikeyan	
9	Mr.P.Narasimman	
10	Mrs.A.Prabha	
11	Mr.M.Mayapandi	
12	Mr.V.Moorthy	
NON-TEACHING STAFF		
1	Mr.R.Alex	
2	Mr.K.Ragubalan	
3	Ms. M. Sindhu	



KINGS
COLLEGE OF ENGINEERING
(N.A.A.C Accredited Institution)
(Approved by AICTE, New Delhi, Affiliated to
Anna University, Chennai)



TUV Rheinland
CERT
ISO 9001

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

One Day Workshop on

"Embedded Controllers in Internet of Things" on 15.02.2018

IN-CHARGES FOR WORKSHOP ACTIVITIES

Co-ordinator : Mr.R.Sundaramoorthi & Mrs.N.Rajeswari

S.NO	ACTIVITIES	IN-CHARGES	SIGNATURE
1	Design and Printing of Brochure, Covering letter & Postages	Mr.R.Sundaramoorthi Mrs.N.Rajeswari	
2	Design & Certificates	Mr.V.Moorthy	
3	Postages	Mr.R.Alex	
4	Purchase	Mr.J.Arokiaaraj Mr.R.Alex	
5	Agenda	Mrs.N.Rajeswari	
6	Hall arrangements	Mr.M.Mayapandi Mr.R.Alex Mr.Ragubalan	
7	Guest Arrangement	Mr.R.Sundaramoorthi Mr.M.Mayapandi	
8	Registration	Mrs.N.Hemavathi	
9	Certificate (Writing & Distribution)	Mrs.A.Prabha	
10	Reception	Mrs.N.Hemavathi	
11	Feedback Collection	Mr.V.Moorthy	
12	Lunch and Refreshment	Mr.S.R.Karthikeyan Mr.P.Narasimman Mr.R.Alex Mr.Ragubalan	
13	Transport	Mr.S.R.Karthikeyan	
14	Compeering	Mrs.A.Prabha	
15	Xerox / Bills and Vouchers Entries	Mr.R.Alex Mr.Ragubalan	

Coordinator

Head of the Department



KINGS
COLLEGE OF ENGINEERING
(NMAC Accredited Institution)
(Approved by ARCTE, New Delhi Affiliated to
Anna University, Chennai)



TOURISM
CERT
ISO 9001

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

One Day Workshop
on
"Embedded Controllers in Internet of Things"
on 15.2.18

AGENDA

09.00 A.M	-	Registration
09.45 A.M	-	Inauguration: Tamil Thaa Vaazthu
09.50 A.M	-	Welcome Address Prof.A.Albert Martin Ruban,HOD/EEE
09.55 A.M	-	Presidential Address by Dr.J.ArputhaVijaya Selvi, Principal, KCE. Dr.S.Sivakumar, Vice-Principal & Head/EEE, KCE.
10.00 A.M	-	Resource Person- Introduction Mr.R.Sundaramoorthi AP/EEE
10.05 A.M	-	Honoring the Resource Person Dr.J.ArputhaVijaya Selvi, Principal, KCE
10.15 A.M	-	Session I Prof.S.Karthik AP/ECE SSM Institute of Engineering & Technology. Dindigul
11.15 A.M	-	Tea Break
11.45 A.M	-	Session II Continues 1. Prof.S.Karthik AP/ECE 2. Prof.M.Meenalochani AP/ECE
01.15 P.M	-	Lunch
02.15 P.M	-	Session II
03.15 P.M	-	Tea Break
03.30 P.M	-	Valedictory Function
04.00 P.M	-	Vote of Thanks Mrs.N.Rajeswari AP/EEE
04.10 P.M	-	National Anthem



One Day Workshop

on

"Embedded Controllers in Internet of Things (IoT)"

15th February, 2018

*Jointly Organized by Department of Electrical and Electronics Engineering
&
IEEE Student Branch (IEEE STB 16621)*

30th January, 2018

Organizing Committee

Chief Patrons

Dr.R.Rajendran
Secretary

Mr.T.R.S.Muthu Kumaar
Chief Executive Officer

Patron

Dr.J.Arputha Vijaya Selvi
Principal

Co-Patron

Dr.S.Sivakumar
Vice Principal

Convenor

Prof.A.Albert Martin Ruban
HoD/EEE

Coordinators

Mr.R.Sundaramoorthi
Assistant Professor

Mrs.N.Rajeswari
Assistant Professor

To

The Principal / Head of the Department - EEE

Sir / Madam,

Sub: Circulation of Information brochure of One day workshop on "Embedded Controllers in Internet of Things" - regarding.

I am glad to inform you that the Department of Electrical and Electronics Engineering is organizing a One day workshop on "Embedded Controllers in Internet of Things" on 15th February, 2018.

The main objective of this workshop is to impart fundamental knowledge of Internet of Things and its domain and Embedded Controllers. The workshop will be given by experts from Industrial trainer.

On behalf of organizing committee of workshop, I request you to circulate the enclosed brochure among the faculty members, research scholars and students of EEE, ECE & ICE in your esteemed institution and encourage them to participate in this one day workshop.

With Regards,

Prof.A.Albert Martin Ruban
HoD/EEE



Participation

Faculties, Research Scholars, PG and UG Students from AICTE recognized institutions.

Seminar Contents

- ✓ Internet of Things (IoT) - Introduction.
- ✓ Concepts of Embedded Controllers.
- ✓ Applications of IoT.
- ✓ Difference between cloud and local server
- ✓ Digital sensor
- ✓ Data visualization
- ✓ Embedded Controllers on IoT

Resource Persons

Mr.Syed Abuthahir

Mr.Karhikeyan

Pzymo Solutions

Registration Fee per Participant : Rs.250/-

The registration fee should be paid by cash only. Pre-registration is mandatory by sending the duly filled registration form to the college address (or) e-mail the soft copy to seedept@kingsindia.net

Important Dates

Last date for Submitting
Registration form : 10.2.18

Intimation of Acceptance : 13.2.18
(through e-mail only)

Organizing Committee

Chief Patrons

Dr.R.Rajendran
Secretary

Mr.T.R.S.Muthu Kumaar
Chief Executive Officer

Patron

Dr.J.Arputha Vijaya Selvi
Principal

Co-Patron

Dr.S.Sivakumar
Vice-Principal

Convenor

Prof.A.Albert Martin Ruban,
HoD / EEE

Co-ordinators

Mr.R.Sundaramoorthi AP/EEE
Mobile Number : 9965156904

Mrs.N.Rajeswari AP/EEE
Mobile Number : 9486239336

One Day Workshop

On

"Embedded Controllers in Internet
of Things "

15th February, 2018



Jointly Organized by

Department of
Electrical & Electronics Engineering
and
IEEE Student Branch (IEEE STB 16621)



KINGS
COLLEGE OF ENGINEERING



A NAAC Accredited Institution

An ISO 9001 Certified Institution
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai
Punalkulam, Thanjavur - 613 303
Phone : 04362 282474, 282676.
Fax : 04362 282494
www.kingsindia.net

About Our Institution

Kings College of Engineering (KCE) was born out of a dream and vision to provide education with unparalleled quality to the young and enthusiastic students of our nation. The College is approved by the AICTE, New Delhi and affiliated to Anna University, Chennai and accredited by NAAC. The drive from our management and dedication of the faculty has seen KCE to rise to the status on one of the most prestigious institutions in this part of the country.

KCE, run by Raj Educational Trust (RET), Chennai is a fast growing Technical Institution in the state of Tamilnadu with a great promise to cater the educational demands of budding engineers in and around Thanjavur from 2001. Our institution offers five UG programmes namely EEE, ECE, CSE, Mechanical and Civil Engineering and five PG programmes namely VLSI Design, Mobile and Pervasive Computing, Thermal Engineering, Power Electronics & Drives, and Computer Science & Engineering. We strive and endeavor every passing day to build our students as technocrats.

How to Reach?

Thanjavur is well connected by Road / Rail transport from all major cities in Tamilnadu. Our college is located 15 kms from Thanjavur railway junction and 12 kms from New Bus Stand on Thanjavur - Pudukkottai National Highway.

Genesis

The Electrical and Electronics Engineering Department is established in the year 2001. The Department of EEE offers 4 years B.E in Electrical and Electronics Engineering and 2 years M.E in Power Electronics and Drives. We have a team of highly qualified, experienced and dedicated faculty to impart quality education to the students. All the laboratories are well established with the state-of-art equipment and latest licensed software for simulation studies that will help our students to achieve their goals. Our department is an approved research centre for pursuing research (Ph.D) under Anna University, Chennai.

Accommodation

Participants are requested to make their own arrangements. However, suggestions to suitable accommodation could be made on request.

Communication Address

Mr.R.Sundaramoorthi & Mrs.N.Rajeswari,
Co-ordinators of Workshop,
Department of EEE,
Kings College of Engineering,
Punalkulam, Thanjavur - 613 303
Phone : 04362 282474, 282676

Mobile: Mr.R.Sundaramoorthi 9965156904
Mrs.N.Rajeswari-9486239336

E-mail : seedept@kingsindia.net

Website : www.kingsindia.net

One Day Workshop

On

"Embedded Controllers in Internet
of Things"

15th February, 2018

Registration Form

(Fill up in Capital Letters)

Name : _____

☐ Faculty ☐ Research Scholar ☐ PG ☐ UG

Department : _____

Institution : _____

Communication
Address : _____

Phone/Mobile No. : _____

Email ID : _____

Registration Fee : Rs.250/-

Date : _____

Signature of the Applicant

Sponsoring Certificate

This is to certify that Dr./Mr./Ms. _____
of _____ department
is being sponsored for attending the one day
workshop on "Embedded Controllers in
Internet of Things" jointly organized by
department of EEE and IEEE student branch
(IEEE STB 16621), Kings College of Engineering
on 15th February, 2018.

Date : _____

Signature of sponsoring authority
(with seal)



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

One Day workshop on "Embedded Controllers in Internet of Things" on 15.02.2018

REPORT

The department of Electrical and Electronics Engineering and IEEE Student branch (IEEE STB 16621) has jointly organized a one day workshop on *"Embedded Controllers in Internet of Things"* on 15.2.2018. The objective of this workshop is to build technical environment among our students and make them to know about fundamental knowledge with practical applications of Internet of Things and Embedded Controllers

Resource persons:

- Prof.S.Karthik, Assistant Professor / ECE/SSM Institute of Engineering and Technology,Dindigul.
- Mrs.M.Meenalochani, Assistant Professor / ECE, ARJ College of Engineering and Technology, Mannargudi.

Convener:

Prof.A.Albert Martin Ruban, Associate Professor & Head / EEE

Coordinators:

1. Mr.R.Sundaramoorthi, Assistant Professor / EEE
2. Mrs.N.Rajeswari, Assistant Professor / EEE

Inaugural Session:

The dignitaries on the Dais during the inaugural session were Dr.S.Sivakumar, Vice-Principal, KCE, Prof.A.Albert Martin Ruban, Head / EEE, Resource persons Prof.S.Karthik & Mrs.M.Meenalochani, and the Program Coordinators Mr.R.Sundaramoorthi and Mrs.N.Rajeswari. The program was started by Thamizh Thaaai Vaazthu followed by Welcome address delivered by Mrs.N.HemavathiAP/EEE. The Presidential address was delivered by our Vice-Principal Dr.S.Sivakumar..

Participants :

External :71

Internal : 08

Total : 79

Session 1- Overview of Internet of Things and Embedded Controllers by Prof.S.Karthik,AP/ECE, SSM Institute of Engineering and Technology, Dindigul.

The introduction about the resource person was given by Mr.R.Sundaramoorthi, AP/EEE. The resource person started the session about the fundamental ideas of Internet of Things, Embedded controllers and Programming ideas etc. He has interacted with the participants towards Digital technological development in the industry and media. He explained about the fundamental elements required for the Internet of Things such as Sensors, Processor and loads. Further he delivered the ideas basic programming languages required for the Controllers. During this session, the participants were actively interacted with the resource person and he also explained basic structure of Embedded Controllers, Programming ideas, tools needed for Internet of Things. He also rendered the real time applications about the underlying technologies of embedded systems and IOT Products.

Session 2: Internet of Things (IoT) - Introduction & applications by Mrs.M.Meenalochani, AP / ECE, ARJ College of Engineering and Technology.

The resource person started the session with the basics of IoT, with simple example followed by structure of IoT, applications of IoT, current status and future prospect of IoT. She also delivered about Wireless sensor networks (WSN), the future of WSN in smart home / smart office and applications of WSN. The session was very informative and the participants were interacted frequently with the resource person.

Session 3: Demonstration of IoT Products by Prof.S.Karthik, AP/ECE

After a short break, the session resumed with the discussion on the Scope of Internet of Things and Role of Embedded Controllers. During this session, resource person has demonstrated the Embedded Kit and IoT Products. All the Participants were actively participated. This session was very interactive.

Valedictory Function:

The feedbacks from the participants regarding the workshop were collected. Then, Mrs.A.Prabha, AP/EEE delivered the vote of thanks. The dignitaries issued certificates to all the participants. Finally the program ended with National anthem.

Workshop Event Photographs:

Dignitaries on the dais during Inagural session of Workshop





Vote of Thanks by Mrs A.Prabha AP/EEE



Prepared by
[Signature] 22/2/18
 Coordinators

[Signature]
 22/2/18
 Principal

Verified by
[Signature] 22/2/18
 Head of the Department

Dr.J.Arputha Vijaya Selvi,M.E.,Ph.D.,
Principal

Ref: KCE/Principal/IV/2019-20

23.07.19

To

The Chief General Manager,
NLC India Ltd,

Neyveli.

Subject: Permission for Industrial Visit reg.

Respected Sir/Madam,

Kings College of Engineering is premier institute in Thanjavur region, affiliated to Anna University, Chennai, approved by AICTE, New Delhi and accredited by NAAC. The institution was established in the year 2001 on a sprawling campus of around 60 acres on Thanjavur-Pudukkottai highway and run by Raj Educational Trust (RET). The institution offers five U.G and four P.G programmes and certified with ISO 9001:2008. The state of the art teaching methodologies including e-learning are used to impart high quality education to the students.

Our college promotes and encourages the students and faculty to undergo Industrial Visit to expose them to practical applications of academic learning and so as to bridge the gap between institutes to industries. These practices would also enable the students and faculty to upgrade their technical skills.

We express our willingness to send our students and faculty to your esteemed organization in the 1st week of August 2019 and we seek your consent in this regard.

Thank you,

Regards,

J. Arputha Selvi
23/7/19

PRINCIPAL
Kings College of Engineering
Punalakulam- 613 303.



एनएलसी इंडिया लिमिटेड-NLC India Limited
(Navratna - Government of India Enterprise)
CIN L93090TN1956GO1003507 Website : www.nlcindia.com



Public Relations Department
Block-2, Neyveli-607 801, Cuddalore District, Tamil Nadu
e-mail : pr.dept@nlcinda.com, pro.nlc57@gmail.com Tele Fax : 04142- 252257

Date: 27/07/2019

Lr.No.209/Visit/PRD/2019

To
The Principal
Kings College of Engineering
Punalkulam-613 303

Sub. to Secretary
S.R.
J. Narayana
23/8/19
23/8/19

Sub: PRD – Visit to Industrial Units – Confirmation – Reg.

Ref: Lr. received dt. 24.07.2019.

We are in receipt of your letter dated: 24.07.2019 The group of visitors from your Institution are permitted to visit TPS-I Expn. only. on 26/08/2019 Please advise them to contact /the Public Relations Dept., (Near Nehru Square), Block-2, Neyveli /Township – 607 801 at 9..30 A.M.

The visitors/students are requested to bring their Identity Card along with TWO COPIES OF NAME LIST during their visit to Neyveli. In case of foreign students please attach passport size photo's 2 No's and two copy of passport and registration certificate /Residential Permit [RC/RP], From 'A' [Rule 6] issued by BUREAU OF IMMIGRATION M.H.A Govt., of India, one week before. Cell Phones with Cameras / Still Cameras / Video Cameras are strictly prohibited inside the Industrial Units.

We request you to arrange your own conveyance/accommodation during the visit.

Thanking you,

Yours faithfully,
for NLC India Ltd,

Chief General Manager/PR
General Manager / P R
NLC Limited
Neyveli - 607 801

पंजीकृत कार्यालय : प्रथम तल नं.8, मेयर सत्यमूर्ति रोड, एफएस.डी, एगमोर कॉम्प्लेक्स, भारतीय खाद्य निगम, चेतपेट चेन्नै - 600 031.

REGD.OFFICE : 1st Floor, No.8, Mayor Sathiyamurthy Road, FSD, Egmore Complex of Food Corporation of India, Chetpet, Chennai - 600 031.

CORPORATE OFFICE: BLOCK-1, NEYVELI - 607 801, CUDDALORE DISTRICT, TAMILNADU.

निगमित कार्यालय: ब्लॉक-1 नेयवेली - 607801. कडलूर जिला, तमिलनाडु

Submitted
to the Principal
A Narayana
23/8/19

Letter of Undertaking for industrial visit given by Parents/Guardian

Date:

To

The Principal
Kings College of Engineering,
Punalkulam – 613 303

Respected Madam,

SUB: Submission of "Industrial Visit Undertaking"-- Reg.

We, Mr. S. JAFER ALI Mrs J. ASMATH BEGUM parents of J. MOHAMED KALIFA bearing Register number 821116105010 studying in VII Semester, Department of Electrical & Electronics Engineering in Kings College of Engineering herewith voluntarily submitting the under taking.

We, the undersigned parents/guardian are aware that, our son is participating in the industrial visit organized by the Institute scheduled during 26/8/19 with our full acceptance and will be bearing all the expenditure incurred for the Industrial visit towards travel and other expenses from our end.

We shall ensure that our son shall abide by the college terms and conditions for industrial visit. We, hereby declare and confirm that the college shall not be held responsible in the event of any misfortune or accidents and/or personal injuries whether fatal or otherwise involving our son.

We shall undertake full responsibility of all the consequences should any other person or body suffer such accidents and/or personal injuries and/or damage to property as a result of our son negligent act during the period of industrial tour.

We further confirm that the college shall not be held responsible for our son misconduct or wrongdoing at all times during the period of industrial visit and shall obey the instructions of the faculty members who are accompanying during the industrial visit.

Yours sincerely, J. Asmath

Signature of the student

(Parents/Guardian's Signature)

Name of the Father: S. JAFER ALI

Name of the Mother: J. ASMATH BEGUM

Name of the Guardian: —

Contact Address: 148, RAHIM NAGAR 2nd STREET, MOHAMED BAYAN, K.A. VILLAGRAM (P.M),

Contact Phone No: 9843087564, 9486575858

J. Asmath

THANJAVUR (T.N) TANJAVUR

Letter of Undertaking for industrial visit given by Parents/Guardian

Date:

To

The Principal
Kings College of Engineering,
Punalkulam – 613 303

Respected Madam,

SUB: Submission of "Industrial Visit Undertaking"-- Reg.

We, Mr. K. Sundharamoorthy Mrs S. Kamala parents of S. Parthiban bearing Register number 221116105012 studying in ___ Semester, Department of Electrical & Electronics Engineering in Kings College of Engineering herewith voluntarily submitting the under taking.


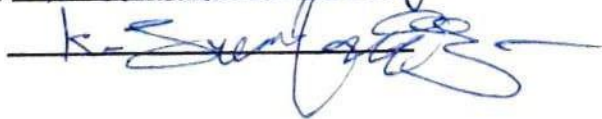
We, the undersigned parents/guardian are aware that, our son is participating in the industrial visit organized by the Institute scheduled during _____ with our full acceptance and will be bearing all the expenditure incurred for the Industrial visit towards travel and other expenses from our end.

We shall ensure that our son shall abide by the college terms and conditions for industrial visit. We , hereby declare and confirm that the college shall not be held responsible in the event of any misfortune or accidents and/or personal injuries whether fatal or otherwise involving our son.

We shall undertake full responsibility of all the consequences should any other person or body suffer such accidents and/or personal injuries and/or damage to property as a result of our son negligent act during the period of industrial tour.

We further confirm that the college shall not be held responsible for our son misconduct or wrongdoing at all times during the period of industrial visit and shall obey the instructions of the faculty members who are accompanying during the industrial visit.

Yours sincerely, K. Sundharamoorthy


Signature of the student

(Parents/Guardian's Signature)

Name of the Father: K. Sundharamoorthy

Name of the Mother: S. Kamala

Name of the Guardian: _____

Contact Address: 9786260605

Contact Phone No: 2/250, east street, sellur (post), Kankavasal (TK), Thiruvananthapuram (Dt)
pin 613 705



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-20 (ODD)

Report - Industrial Visit

Place Visited: NLC, Neyveli (Thermal Power Station-I)

Date of Visit: 26.08.19

As part of curriculum of Anna University our department has arranged one day local visit at Neyveli Lignite Corporation – Neyveli, Cuddalore District, Tamilnadu on 26.08.19. Third year & Final year EEE Students (26 Members) and five staff members were visited the thermal power station.



Over View of Thermal Power Station-II, NLC, Neyveli

The Er.A.Swaminathan, Assistant Engineer (Electrical), Training Complex, addressed the students and introduced about the overall view of NLC. He explained the split up of all power station Units & mines in NLC.

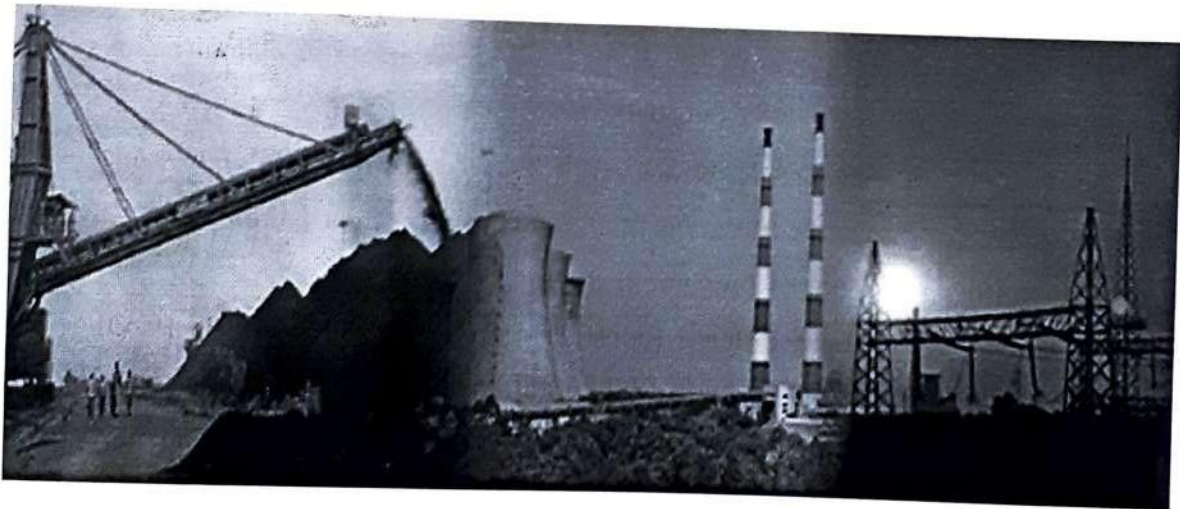
SNO	POWER PLANTS	CAPACITY (MW)
1.	Thermal Power Station-I	500
2.	Thermal Power Station-II	1470
3.	Thermal Power Station-I Expansion	420
4.	Thermal Power Station-II Expansion	500
5.	Wind Power Plant (34x1.5 MW)	51
6.	Solar Power Plant	1000

During this session, students were interacted with engineer about the various power plants.

SNO	MINES	CAPACITY (MTPA)
1.	Mine-I	10.5
2.	Mine-IA	3
3.	Mine-II	15

He explained about NLC as follows:

- A NAVRATNA company under the Ministry of Coal.
- since 1956 - more than 60 years of its glorious existence.
- Present Mining Capacity : 30.6 MTPA (Lignite).
- Present Power Generation Capacity (including JVs) : 3140MW (Lignite), 1000MW (Coal), 1001.56MW (Solar), 51MW (Wind), Total : 5192.56 MW.
- Projected Capital Expenditure (up to 2025): Rs.1, 28,983 Crore with a debt-equity ratio of 70:30.
- Moved from an only lignite mining and power generation Company to become an energy company.



- Diversifying into coal based power generation and generation from renewable energy sources like Solar and Wind.
- Marching towards 21011MW by 2025.

PHOTOS IN THE THERMAL POWER STATION-I



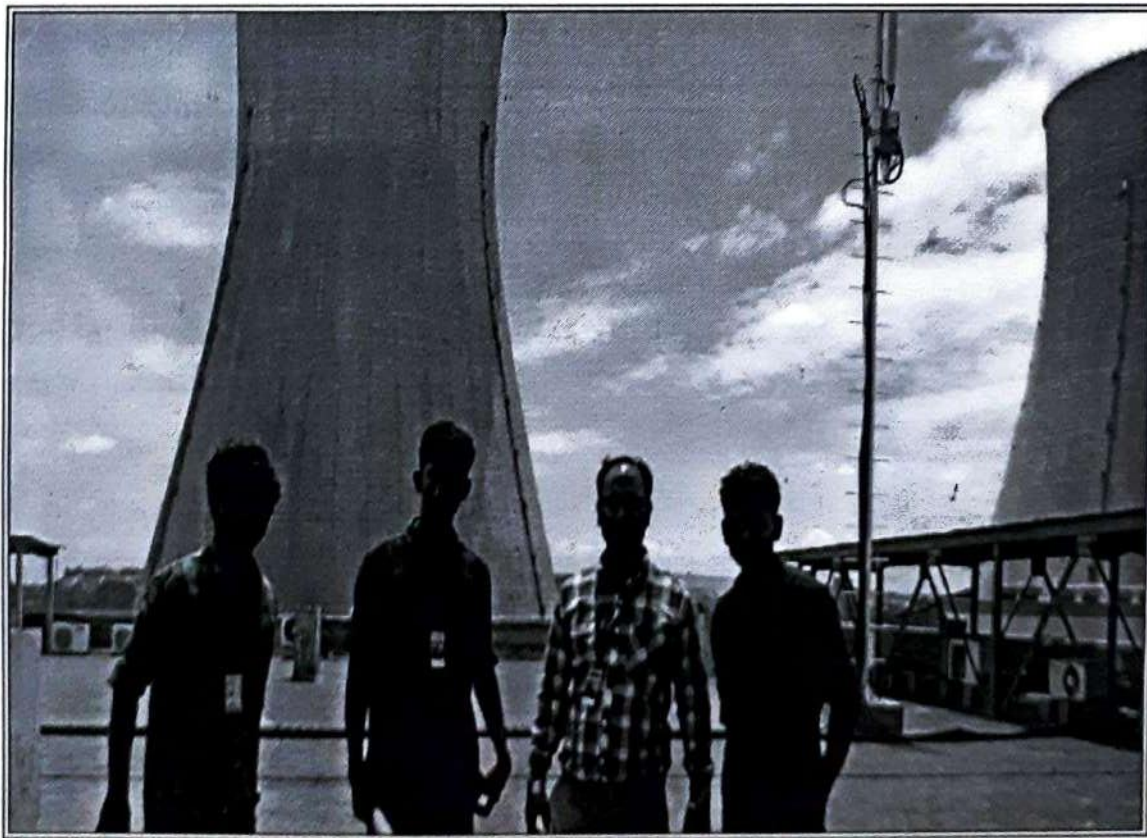
Students ID card verification at the entrance



Generator ratings were noted

GENERATOR RATINGS :(SYNCHRONOUS GENERATOR)

Made	: ANSALDO – Made in Italy
Rated Power	: 283500 kVA
Power Factor	: 0.85
Armature Voltage	: 15750 V
Armature Current	: 10392 A
Frequency	: 50Hz
Speed	: 3000 rpm
Type	: 3 ϕ AC
Connection	: Star
No. of Poles	: 2
The permissible over speed	: 3600 rpm for 2min
Rotation	: Clockwise seen from turbine end
Primary coolant temperature	: 45°C



Students were nearby cooling tower

CERTIFICATE LETTER

07-01-2019

From,

Campus UK,

Ass. Technical Head,

Trichy.

To,

Project Coordinator,

IV Year EEE,

Kings College of Engineering,

Punalkulam, Thanjavur.

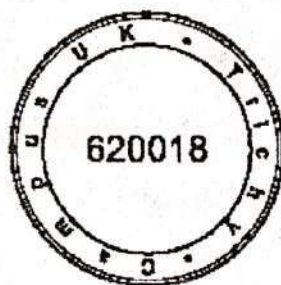
Respected Sir / Madam,

Sub : Students Project Work

This is to demonstrate that following students from your college, ensuing their work in Renewable energy sources. This group visited our organisation on 07/01/2019 and we conversed about their project in brief. They are clarified their doubts. We expect best outcome from them..

Student Details

S.NO	NAME	REGISTER NO
1	T.Akalya	821115105001
2	R.Baranika	821115105005
3	R.Shanthi	821115105039



With Regards,

R. Rajesh
(R. Rajesh)
(Ass. Technical Head)

Campus UK

3rd Floor, 24 and 25 Moorthy Square Near KAP Viswanthan School
Above MPM Muthu General store, Thillai Nagar Main Road Trichy - 620 018.

Web: www.campusuk.com Email: technology@campusuk.com

Contact: 9597184394, +91 431 - 4544429

REPORT FOR OUR FIELD VISIT

This report deals with the learning outcome of our field visit.

The overview of our project was explained. The major components and source were deeply discussed. From this field visit it, we learned about the renewable energy sources (i.e.) solar energy. They clearly explained about their performance and efficiency.

The following points were learned from the field visit which are relevant to our project.

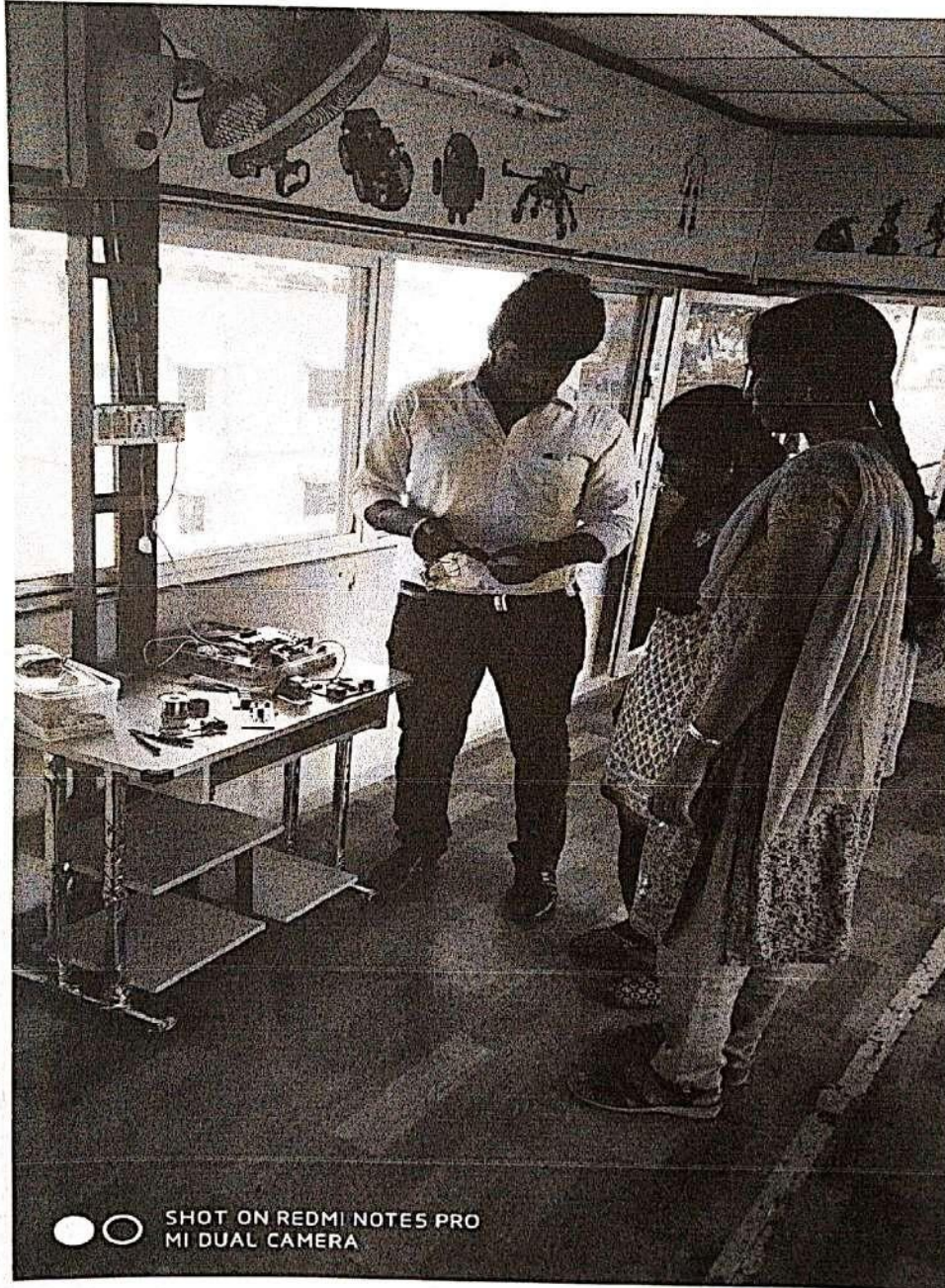
- ❖ The development of the renewable energy system has overcome all advantages of the conventional or non renewable energy sources.
- ❖ The current energy system employed in the power generation are: solar, wind, biomass and tidal.
- ❖ The renewable energy resources are developed in many countries.
- ❖ Solar power in India has huge potential and its environment friendly as it has zero emission while generating and is obviously the most secure.

REPORT FOR OUR FIELD VISIT

- ❖ Solar power technology enhances PV output by concentrating a large area into a small beam using lens, mirrors and tracking system.
- ❖ Due to varying efficiencies and numerous technologies presently available, power output is effected by environmental condition and module specification.

Apart from the characteristics of various power electronics devices were learned. The merits and demerits of the LASER were studied. The purpose of using laser light instead of laser diode was clarified. These are the things which are learned from our field visit.

FIELD VISIT



SHOT ON REDMI NOTES PRO
MI DUAL CAMERA

Pic: Field Visit at Campus UK, Trichy



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2017-2018 / ODD SEMESTER

In-House Training

Class : III EEE
Batch : 2015-19
Total Number of Students : 50
Nil Arrear Students : 10

Plan of Action:

- Nil arrear students are insisted to attend In-House Training in the winter vacation leave.
- Presentation will be completed before 1st assessment test and report will be submitted to project officer.

The following students are eligible to attend In-House Training in the winter vacation holidays.

1. BARANIKA. R
2. DHEERTHI. S
3. DIVYA. K
4. GANESH KUMAR. P
5. HARISHBABU. R
6. KALAIYARASI. D
7. MUTHU MEENA. K
8. SHELAA S
9. VEERAMANI M
10. BRINDHA. M

S. J. Bartholmey
IHT Co-ordinator/EEE 7/11/17

A. Alumm
HOD/EEE 7/11/17



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2017-2018 / ODD SEMESTER

KCE/EEE/IHT/17-18/Circular-1

07.11.2017

We hereby inform the following (Nil arrear students) third year EEE students are asked to attend In-House Training in the academic year 2017-18 (odd) semester vacation holidays. At the time of sixth semester reopening, documents should be submitted to co-ordinator. For further information contact Mr.S.R.Karthikeyan AP/EEE.

List of Nil Arrear Students:

1. BARANIKA. R *R. Baranika*
2. DHEERTHI. S *S. Dheerthi*
3. DIVYA. K *Divya*
4. GANESH KUMAR. P
5. HARISHBABU. R
6. KALAIYARASI. D *Kalaiyarasi*
7. MUTHU MEENA. K *Muthu Meena*
8. SHELA S
9. VEERAMANI M *Veeramani*
10. BRINDHA. M *Brindha M.*

S. R. Karthikeyan
IHT Co-ordinator/EEE 7/11/17

ahm
Class In-charge

A. Arumma
HOD/EEE 7/11/17



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2017-18 (Even)

KCE/EEE/IHT/17-18/Circular-2

02.04.2018

We hereby inform third year EEE students are asked to attend In-House Training in the academic year 2017-18 (Even) semester vacation holidays. At the time of seventh semester reopening, the report should be submitted to co-ordinator. For further information contact Mr.S.R.Karthikeyan AP/EEE.

In-House Training Report Format:

1. Font Size: 12
2. Spacing : 1.5
3. Font name: Cambria
4. First page should include college logo along with Department name, group name...
5. Second page - Photo copy of training Competition Certificate.
6. Third page - Photo copy of Daily work done.
7. Fourth page - Photo copy of feedback form.
8. Fifth page - Contents of the report

S. R. Karthikeyan
 IHT Co-ordinator/EEE 2/4/18


 HOD/EEE

1) R. Shanthi → Jn. Shanthi

2) N. Nalini → N. N. J

3) P. RAMU → P. Ramu

4) D. DINESHKUMAR. ~~S. N. J~~ /

5) T. Thammeswar. ~~Jn. Jn~~

6) R. Kavalvizhi - ~~Jn. Jn~~

7) S. Ailandaswari - ~~J. Jn~~

8) P. Victoriya - ~~Jn. Jn~~

9) K. Dixya - ~~Jn. Jn~~

10) K. Muthumeena - K. M. Jn.

11) R. Santhosh Sami - ~~Jn. Jn~~

12) M. Veeramani. ~~Jn. Jn~~

13) K. Dixya

14) S. Dheethi - S. Dheethi

15) M. Bindha ~~Jn. Jn~~ M.

16) K. Harini - ~~Jn. Jn~~

17) E. Elakkiya - E. Elakkiya

18) S. Sowmya - ~~Jn. Jn~~

19) D. Kalaiyalani - ~~Jn. Jn~~

20) M. Prakash - ~~Jn. Jn~~

21) S. Prakash - ~~Jn. Jn~~

22) R. Phani - ~~Jn. Jn~~

23) T. Prathesh - T. Prathesh

24) N. Vibinraj - N. V. Jn.

25) R. Harish Babu Raju

26) R. Raguraman R. R. Jn.

27) P. Ramkumar ~~Jn. Jn~~

28) P. Ramkumar P. Ramkumar

29) M. Swiya Prakash ~~Jn. Jn~~

30) H. SATHIYEL M. Jn.

31) K. SANDRU K. Sandru

32) B. Rohini B. Rohini

33) D. RADEEP Kumar. D. Radheep

34) V. P. Prem Kumar V. P. Prem

35) M. Sathish M. Sathish

36) R. BARANIK R. Baranik

37) R. SUNDAR R. Sundar

38) J. Shresh J. Shresh

39) R. PARTHASARATHI R. Parthasarathi

40) P. GANESH KUMAR P. Ganesh

06/03

Permission Letter

From:

R. Santhosh sami

iii - EEE

Kings college of engineering

To

Head of the department

EEE

Kings college of engineering

Sir,

Sub: Approval for Inplant training in neyveli

Sir, As I interested to take part in Inplant training in neyveli lignite corporation. also vacation holidays. So I request you to approve me for training and also provide the request for inplant training.

Thanking you

Sayuky

Yours faithfully

Enclosure:

Person copy of
requestion letter for
inplant training.

[R. santhosh sami]
iii - EEE

Forwarded to HOD

6/3/18
Recommended & Forwarded to
H.O.D Sir 6/3/18

Yes

A. Arun
6/3/18

Dr.T.Shanthi, M.E.,Ph.D.,
Project Officer

Ref: KCE/PO/IHT/01/2017-18

01.06.18

To
The Executive Director,
MARIS Associates Pvt Ltd,
Madathur,
Thoothukudi - 628002.

Subject: Permission to do In House Training – requested – regarding.

Respected sir/madam,

The following third year Electrical & Electronics Engineering students of Kings college of Engineering, Punalkulam are willing to undergo In-House Training (IHT) in your concern. During the period of training, they will abide by the rules and regulations of your organization.

They are:

S.No	Name of the Students
1.	M.Veeramani
2.	B.Rohinth
3.	S.Dheerthi
4.	K.Divya
5.	S.Shelaa

We would be thankful, if you could kindly permit them to carry out their training at your esteemed organization.

Thanking you

(Signature)
Regards, 1/6/18
PROJECT OFFICER / IHT/EDE
KINGS COLLEGE OF ENGINEERING
PUNALKULAM-628002, PUDUCHOTTAI

TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

Office of the Superintending Engineer,
Thanjavur Elec. Distn. Circle,
Thanjavur - 7.

Memo.No. 6910/ADM.3/A.2/F. Inplant Training/2018. dt: 13.06.2018.

**Sub: Estt - Training - Inplant Training - 230 KVSS -
TEDC/Thanjavur - permission granted - Regarding.**

**Ref: 1. (Per) TANGEDCO proceeding No.(CMD) No.1 (Tech.Branch)
dated 09.11.2010.**

2. The Principal, Letter dated .12.06.2018.

**As per orders issued the above reference 1st cited the student list in the
Annexure - I who has been undergone Inplant Training against the column 3, 4, 5 in
the Annexure-I.**

**The terms and conditions stipulated by the Board during the period of
inplant training as per Annexure A & B (Enclosed).**


**For Superintending Engineer,
TEDC/Thanjavur.**

To

The Executive Engineer/230 KVSS/Thirukannurpatty


**It is requested to provide necessary facilities to the student to undergone
inplant training and also able to obtain an undertaking an Annexure-B of
from the student the same may be forwarded to this office promptly.**

Copy to the Principal

**Kings College of Engineering, Thanjavur
Periyar Maniammai Institute, Thanjavur
SASTRA Deemed to be University, Thanjavur**

ANNEXURE - I

SL. No	Name of the Student Thiruvalargai	Year	Branch	Period of Training	To whom report for Training
1.	S.Aklandeswari,	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
2.	S.Sowmiya	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
3.	P.Victoriya	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
4.	Harini	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
5.	S.Karthicknathan	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
6.	Soundarya	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
7.	Durgalakshmi	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty
8.	Pornika	III	EEE	18.06.2018 to 22.06.2018	EE/230 KVSS/ Thirukannurpatty


For Superintending Engineer,
TEDC/Thanjavur.

A REPORT ON INPLANT TRAINING AT NEYVELI LIGNITE CORPORATION LIMITED NEYVELI

SUBMITTED BY

R.SANTHOSH SAMI.R,IV EEE

KINGS COLLEGE OF ENGINEERING

FROM 04th JUNE 2018 TO 09th JUNE 2018

ACKNOWLEDGEMENT

The industrial exposure that I have experienced as a trainee in **Neyveli Lignite Corporation Limited** (nlc.india.ltd) has helped me a lot not only in improving my theoretical knowledge but also to understand the working of a large industry.

I am sincerely grateful to the **LEARNING & DEVELOPMENT CENTER** of Neyveli Lignite Corporation Limited (nlc.india.ltd) for giving me an opportunity to undergo six days Inplant Training in their organization & for providing homely atmosphere in their organization.

I am also thankful to **Mr.S.R.KARTHIKEYAN** AP/EEE for his positive support, coordination & guidance.

And last but not the least I thank all the people of the department, for their kind co-operation and support.

OVERVIEW

Neyveli Lignite Corporation (NLC), incorporated in 1956, is the business of lignite mining and power generation. At present, NLC operates three opencast lignite mines of total capacity of 24 million tonnes and three thermal power stations with total installed capacity of 2490 mega watt.

Neyveli Lignite Corporation is a Public Sector Enterprise, under the administrative control of Ministry of Coal. The company also operates subsidiary — NLC Tamilnadu Power Limited.

It has a chequered history of achievements.

Mines

Mine-I – This mine, located on the northern part of Neyveli Township in Tamil Nadu, is spread over an area of 26.69 sq km. This mine has reserve of 365 million tonnes and has a production capacity 10.5 million tonnes of lignite per annum. This mine feeds lignite to its 600 MW capacity of First Thermal Power Station and 420 MW Thermal Power Station 260 1/4 I (expanded).

Mine-IA – This mine is spread over an area of 11.6 sq km. The mine has a reserve of 120 million tonnes with a production capacity of 3 million tonnes of lignite per annum. It caters to the need of 250 MW independent power project, in addition to the requirement of NLC's Thermal Power Stations.

Mine-II – This mine was sanctioned by the Government of India in February 1978 with a lignite production capacity of 4.7 mtpa which was increased to 10.5 mtpa in 1983. This mine is spread over an area 27.74 sq km and has a reserve of 390 million tonnes.

Thermal Power stations;


Thermal Power stations (TPS) TPS-I — This is South Asia's first and only lignite-fired thermal power station. This plant was commissioned with one unit of 50 MW and currently possess six units of 50 MW each and three units of 100 MW each. The company has set up additional capacity of 420 MW. It has total generating capacity of 1020 MW

TPS- II – This power plant was constructed in two stages in 630 MW and 840 MW. This power plant has a generating capacity of 1470 MW consists of seven units of 210 MW each.




**INPLANT TRAINING ON NEYVELI
LIGNITE CORPORATION**
FROM: 04-06-18 TO 09-06-18

SUBMITTED BY
R. SANTHOSH SAMY
FINAL YEAR EEE
Kings College Of Engineering




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The report should not be regarded by recipients as a substitute for the exercise of their own judgment. Past performance is not necessarily a guide to future performance. The value of any investment or income may go down as well as up and you may not get back the full amount invested. Any opinion expressed in this report is subject to change without notice and may differ or be contrary to opinions expressed by other business groups of NLC, as a result of using different assumptions and criteria. The presentation report may contain certain "forward-looking statements". These forward-looking statements generally can be identified by words or phrases such as "will", "anticipate", "believe", "expect", "estimate", "forecast", "project", "plan", "intend", "aim", "seek", "will continue", "will pursue" or other words or phrases of similar import. Similarly, statements that describe our strategies, objectives, plans or goals are also forward-looking statements.

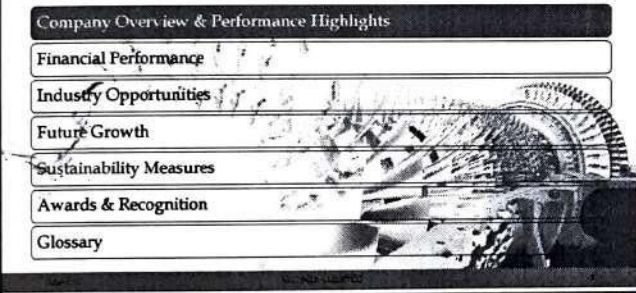

All forward-looking statements are subject to risks, uncertainties and assumptions about us that could cause actual results to differ materially from those contemplated by the relevant statements. These forward-looking statements are based on our current plans and expectations. Actual results may differ materially from those suggested by the forward-looking statements due to risks or uncertainties associated with our operations with respect to, but not limited to, regulatory changes pertaining to the industries in which we have our businesses and our ability to respond to them, our ability to successfully implement our strategy, our growth and expansion, technological changes, our exposure to market risks, general economic and political conditions which have an impact on our business activities or investments, the monetary and fiscal policies of India, inflation, deflation, developments in interest rates, foreign exchange rates, equity prices or other rates or prices, the performance of the financial markets in India and globally, changes in Indian laws, regulations and taxes and changes in competition in our industry etc.

NLC reserves the right to alter, modify or otherwise change the presentation without notifying any person of such changes or revision. Neither the author or NLC, shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from the presentation report. Further, NLC, is under no obligation to update or keep current the information contained herein. The disclosure contained in this presentation report produced by NLC, shall be governed by and construed in accordance with laws of India. NLC specifically prohibits the reproduction of the material in whole or in part without the written permission of NLC and NLC, accepts no liability whatsoever for the actions of third parties in this respect. Images may depict objects or elements which are protected by third party copyright, trademarks and other intellectual property rights. All rights reserved.



Contents


- Company Overview & Performance Highlights
- Financial Performance
- Industry Opportunities
- Future Growth
- Sustainability Measures
- Awards & Recognition
- Glossary

NLC India Ltd | Introduction

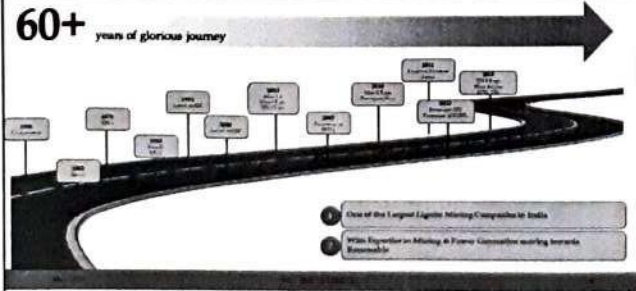
- ☒ A National Company
- ☒ Rich Heritage with Over a Decade of Corporate Excellence
- ☒ Strong Partnership with Government of India (equity holding 66.72%)
- ☒ Core Business: Mining & Power Generation with Expertise in engineering & construction of mineral mining, power generation
- ☒ Robust Financial Performance - FY 15-16 Total Income - ₹ 7,194 crore
PAT - ₹ 1,100 crore, Market Capitalisation - ₹ 86,10,603 crore
- ☒ Consistent with A+ Rating - Highest creditworthiness rating
- ☒ Diverse Portfolio of Divisions comprising of Coal, Lignite, Power, Engineering & Construction, Infrastructure, Real Estate, etc.

* Based on closing share price in BSE as on 23.03.2017 - BSE Ex. 525.40 Post bookend equity share




Rich Heritage

60+ years of glorious journey




1. One of the Largest Lignite Mining Companies in India

2. First Exporter in Mining & Power Generation exporting to various countries



Strong In-House Capabilities

Expertise in Open Cast Mining & Power Generation	Lignite Resources for Captive Consumption	Nodal Agency for Lignite Data Base	Strong Financials
<ul style="list-style-type: none"> Long experience and expertise in operations, maintenance and project management in open cast mining & power generation Apart from approved mining equipments for open cast mining, we also have a fleet of heavy machinery, trucks, bulldozers, etc. for various construction and operations 	<ul style="list-style-type: none"> Captive coal source with power plants located at the pit heads of Lignite mines Greater flexibility to handle the lignite production to adjust for variations in power demand and power generation at thermal power plants 	<ul style="list-style-type: none"> Nodal Agency for Lignite database approved by Ministry of Coal Competitive advantage in identifying and exploiting new lignite deposits in India 	<ul style="list-style-type: none"> Consistent growth in turnover Highest dividend yield Conservative credit rating Robust Financials - Credit Rating: A+ (by CRISIL)



Strength & Opportunities

Strength

- Availability of lignite and water for power generation.
- Expertise in operation & maintenance of open-cast mining, power generation.
- Potential areas for diversification – Coal blocks, Renewable energy & Power trading
- Harmonious Industrial relations.
- Pioneering positions in open-cast lignite mining with SME technology and lignite fired power station.



Opportunities

- GOI's commitment to improve the quality of life of its citizen through higher electricity consumption.
- GOI aims to provide each household access to electricity, round the clock and improve the quality of life of people through 24x7 power supply.
- Rise in the per capita consumption of power.
- Huge potential for Renewable Energy.
- Launch of 100 smart cities mission by GOI.

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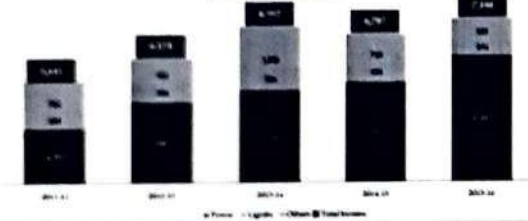
Sustainability Measures

Awards & Recognition

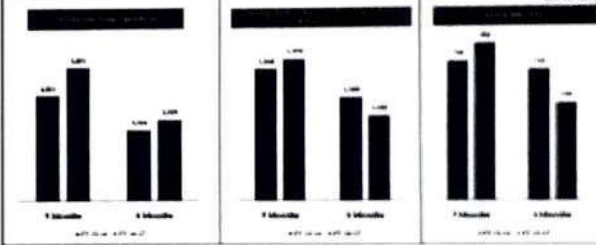
Glossary

Financial Performance

Total Income (Rs. in crore)



Financial Performance - FY 2016-17



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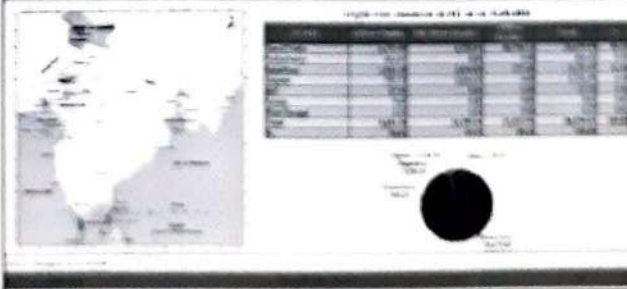
Future Growth

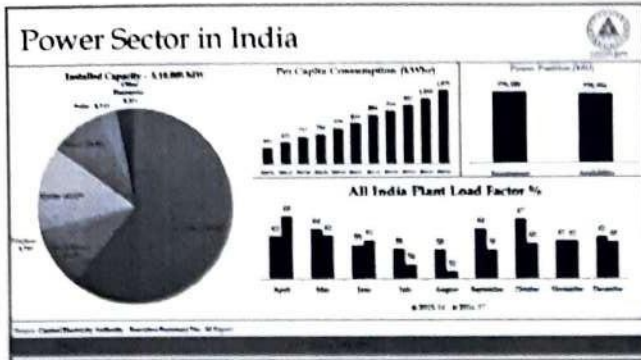
Sustainability Measures

Awards & Recognition

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Lignite Reserves in India





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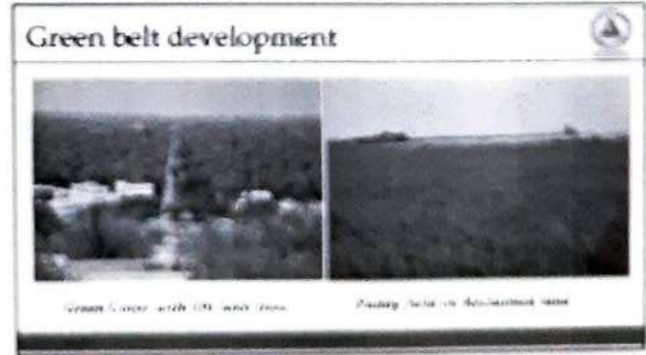
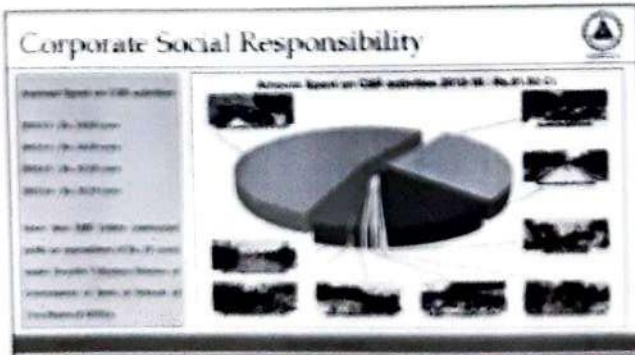
NLCIL - Growth Plan over 10 Years - Vision 2025

Sr. No.	Project	Existing Capacity ¹	Addition Proposed	Total ²
1	Lignite (MTPA)	20.00	31.55	51.55
2	Coal (MTPA)	0	31.00	31.00
3	Power - Lignite Based (MW)	3,340	3,540	6,880
4	Power - Coal Based (MW)	1,000	5,940	6,940
5	Power - Renewable (MW)	55	8,196	8,251
6	Regeneration of Power Assets (MW)	0	3,000	3,000
	TOTAL POWER (MW)	4,395	16,676	21,071

1. Existing Capacity as on 31.03.2015
2. Total Capacity as on 31.03.2025

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New Initiatives – Sustainable Development



Energy Conservation

- Formed 14 industrial service units for adoption of energy conservation measures
- To utilise alternate source of energy wherever permissible

Technology Absorption

- Studies on synthesis of Zeolites from Lignite Fly Ash and its efficiency in cooling water treatment taken up based on the outcome production of Zeolite tablet for water treatment.
- Development of organic coating paints for use in specialized Mining equipment/De-watering pipes to enhance its life.
- Reclamation of slag Dump areas in Mine-II suitable for development of Green Cover

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Awards & Recognition



- Best PSU Implementing CSR Award (2nd Place)
- Best Corporate Film in Hindi (2nd Place)
- Best PSU Implementing RTI (Special Award)
- Golden Peacock Environment Award 2014
- National Award for Outstanding Industrial Relations' (First Runner up)
- SCOPE Excellence Award - Gold Trophy presented to NLCIL by Shri Pranab Mukherjee, Hon'ble President of India
- Cost Excellence Award for best practices in Cost Management from The Institute of Cost Accountants of India for the third time.
- The Ahmedabad and Hyderabad Chapters of Public Relation Society of India (PRSI) has honoured NLCIL with six awards in recognition of its performance in various categories
- Corporate Vigilance Excellence Award 2013-14 instituted by Institute of Public Enterprises (IPE), a well known autonomous, non-profit organisation in Hyderabad
- Golden Peacock Award for CSR - 2015



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Term	Description
BSE	Bombay Stock Exchange
CAPEX	Capital Expenditure
CSR	Corporate Social Responsibility
DVC	Damodar Valley Corporation
EBIT	Earnings before Interest & Tax
EBITDA	Earnings before Interest, Tax & Depreciation and Amortisation
Expn.	Expenditure
FY	Financial Year
GOI	Government of India
JV	Joint Venture
krWh	Kilowatt hour
L.T	Lakh Ton
MT	Million Ton
MT/A	Million Ton per Annam
MTU	Million Unit
MW	Mega Watt

Term	Description
NLCIL	NLC India Limited
NTPP	New Neyveli Thermal Power Project
NSE	National Stock Exchange
NTPL	NLC Tamluk Power Limited
NUPPL	Neyveli Ultra Pradesh Power Limited
OPM	Operating Profit Margin
PAT	Profit after Tax
PBT	Profit before Tax
PSU	Public Sector Undertakings
ROCE	Return on Capital Employed
RTI	Right to Information
SCOPE	Standing Conference of Public Enterprises
SGR	Specialized Mining Equipments
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Limited
TH	Tamil Nadu
TPS	Thermal Power Station
UP	Uttar Pradesh



THANK YOU



CREATING WEALTH FOR WELLBEING

NLC India Limited

(formerly - Neyveli Lignite Corporation Ltd.,) "NAVRATNA" - Govt. of India Enterprise

LEARNING & DEVELOPMENT CENTRE



CERTIFICATE FOR INPLANT TRAINING

This is to certify that Mr/Ms **SANTHOSHSAMI R, III B.E. (EEE)**

..... **KINGS COLLEGE OF ENGINEERING, PUDUKOTTAI**

has undergone

Inplant Training in **NLC India Limited, Neyveli** *between* **04-Jun-18**

and **09-Jun-18**

NLCIL wishes him / her Success in all future endeavours.



HEAD / L&D

LEARNING & DEVELOPMENT CENTRE

"Training adding Value to Life"

2.3.1_EXP_190

15.12.17

IN PLANT TRAINING CERTIFICATE

We hereby certify that Ms. K. Divya (Regd.No. 821115105010) from Kings College of Engineering, Punalkulam has completed the In Plant Training for a period of 3 days from 13.12.2017 to 15.12.2017. During the In plant training period, her conduct was GOOD.

We wish her all success in her professional life.

For SRF Limited,



T.K. Srivatsan
Senior Manager – HR & IPST

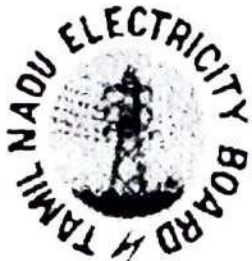
SRF LIMITED
TECHNICAL TEXTILES BUSINESS
VIRALIMALAI-621 316.
PUDUKKOTTAI DISTRICT.
TAMILNADU, INDIA.

SRF LIMITED
Viralimalai - 621 316
Distt. Pudukkottai
TamilNadu, India.
Tel: +91-4339-220808 (6 Lines)
Fax: +91-4339-220284
Website: www.srf.com

Regd. office :
The Galleria, DLF Mayur Vihar,
Unit No. 236 & 237, Second Floor,
Mayur Place, Noida Link Road,
Mayur Vihar Phase-I Extn,
Delhi-110 091.
CIN No : L16101DL1970PLC005197
E-mail: info@srf.com

2.3.1_EXP_191

TAMILNADU ELECTRICITY BOARD



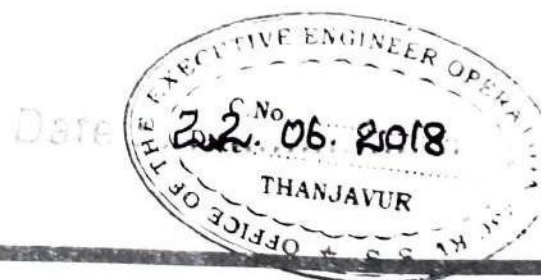
Certified that *P. VICTORIA*.....B.E/B.Tech IIIrd Year

.....*KING'S*.....COLLEGE.....OF.....ENGINEERING.....

has attended the in - Plant training at 230 KV/ 110 KV Sub Station, Thanjavur.

From 18.06.2018 to 22.06.2018.

Reference Lr No. : 6910/ADM-3/A.2/F.Irplant Training/2018/ Dt : 13/06/2018



EXECUTIVE ENGINEER
OPERATION
230 KV SUB - STATION
THANJAVUR - 613 303.

Department of Electrical & Electronics Engineering
Academic Year 2018-19 / Odd Semester
In-House Training Attended - Academic Year 2017-18
Class: IV EEE
BATCH: 2015-19

SNo.	Register Number	Name of the Student	Date	Name of the Companies
1	821115105010	DIVYA. K	13.12.17 to 15.12.17	SRF Limited, Viralmalai - 621316
2	821115105307	SHELAA S		
3	821115105308	VEERAMANI M		
4	821115105010	DIVYA. K	18.06.18 to 20.06.18	MARIS Associate Pvt Ltd, Madathur, Thoothukudi- 628002
5	821115105307	DHEERTHS		
6	821115105308	VEERAMANI M		
7	821115105023	MUTHUMEENA. K	04.12.17 to 08.12.17	TNEB, Tamilnadu Transmission Corporation Ltd, Thanjavur.
8	821115105001	AKALYA. T		
9	821115105006	BRINDHA. M		
10	821115105017	KALAIYARASI. D	06.12.17 to 10.12.17	Pantech ProEd Private Ltd, Trichy
11	821115105002	AKASH. R		
12	821115105007	DEEPAK RAJS		
13	821115105026	PRAKASH. M		
14	821115105037	SANTHOSHSAMI. R		
15	821115105044	SURIYA PRAKASH. M		
16	821115105304	PRADEEPAKUMAR D		
17	821115105027	PRAKASH. S	08.06.18 to 09.06.18	Pantech ProEd Private Ltd, Trichy
18	821115105005	BARANIKA. R		
19	821115105011	ELAKKIYA. E		
20	821115105012	GANESH KUMAR. P		
21	821115105009	DHINESH. J	18.06.18 to 22.06.18	TNEB, Tamilnadu Transmission Corporation Ltd, Vallam, Thanjavur.
22	821115105028	PRATHEESH. T		
23	821115105003	AKILANDESWARI. S		
24	821115105014	HARINI. K	04.06.18 to 09.06.18	NLC, Neyveli
25	821115105041	SOWMIYA. S		
26	821115105046	VICTORIYA. P		
27	821115105037	SANTHOSHSAMI. R	18.06.18 to 21.06.18	Intello Automation, TBI, PMU, Vallam, Thanjavur.
28	821115105019	KAYALVIZHI. R		
29	821115105039	SHANTHI. R		
30	821115105024	NALINI. N		
31	821115105303	MOHANRAJ S		
32	821115105702	ROHINTH. B		

SNo.	Register Number	Name of the Student	Date	Name of the Companies
33	821115105015	HARISHBABU. R	18.06.18 to 20.16.18	Pantech ProEd Private Ltd, Trichy
34	821115105035	SANDRU. K		
35	821115105309	VIBINRAJ N		
36	821115105301	DINESHKUMAR D		
37	821115105306	RAMKUMAR P		
38	821115105033	RAMU. P		
39	821115105043	SUNDAR. R	11.06.18 to 15.06.18	Bharath Electric Motors, Coimbatore.
40	821115105040	SIVAKUMAR S		
41	821115105030	PREM KUMAR. V.P		
42	821115105031	RAGURAMAN. R		
43	821115105038	SATHISH. M		
44	821115105701	ENIYAVAN R		
45	821115105036	SANTHOSH KUMAR. R		
46	821115105032	RAMKUMAR. P		
47	821115105034	SAKTHIVEL. M		
48	821115105045	TAMIL SELVAN. T		
49	821115105302	KARTHIKEYAN R	25.06.18 to 29.06.18	TNEB, Tamilnadu Transmission Corporation Ltd, Vallam, Thanjavur.
50	821115105025	PARTHASARATHI. R		
51	821115105305	RAJADURAI R		

Note:

Three students attended In-House Training in both summer and winter vacation holidays. They are: DIVYA. K, SANTHOSH SAMI. R & VEERAMANI M

S. S. Ganesan
IHT Co-ordinator/EEE 20/07/18

A. Arumugam
HOD/EEE 20/7/18

J. Arumugam
24/7/18



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2018-2019 (ODD SEMESTER)
IN HOUSE TRAINING PRESENTATION SCHEDULE

Date: 03.07.18

KCE/EEE/HOD/IHT/2018-19-1

All the Students of IV year Electrical and Electronics Engineering should come prepared with the power point presentation regarding their industrial training and learning outcome along with the one hard bond copies of training report & PPT Handouts on the day of presentation. After completing their presentation evaluation made by their performance, concept and future scope of the training discussion.

Presentation Date: 14.07.18 – Project Hour

Venue: IV EEE class room

S. A. G. 3/7/18
 IHT Coordinator

A. Summ
 HOD /EEE 3/7/18



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR(2018-19)ODD
IN HOUSE TRAINING FEEDBACK FORM**

Company Name: MARIS PRIVATE LIMITED AND ASSOCIATES

Duration: 19 06 18 - 20 06 18

1 - Unsatisfactory

2 - Satisfactory

3 - Good

4 - Very Good

5 - Excellent

	1	2	3	4	5
1. Overall experience of IHT period time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooperation of the company management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Technical Practices provided by the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. IHT will help to your Final project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. IHT will help to get Internship in that company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. IHT will help to recruit you to that company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Way of approach of that company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Skills learned during the period of IHT.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Support of IHT coordinator of our college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Technical stuff provided by the company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

From

Dr.T.Shanthi, M.E.,Ph.D.,
Project Officer,
Kings College of Engineering,
Punalkulam.

To

The Executive Director,
MARIS Associates Pvt Ltd,
Madathur,
Thoothukudi-628002.

Dear sir/madam,

Sub: Thanks letter for In House Training- reg.

Warm greetings from Kings College of Engineering


We would like to thank you for the support you have provided us in accommodating our students for the purpose of in plant training at your esteemed organization. The opportunity you have provided for our students help them to be aware of the practical challenges of technology in industries environment. We are very happy that, we have made a right choice for our students for utilizing the facilities available in a national/state organization like yours.

We earnestly look forward for the same support in future also, for building a strong technical community.

Thanking you

Place: Punalkulam

Date: 17.07.18

Project Officer -

PROJECT OFFICER/ IHC/EDE
KINGS COLLEGE OF ENGINEERING
PUNALKULAM-613303, PUDUKOTTAI, Dt



Department of Electrical & Electronics Engineering

Academic Year 2017-2018 / Even Semester

In-House Training Presentation Mark Statement - 14.07.18

Class: IV EEE

BATCH: 2015-19

SNo.	Name of the Student	Name of the Companies	Content (5)	Concept (5)	Presentation (5)	Viva voce (5)	Total (20)
1	DIVYA. K	SRF Limited, Viralmalai - 621316	5	4	4	4	17
2	SHELAA S						
3	VEERAMANI M						
4	DIVYA. K	MARIS Associate Pvt Ltd, Madathur, Thoothukudi- 628002	5	4	4	4	17
5	DHEERTHI S						
6	VEERAMANI M						
7	MUTHUMEENA. K	TNEB, Tamilnadu Transmission Corporation Ltd, Thanjavur.	5	4	4	4	17
8	AKALYA. T						
9	BRINDHA. M						
10	KALAIYARASI. D						
11	AKASH. R	Pantech ProEd Private Ltd, Trichy	5	4	4	4	17
12	DEEPAK RAJ S						
13	PRAKASH. M						
14	SANTHOSH SAMI. R						
15	SURIYA PRAKASH. M						
16	PRADEEPKUMAR D						
17	PRAKASH. S						
18	BARANIKA. R	Pantech ProEd Private Ltd, Trichy	4	4	4	4	16
19	ELAKKIYA. E						
20	GANESH KUMAR. P						
21	DHINESH. J						
22	PRATHEESH. T						
23	AKILANDESWARI. S	TNEB, Tamilnadu Transmission Corporation Ltd, Vallam, Thanjavur.	4	4	4	4	16
24	HARINI. K						
25	SOWMIYA. S						
26	VICTORIYA. P						
27	SANTHOSH SAMI. R	NLC, Neyveli	5	4	4	4	17
28	KAYALVIZHI. R	Intello Automation, TBI, PMU, Vallam, Thanjavur.	4	4	4	4	16
29	SHANTHI. R						
30	NALINI. N						
31	MOHANRAJ S						
32	ROHINTH. B						


SNo.	Name of the Student	Name of the Companies	Content (5)	Concept (5)	Presentation (5)	Viva voce (5)	Total (20)
33	HARISHBABU. R	Pantech ProEd Private Ltd, Trichy	4	4	4	4	16
34	SANDRU. K						
35	VIBINRAJ N						
36	DINESHKUMAR D						
37	RAMKUMAR P (Lateral)						
38	RAMU. P						
39	SUNDAR. R	Bharath Electric Motors, Coimbatore.	4	4	4	3	15
40	SIVAKUMAR.S						
41	PREM KUMAR. V.P						
42	RAGURAMAN.R						
43	SATHISH. M						
44	ENIYAVAN R						
45	SANTHOSH KUMAR. R						
46	RAMKUMAR. P						
47	SAKTHIVEL. M						
48	TAMIL SELVAN. T						
49	KARTHIKEYAN R	TNEB, Tamilnadu Transmission Corporation Ltd, Vallam, Thanjavur.	4	4	4	4	16
50	PARTHASARATHI. R						
51	RAJADURAI R						

Total No. of Companies: 07

Total No. Batches : 11

Total No. Students : 48

S. R. Gauthi / 16/7/18
IHT Co-ordinator/EEE


HOD/EEE

DEPARTMENT OF MECHANICAL ENGINEERING

2.3.1: EXPERIENTIAL LEARNING



TABLE OF CONTENTS

S.No	Content	Page No
1	Industrial Visit	02
2	In House Training	19
3	Workshop	30



Department of Mechanical Engineering

Experiential Learning / 2019-20

**Place of Visit : Vikram Sarabai Space Research Centre,
ISRO, Trivandram,**

Type of Activity : Industrial Visit

Date of visit : 02.08.2019

24/7/2019

From:

Final year Mechanical
Department of Mechanical Engg.
Kings college of Engg.
Punalkulam.

To:

The principal
Kings college of Engg.
Punalkulam

Submitted to Secretary for
J. P. M. C.
24/7/19.

24/7/19

Respected Madam;

Subj: Requesting to apply industrial visit to ISRO,
Trivandrum.

Through: proper channel.

For the purpose of Industrial visit, hereby, the
students of final years mechanical Engg are requesting
to apply ISRO, Trivandrum. So, kindly permit us to apply
and go for industrial visit on first week of August 2019

Thank you,

Yours sincerely
N. M. A. S. H.

(N. M. A. S. H.)
I.V. coordinator.

Submitted to the Principal

T. P. M. C.
24/7/19

24/7/19



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2019-2020

INDUSTRIAL VISIT SCHEDULE FOR FINAL YEAR STUDENTS

DAY 1: (01.08.19) Thursday

- Home Town- Departure from Hometown to Thiruvananthapuram (Kerala) by special coach (Saraswathi Bus Service) at 10.00 pm from New Bus stand.

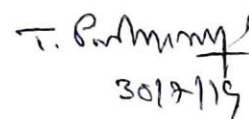
DAY 2: (02.08.19) Friday

- Arrival at Thiruvananthapuram 05.00 am
- After fresh up & breakfast proceed to IV (Industrial Visit) at 9.30 am.(ISRO)
- After lunch proceed to Zoo at Thiruvanthapuram (2.00 pm to 5.00 pm)
- Evening Free For shopping at 7.00 pm
- Dinner & Overnight Stay at Hotel (Thiruvanthapuram)

DAY 3: (03.08.19) Saturday

- After fresh up Start at Thiruvananthapuram to cochi 4.00am
- Break fast 08.30 am to 09.30 am
- After break fast 11.00 am to 6.00 pm Cogeneration Plant Visit, Cochi.
- Evening Free For shopping at 7.00 pm (LuLu Mall) Cochi.
- Departure from Cochi(Kerala) To Hometown by special coach (Saraswathi Bus Service) at 10.00 pm from LuLu Mall Cochi
- Arraival to Thanjavur at 05.00 am (Sunday).


3/7/19


30/7/19

Permission Letter for Industrial Visit

01.08.19

From

Dr.T.Pushparaj,
Professor & Head - Mechanical Engineering
Kings College of Engineering,
Punalkulam – 613 303

To

The Principal,
Kings College of Engineering,
Punalkulam – 613 303

Respected Madam,

Sub: Permission Letter for Industrial Visit regarding,

We are planned to Undergo Industrial visit on 02.08.19 at ISRO Thiruvanthapuram and Wonderla on 03.08.19 With 54 students from final year mechanical Engineering along with 4 faculty members from Mechanical engineering department kindly permit for the same. We assure that the entire programme will be in a smooth manner.

Thank you.

Sub. to Secretary's
J. Ananthan
01/8/19.
VDR
11/8/19

Yours truly
T. Pushparaj 11/8/19
(Dr.T.Pushparaj)



VSSC Space Museum visit - Registration

1 message

no-reply@vssc.gov.in <no-reply@vssc.gov.in>
To: melwinsri@gmail.com

Wed, Jul 24, 2019 at 1:42 PM

Dear Sir/Madam,

Most welcome to the VSSC Space museum. To have more information and to continue the registration, please follow this link .

http://spacemuseum.vssc.gov.in/MuseumVisit/register.htm?_flowId=ProcessRegistration-flow&id=ff80808165cd0d07016c2304d1a314d5&key=c08f4f11-2f66-4e3c-ab3b-f0ae12b8ebbd

Regards,
Public Relations Officer, VSSC.

Guidelines

- Public are allowed to visit the Vikram Sarabhai Space Centre(VSSC) space museum from 09:30 hrs to 16:00 hrs on all days except Sundays and declared holidays (notified on the calendar available online). The entry is allowed without any fee.
- A visit to the space museum will take more than an hour. There will be regular film shows on all days. Special shows will be arranged for groups with not less than 40 visitors, on request.
- Sounding rockets are generally launched from TERLS on every third Wednesday at 11:45 hours (subject to change for technical reasons) for scientific purposes. Those who wish to witness the launch should be present at space museum before 10:30 hrs.
- The entry is allowed only for Indian nationals (Foreign nationals are also allowed against special permit issued by Administrative Officer, Public Relations, VSSC with the approval of Director, VSSC, for which they have to apply in advance)
- The interested Indian nationals can apply online, maximum 3 months in advance. **Online request will be processed only on working days**
- The request can be for an individual or for a group. The individual/group leader should furnish the following details
 - Name, age, occupation, address and mobile number.
 - Proof of identity (voter's id/Aadhar card/driving license/passport/PAN card/id-card issued by government organisation).
 - Name and age of other individuals in the group.
 The group leader should be invariably present at VSSC on the day of visit and will be responsible for the integrity and disciplined behaviour of the group.
- For every online request, the system will acknowledge with a unique id. This id can be used to check the status of the request online and also to get the printed entry pass on arrival at VSSC.
- VSSC will process the online request for approval. On approval, intimation will be given by email and SMS.
- Printed entry pass can be obtained either from the Public Relations Office, VSSC near Veli Church or from the security gate at Canal gate, near Stationkadavu at the northern boundary of the VSSC campus . For this purpose the group leader should furnish the details of the assigned request ID along with the registered proof of identity at the above identified points. On verification, the pass will be printed and issued. The pass will be valid only for the date of issue.
- Limited number of vehicles will be allowed up to Space Museum. Group leader should provide the details of the vehicle while seeking entry pass.
- Entry will be allowed only from the Canal gate.
- Mobile phone, camera, CD, USB drive, floppy or other electronic gadgets are **strictly prohibited** inside the campus.
- VSSC will not be responsible for any accident to the visitors or for any loss/damage to their belongings during their visit to VSSC or to any of its facilities, or while launching rockets.

**** PLEASE DON'T REPLY TO THIS MAIL ****



Melwin J Sridhar M <melwinsri@gmail.com>

VSSC Space Museum visit - Confirmation

1 message

no-reply@vssc.gov.in <no-reply@vssc.gov.in>
To: melwinsri@gmail.com

Wed, Jul 24, 2019 at 2:53 PM

Dear N Magesh,

Your request to visit space museum has been APPROVED.

Visit ID: 1907257

Date of visit :02-08-2019 9:30 AM

Nos. of Visitors :52

Guidelines

- Printed entry pass can be obtained either from the Public Relations Office, VSSC near Vell Church or from the security gate at Canal gate, near Stationkadavu at the northern boundary of the VSSC campus . For this purpose the group leader should furnish the details of the assigned request ID along with the registered proof of identity at the above identified points. On verification, the pass will be printed and issued. The pass will be valid only for the date of issue.
- Limited number of vehicles will be allowed up to Space Museum. Group leader should provide the details of the vehicle while seeking entry pass.
- Entry will be allowed only from the Canal gate.
- Mobile phone, camera, CD, USB drive, floppy or other electronic gadgets are **strictly prohibited** inside the campus.
- A visit to the space museum will take more than an hour. There will be regular film shows on all days. Special shows will be arranged for groups with not less than 40 visitors, on request.
- Sounding rockets are generally launched from TERLS on every third Wednesday at 11:45 hours (subject to change for technical reasons) for scientific purposes. Those who wish to witness the launch should be present at space museum before 10:30 hrs.
- VSSC will not be responsible for any accident to the visitors or for any loss/damage to their belongings during their visit to VSSC or to any of its facilities, or while launching rockets.

For any further queries, please contact public Relations : 0471-2564292, 2565649

Regards,

Public Relations Officer, VSSC

*** PLEASE DON'T REPLY TO THIS MAIL ***

7/29/2019

Gmail - VSSC Space Museum visit - Confirmation

ISRO Confirmation

 Gmail

Melwin J Sridhar M <melwinsri@gmail.com>

VSSC Space Museum visit - Confirmation

1 message

Mon, Jul 29, 2019 at 3:25 PM

no-reply@vssc.gov.in <no-reply@vssc.gov.in>
To: melwinsri@gmail.com

Dear M Melwin Jagadeesh Sridhar,

Your request to visit space museum has been APPROVED.

Visit ID: 1907311

Date of visit :02-08-2019 9:30 AM

Nos. of Visitors :11

Guidelines

- Printed entry pass can be obtained either from the Public Relations Office, VSSC near Veli Church or from the security gate at Canal gate, near Stationkadavu at the northern boundary of the VSSC campus . For this purpose the group leader should furnish the details of the assigned request ID along with the registered proof of identity at the above identified points. On verification, the pass will be printed and issued. The pass will be valid only for the date of issue.
- Limited number of vehicles will be allowed up to Space Museum. Group leader should provide the details of the vehicle while seeking entry pass.
- Entry will be allowed only from the Canal gate.
- Mobile phone, camera, CD, USB drive, floppy or other electronic gadgets are strictly prohibited inside the campus.
- A visit to the space museum will take more than an hour. There will be regular film shows on all days. Special shows will be arranged for groups with not less than 40 visitors, on request.
- Sounding rockets are generally launched from TERLS on every third Wednesday at 11:45 hours (subject to change for technical reasons) for scientific purposes. Those who wish to witness the launch should be present at space museum before 10:30 hrs.
- VSSC will not be responsible for any accident to the visitors or for any loss/damage to their belongings during their visit to VSSC or to any of its facilities, or while launching rockets.

For any further queries, please contact public Relations : 0471-2564292, 2565649

Regards,
Public Relations Officer, VSSC

**** PLEASE DON'T REPLY TO THIS MAIL****


31/7/19

<https://mail.google.com/mail/u/0?ik=49f4992754&view=pt&search=all&permthid=thread-f%3A1640386363980416467&simpl=msg-f%3A16403863639...> 1/1

Wonderla IV
Request & Approval.



Melwin J Sridhar M <melwinsri@gmail.com>

Re: IV request

1 message

Business Development Kochi <bd.cok@wonderla.com>
To: melwinsri@gmail.com
Cc: Praveen Kumar <praveen.kumar@wonderla.com>

Wed, Jul 31, 2019 at 10:23 AM

Dear Sir,

Please find the IV permission letter attached.

On Tue, Jul 30, 2019 at 9:31 PM Praveen Kumar <praveen.kumar@wonderla.com> wrote:

Hi,

Kindly do the needful

----- Forwarded message -----

From: "Melwin J Sridhar M" <melwinsri@gmail.com>

Date: Jul 30, 2019 21:24

Subject: Fwd:

To: <praveen.kumar@wonderla.com>

Cc:

Dear Sir,

My self **Melwin M**, Assistant Professor, Department of **Mechanical Engineering, Kings College of Engineering Thanjavur-Tamilnadu**. we are planned to visit wonderla cochi (kerala) on **03.08.19 Saturday** with **52 students** along with **4 faculty members**, on that time we requesting you to arrange an Industrial Visit inside the park its very useful for our students.

***The details of students and staff are attached.**

Thank you.

With Kind Regards,

M.Melwin J Sridhar, B.Tech, ME, (Ph.D).,
Assistant Professor,
Department of Mechanical Engineering,
Kings College of Engineering, Thanjavur.

Disclaimer : The information contained in this communication is intended solely for the use of the individual or entity to whom it is addressed and others authorized to receive it. It may contain confidential or legally privileged information. If you are not the intended recipient you are hereby notified that any disclosure, copying, distribution or taking any action in reliance on the contents of this information is strictly prohibited and may be unlawful. If you have received this communication in error, please notify us immediately by responding to this email and then delete it from your system. The firm is neither liable for the proper and complete transmission of the information contained in this communication nor for any delay in its receipt.

—
Thank you

Regards,

Business Development

Wonderla Holidays Ltd., Kochi

Ph: 0484 2684009 | 7593853107

Date : Wed, 31st July 2019

M.Melwin J Sridhar, B.Tech, ME, (Ph.D).
Assistant Professor
Department of Mechanical Engineering
Kings College of Engineering, Thanjavur

Dear Sir,

Greetings from Wonderla, Kochi !

As per the mail from your end, we are glad to permit industrial visit for the students of Mechanical Engineering Department on 03.08.2019. The time for industrial visit will be intimated to you after reaching the park.

As the industrial visit takes place inside the park, the purchase of entry tickets is compulsory. Please contact Help Desk with your booking number, on the day of visit for further proceedings.

Please intimate us in advance if there is any change in your schedules.

For any further assistance, please feel free to contact us.

Regards,


Authorized Signatory



Branches

Bangalore Park (Reg.office): 28th KM, Mysore Road, Bangalore: 562 109 | Ph: +91 80 22010300 | Email: mail.blr@wonderla.com
Kochi Park: Pallikkara, Kumarapuram P.O., Kochi: 683 565 | Phone: +91 484 2684001 | Email: mail.cok@wonderla.com
Hyderabad Park: ORR, Exit No. 13, Ravirala Post, Hyderabad: 501 510 | Ph: +91 40 23490300 | Email: mail.hyd@wonderla.com
Bangalore Resort: 28th KM, Mysore Road, Bangalore: 562 109 | Ph: +91 80 33710333 | Email: resort.blr@wonderla.com



DEPARTMENT OF MECHANICAL ENGINEERING

Industrial Visit to ISRO-Trivandram

Student's Committee List

S. No	Students' Name	Name of the Committee	Year/Sem/Sec
1	Gopikrishnan. M	Transport	IV/VII/A
2	Manibharathi. S		
3	Anandraja. K		
4	Ajeeth. G. K		
5	Dikshan Deep. B	Food	
6	Harish Balaji. R		
7	Praveenkumar. S		
8	Sathishkumar. M		
9	Rajulu. M	Refreshment	
10	Arun. B		
11	Magesh. K		
12	Dhasarathan. K		
13	Nagaraj. T	Discipline	
14	Arun. R		
15	Vijay Baskar. S		
16	Chyleshwar. M		

Staff i/c

T. R. R. R.
HOD

2/7/19

DEPARTMENT OF MECHANICAL ENGINEERING
INDUSTRIAL VISIT SCHEDULE FOR FINAL YEAR STUDENTS
ACADEMIC YEAR 2019 -20

SN	Register No	StudentName
1	821116114001	AATRALARASAN T
2	821116114002	ABINESH K
3	821116114003	AFSHAL HUSSAIN S
4	821116114004	AJEETH G.K
5	821116114005	AJITH S
6	821116114006	AKASH G
7	821116114007	AKASH DHILIP KUMAR A
8	821116114009	ALLAN A.T
9	821116114010	ALWIN RAJ V
10	821116114011	ANANDH A
11	821116114012	ANAND RAJA K
12	821116114013	ANURANJAN M
13	821116114014	ARUN A
14	821116114015	ARUN B
15	821116114016	ARUN R
16	821116114017	ARUN KUMAR P
17	821116114019	BHARATHIKANNAN A
18	821116114020	BALAJI E
19	821116114021	CHYLESHWAR M
20	821116114023	DHANASEKAR S
21	821116114024	DHASARATHAN K
22	821116114026	DIKSHAN DEEP B
23	821116114027	EZHILVENDAN K
24	821116114028	GOPINATH L
25	821116114030	HARI HARAN S
26	821116114032	HARISH BALAJI R
27	821116114033	JAYASEELAN R
28	821116114034	JEEVA S
29	821116114035	JEYANDHAN R
30	821116114036	JOSEPH MANVEL RAJA J
31	821116114037	KABILESH G
32	821116114039	KRISHNAN G
33	821116114040	MAHESH K
34	821116114041	MONALISAN G
35	821116114043	NAGARAJAN T
36	821116114044	NAVEEN J
37	821116114302	ARJUN A
38	821116114303	MANIBHARATHI S



DEPARTMENT OF MECHANICAL ENGINEERING
INDUSTRIAL VISIT SCHEDULE FOR FINAL YEAR STUDENTS
ACADEMIC YEAR 2019 -20 Contact Numbers

SN	Register No	StudentName	Contact Number	
			Parent	Student
1	821116114001	AATRALARASAN T	7868047289	8940457282
2	821116114002	ABINESH K	8524969712	9095008659
3	821116114003	AFSHAL HUSSAIN S	9597366685	8015097486
4	821116114004	AJEETH G.K	8056864210	9087346062
5	821116114005	AJITH S	7562996806	9943379692
6	821116114006	AKASH G	9843766638	8940302898
7	821116114007	AKASH DHILIP KUMAR A	9092728871	9626211687
8	821116114009	ALLAN A.T	6380015050	7539918757
9	821116114010	ALWIN RAJ V	9751239544	8525966386
10	821116114011	ANANDH A	9629624374	8870845672
11	821116114012	ANAND RAJA K	9003668715	9003409001
12	821116114013	ANURANJAN M	8098258112	9047742876
13	821116114014	ARUN A	9944125955	7397029803
14	821116114015	ARUN B	9488489743	7010096965
15	821116114016	ARUN R	8270629400	7639653090
16	821116114017	ARUN KUMAR P	7639166583	9626426956
17	821116114019	BHARATHIKANNAN A	9944607612	8838921970
18	821116114020	BALAJI E	9047585244	7339390613
19	821116114021	CHYLESHWAR M	9500713636	9585920238
20	821116114023	DHANASEKAR S	9629615119	9688880242
21	821116114024	DHASARATHAN K	9940947137	8098879291
22	821116114026	DIKSHAN DEEP B	7904478415	9952167053
23	821116114027	EZHILVENDAN K	9585469372	8489675162
24	821116114028	GOPINATH L	9486742631	8056864807
25	821116114030	HARI HARAN S	9843698453	9159094010
26	821116114032	HARISH BALAJI R	9786463373	9042977518
27	821116114033	JAYASEELAN R	9994670195	8015293489
28	821116114034	JEEVA S	8098481512	9751996621
29	821116114035	JEYANDHAN R	9486835840	9786952415
30	821116114036	JOSEPH MANVEL RAJA J	9626657643	9003326609
31	821116114037	KABILESH G	9047189099	8270532239
32	821116114039	KRISHNAN G	7598264689	9629208029
33	821116114040	MAHESH K	8144950628	9789719218
34	821116114041	MONALISAN G	9840796707	9566531519
35	821116114043	NAGARAJAN T	9976882434	9360017963
36	821116114044	NAVEEN J	9789476129	9894329435
37	821116114302	ARJUN A	7708584689	9942684049
38	821116114303	MANIBHARATHI S	8667097372	8012120824

PARENT DECLARATION FORMAT

FOR INDUSTRIAL VISIT / EDUCATIONAL TOUR

Date : 1.8.19

From

R. Vignesh Prabhu,
IV - A Mech.
Kings College of Engineering,
Punalkulam

To

The Principal
Kings College of Engineering
Punalkulam 613 303

Respected madam,

I, Father / Mother / [✓]Guardian of S. Kalavathi B.E Seventh Semester studying in the Department of Mechanical Engineering punalkulam 613 303, allow my son to take part in the industrial visit / educational tour to ISRO arranged by the Department of Mechanical engineering from 1.8.19 (Date) to 4.8.19 (Date). I assure you that my son will maintain decorum and discipline during the industrial visit / educational tour. I clearly understand that any mishaps that may affect my son during the tour, will not be the responsibility of the Department / College.

Thanking you,

Yours faithfully,

S. Kalavathi

R. Vignesh Prabhu / 1.08.19

Student's signature with Date

Student's Name & Roll No.

R. Vignesh Prabhu \approx 16MEA46

Signature of the Parent / Guardian

Parent / Guardian Contact No.

9965311471

See
31/7/19

PARENT DECLARATION FORMAT

FOR INDUSTRIAL VISIT / EDUCATIONAL TOUR

From

Date: 01.08.2019

A. Sumathi,
1/16 North Street,
Pillaiyarpatti,
Thanjavur.

To

The Principal
Kings College of Engineering
Punalkulam 613 303

Respected madam,

I, Father / Mother/ Guardian of A. Arjun. B.E Seventh Semester studying in the Department of Mechanical Engineering punalkulam 613 303, allow my son to take part in the industrial visit / educational tour to Depo arranged by the Department of Mechanical engineering from 1.08.2019 (Date) to 04.08.2019 (Date). I assure you that my son will maintain decorum and discipline during the industrial visit / educational tour. I clearly understand that any mishaps that may affect my son during the tour, will not be the responsibility of the Department / College.

Thanking you,

Yours faithfully,

A. Arjun

Student's signature with Date

Student's Name & Roll No.

A. Arjun
16ME440.

31/7/19

A. Sumathi

Signature of the Parent / Guardian

Parent / Guardian Contact No.

7708584689.

DEPARTMENT OF MECHANICAL ENGINEERING
INDUSTRIAL VISIT SCHEDULE FOR FINAL YEAR STUDENTS
ACADEMIC YEAR 2019 -20

Approved by AICTE, New Delhi & Affiliated to Anna University of Technology Tiruchirappalli.

SN	Register No	StudentName
1	821116114001	AATRALARASAN T
2	821116114002	ABINESH K
3	821116114003	AESHAL HUSSAIN S
4	821116114004	AJEETH G.K
5	821116114005	AJITH S
6	821116114006	AKASH G
7	821116114007	AKASH DHILIP KUMAR A
8	821116114009	ALLAN A.T
9	821116114010	ALWIN RAJ V
10	821116114011	ANANDH A
11	821116114012	ANAND RAJA K
12	821116114013	ANURANJAN M
13	821116114014	ARUN A
14	821116114015	ARUN B
15	821116114016	ARUN R
16	821116114017	ARUN KUMAR P
17	821116114019	BHARATHIKANNAN A
18	821116114020	BALAJI E
19	821116114021	CHYLESHWAR M
20	821116114023	DHANASEKAR S
21	821116114024	DHASARATHAN K
22	821116114026	DIKSHAN DEEP B
23	821116114027	EZHILVENDAN K
24	821116114028	GOPINATH L
25	821116114030	HARI HARAN S
26	821116114032	HARISH BALAJI R
27	821116114033	JAYASEELAN R

SN	Register No	StudentName
28	821116114034	JEEVA S
29	821116114035	JEYANDHAN R
30	821116114036	JOSEPH MANVEL RAJA J
31	821116114037	KABILESH G
32	821116114039	KRISHNAN G
33	821116114040	MAHESH K
34	821116114041	MONALISAN G
35	821116114043	NAGARAJAN T
36	821116114044	NAVEEN J
37	821116114302	VARJUN A
38	821116114303	MANIBHARATHI S
39	821116114304	PRAYINKUMAR S
40	821116114307	SENGUTTUVAN S
41	821116114308	SRIRAM P.S
42	821116114309	VIGNESH N
43	821116114310	VIGNESH PRABHU R
44	821116114701	GOBIKRISHNAN M
45	821116114047	PRASANTH R
46	821116114052	RAJULU M
47	821116114053	RAMAVEL A
48	821116114054	RAMESH KUMAR L
49	821116114055	RAMKUMAR S
50	821116114058	SANGARANARAYANAN P
51	821116114064	SATHISH KUMAR M
52	821116114071	SURENDHAR C
53	821116114079	VIGNESH M
54	821116114081	VIJAY BASKAR J

ALONG WITH FACULTY MEMBERS

SN	Name	Designation
1	Dr.T.Pushparaj	Head & Professor
2	Mr.N.Magesh	Assistant Professor
3	Mr.M.Melwin J Sridhar	Assistant Professor
4	Mr.S.Sabanayagam	Assistant Professor

PRINCIPAL
Kings College of Engineering
Punakulam- 613 303.

Ph: 8610089922

Principal


 Punakulam, Gandarvakottai Taluk, Pudukkottai District - 613 303.
 Ph: 04362-282474, 282395, 282396. Fax: 04362-282474


IMPORTANT INSTRUCTIONS

Visitors holding valid entry pass only will be allowed inside Space Museum. Entry passes can be obtained on request from Administrative Officer, Public Relations, VSSC. Request should contain information like visitors' name, age, address, occupation etc. Requests for passes may be sent well in advance directly by ordinary post or Speed post. There is **NO ENTRY FEE** to visit VSSC Space Museum.

Visitors of Foreign Nations should obtain the Special entry permit directly from Public Relations, subject to the approval of the Director, VSSC.

Space Museum visitors are requested to enter / exit through **Canal Gate** near Stationkadavu only. Limited number of vehicles may be allowed up to Space Museum. Mobile phones, Cameras, CDs, Floppies or other Electronic Gadgets etc, are **strictly prohibited** inside the campus.

A visit to Space Museum will take more than one hour. Entry will be allowed from 09:30 hrs to 15:30 hrs on all VSSC working days and Saturdays. There will be regular film shows on all days. Special shows will be arranged for groups with not less than 40 visitors, if required.

VSSC will not be responsible for any loss / damage or accident to the visitors during their visit to VSSC or to any of its facilities or while launching of rockets.

For further details and entry passes, please contact :

Administrative Officer,
Public Relations,
VSSC, ISRO P.O
Thiruvananthapuram 695 022

Telephone Numbers

Public Relations : 0471-2564292, 2565649
Space Museum : 0471-2562275, 2562717
Fax : 0471-2564060

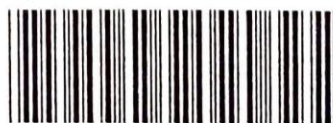
Government of India
Department of Space
Vikram Sarabhai Space Centre
Thiruvananthapuram - 695 022

SPACE MUSEUM / ~~WITNESSING ROCKET LAUNCH~~
(Entry through Canal Gate)

Pass No 1907257 Date: 02-08-2019
Name Mr. Magesh N
Address KINGS COLLEGE OF ENGINEERING, PUNALKULAM
Punalkulam, PUDUKOTTAI
Tamil Nadu 613303
No. of Persons 58
Vehicle No if any ONE BUS ONLY TN 63 AZ 4466
Date of visit : 02-08-2019 12:00 AM

Holder's signature : *[Signature]*

(Seal)



This is a system generated entry pass.
Valid with out signature of the approving authority.

Administrative Officer
Public Relations

Can be retained by the visitor

Visitors pass

Timing: 09.30 Hrs to 15.30 Hrs

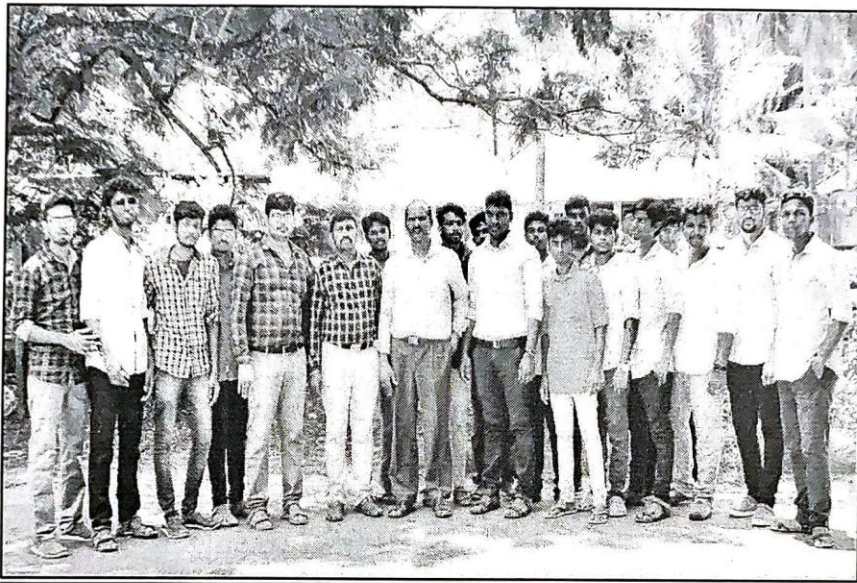
Phone: 2562275 / 2562717

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Industrial Visit

Industry : ISRO, VSSC- THIRUVANTHAPURAM
Place : THIRUVANTHAPURAM
Date : 02.08.2019

Fifty four students from Final year mechanical engineering and four faculty members were visited **ISRO Thiruvananthapuram** by bus on 02.08.19. In the **VSSC**, the students were seen the satellite components and their functions from the beginning (old age) to the updated stage and they have gained the knowledge about the cryogenics which is a typical area in fuels. The Interaction of students to the experts of all the departments in industry was good during the visit.



All participants visiting the ISRO, VSSC- Thiruvananthapuram



In front of ISRO, VSSC

Mahesh
12/8/19
Staff in charge

T. Prabhakaran
HOD 12/8/19

Dr. T.PUSHPARAJ M.E ,Ph.D
PROFESSOR & HEAD
MECHANICAL DEPARTMENT

08.10.2020

To

The HR Manager,
Hindustan motors,
Bangalore.

Sub: Permission to do In-house Training – requested-reg.

Sir,

The following final year Mechanical Engineering students of Kings College of Engineering, Punalkulam are willing to undergo Inplant Training in your concern. During the period of training, they will abide by the rules and regulations of your organization. They are:

Sn.No	Name of the student	Register number
1	Abbas Mohamed. S	821117114001
2	Madhesh. D	821117114035
3	Jerome Nicholas. A	821117114024
4	Manimaran. S	821117114039
5	Muthumanikandan. J	821117114047

We would be thankful, if you could kindly permit them to carry out their training at your Esteemed organization.

Thanking you



Hindustan Motors Limited

HINDUSTAN MOTORS,

Siddhartha Layout, Kattriguppe Main Road, bsk 3rd Stage, Bengaluru, Karnataka.

Tele : +919342678795

20/11/2020

Dear Sir,

We accepted to your students for intership training in our concern .

The list of students name are mention below

S.ABBAS MOHAMED

D.MADHESH

A.JEROME NICHOLAS

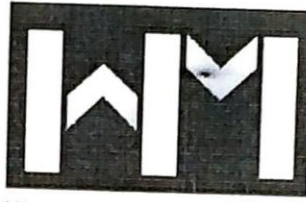
S.MANIMARAN

J.MUTHU MANIKANDAN

Thanking you,

With regards

(SS.MOHANKUMAR)



Hindustan Motors Limited

HINDUSTAN MOTORS,

Siddhartha Layout, Kattriguppe Main Road, bsk 3rd Stage, Bengaluru, Karnataka.
Tele : +919342678795

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **S.ABBAS MOHAMED, D.MADHESH, A.JEROME NICHOLAS, S.MANIMARAN, J.MUTHU MANIKANDAN** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020** to **20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

(SS.MOHANKUMAR)

HR Manager

Department of Mechanical Engineering
Academic Year 2020-2021 ODD Semester
In-House Training/Tentative Schedule

Class: IV Mech. A Sec.

Batch: 2017-2021

SNo	Register Number	Name of the Student	Name of the Company	Date/Duration
1	821117114001	Abbas Mohamed S	Hindustan Motors, Bangalore.	Sep '20 To Nov '20 (Week end)
2	821117114035	Madhesh D		
3	821117114024	Jerome Nicholas A		
4	821117114039	Manimaran S		
5	821117114047	Muthu Manikandan J		
6	821117114006	Annamalai K	Ashok Leyland, Chennai.	
7	821117114017	Enoch Ebenezer P		
8	821117114031	Kathiravan R		
9	821117114002	Abdul Shimak J		
10	821117114029	Karthick (24.11.1999) M		
11	821117114007	Aravindasamy R	Larsen & Toubro Ltd. Coimbatore.	Oct '20 To Nov '20 (Week end)
12	821117114008	Arjun Kumar R		
13	821117114018	Hariharan R		
14	821117114021	Infant Raja S		
15	821117114033	Keerthivasan K		
16	821117114013	Balamurugan M	Greentec Industries, Thanjavur.	Sep '20 To Nov '20 (Week end)
17	821117114016	Dhivakaran K		
18	821117114019	Hariharan V		
19	821117114038	Manimaran G		
20	821117114037	Maheswaran C		
21	821117114027	Kannan K	Everest Industries Limited, Coimbatore.	
22	821117114025	Kabilan S		
23	821117114003	Abishek S		
24	821117114046	Muthu S		
25	821117114048	Pragatheesh R		
26	821117114032	Kaviyarasan N	Fumes Renewable Energy Pvt. Ltd., Chennai.	
27	821117114034	Krishna S		
28	821117114036	Mohamed Yasin Sharif R		
29	821117114011	Augustine Albert J		
30	821117114005	Alagesan K		
31	821117114014	Bharath M	Wheels India Limited, Paadi, Chennai	Oct '20 To Nov '20 (Week end)
32	821117114028	Karan K		
33	821117114049	Prakash B		

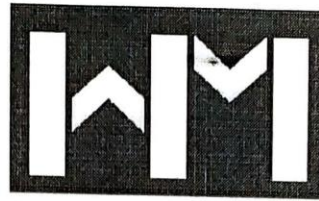
NO OF COMPANIES:07

TOTAL NO OF BATCHES:07

IHT Coordinator/MECH

T. P. Ramesh
HoD/MECH

J. M. M. M.
Principal



Hindustan Motors Limited

HINDUSTAN MOTORS,

Siddhartha Layout, Kattriguppe Main Road, bsk 3rd Stage, Bengaluru, Karnataka.
Tele : +919342678795

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **S.ABBAS MOHAMED, D.MADHESH, A.JEROME NICHOLAS, S.MANIMARAN, J.MUTHU MANIKANDAN** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

(SS.MOHANKUMAR)

HR Manager



ASHOK LEYLAND

ASHOK LEYLAND

Madavaram Red Hills Rd, Grant Lyon, Puzhal, Chennai, Tamil Nadu 600052

Tel: 044 – 2220 6000

Fax: 044 – 2220 6001

Emai id : secretarial@ashokleyland.com

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **K.ANNAMALAI, P.ENOCH EBENEZER, R.KATHIRAVAN, J.ABDUL SHIMAK, M.KARTHICK** the students of **kings college of engineering, punalkulam** has. successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

Manager



LARSEN & TOUBRO, LTD

Srinivasa Nagar, Malumichampatti, Tamil Nadu 64105

Tel: +91 22 67525656

Fax: +91 22 67525893

Email id : igrc@larsentoubro.com

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **R.ARAVINDASAMY, R.ARJUN KUMAR, R.HARIHARAN, S.INFANT RAJA, K.KEERTHIVASAN, M.BALAMURUGAN** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

MANAGER

GREENTEC INDUSTRIES

THANJAVUR

Ph no:08623 276000 to 08623 276009

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that

**K.DHIVAKARAN,V.HARIHARAN,G.MANIMARAN,C.MAHESHWARAN,
K.KANNAN** the students of **kings college of engineering, punalkulam** has
successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our
company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards



HR Manager



EVEREST INDUSTRIES, Ltd

COIMBATORE

Ganeshapuram, Podanur, Tamil Nadu 641023

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **S.KABILAN, S.ABISHEK, S.MUTHU, R.PRAGATHEESH** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

Manager

Fumes

FUMES RENEWABLE ENERGY Pvt. Ltd.,

NO.10/110, Brahmin St, Karambakkam, Buddhar Colony, Porur, Chennai, Tamil Nadu 600116

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **N.KAVIYARASAN,S.KRISHNA,R.MOHAMED YASIN SHARIFF,J.AUGUSTINE ALBERT** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards



HR Manager



WHEELS INDIA LIMITED

Madras Thiruvalluvar Madras Thiruvallur High Rd, TVS Industries, Padi, Chennai, Tamil Nadu

Tele: 044 2623 4300

20/11/2020

TO WHOM IT MAY CONCERN

This is to certify that **K.ALAGESAN, M.BHARATH, K.KARAN, B.PRAKASH** the students of **kings college of engineering, punalkulam** has successful/completed their in-house training from **20.10.2020 to 20.11.2020** in our company, with reference to partial fulfillment of the academic requirements.

All necessary details were provided from our side for the establishment of this in-house training.

We wish them the very best in all his future endeavours.

Thanking you,

With regards

HR Manager

From

R.Shankar
Assistant Professor,
Kings College of Engineering
Pudukkottai.

To

Dr. T.Pushparaj
Head of the Department,
Mechanical Engineering.
Kings college Engineering,
Pudukkottai.

Dear sir,

Sub: Requisition for conducting workshop,

As per our academic schedule we plan to conduct Workshop on
"Welding Technologies" on 07.02.2020 between 02.00 p.m. and 04.30 p.m at
Chera hall for the second and third year Mechanical engineering students. Kindly permit
the same.

Thank you

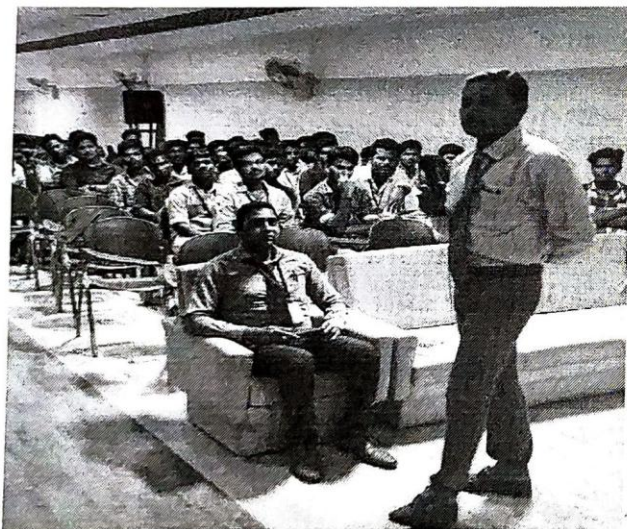

R.Shankar

DEPARTMENT OF MECHANICAL ENGINEERING

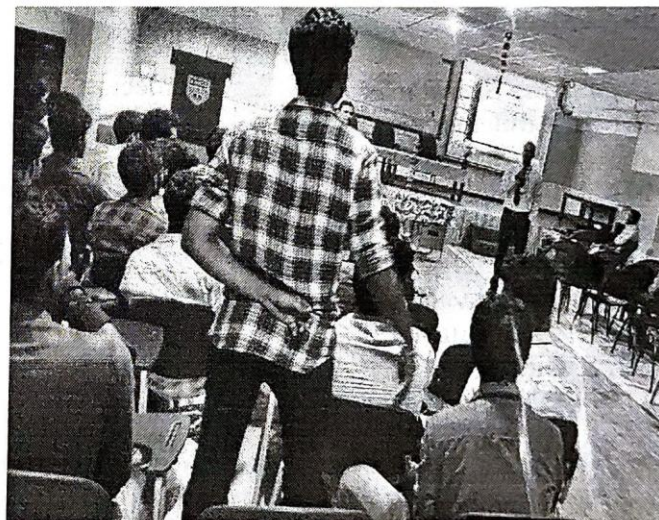
Academic year -2019-20 Even

Workshop Report

The Mechanical Engineering Department of Kings College of Engineering organized "Workshop on Welding Technologies" on 07.02.2020 between 02.00 p.m. and 04.30 p.m. at Chera Hall. The second and third year Mechanical students were attended this Workshop. Dr.P.P.Shantharaman, Co ordinator welcomed the gathering. In the first session, Mr.R.Shankar, Co-ordinator explained the principles of various welding technology. During second session, a practical class was conducted about the Arc, MIG and TIG welding practice in the Mechanical Workshop. The objective of the workshop is to gain the working principle of Arc, MIG and TIG welding. Totally 108 students from second and third year Mechanical Engineering participated and benefited. More number of students interacted about the welding techniques and clarified their doubts.



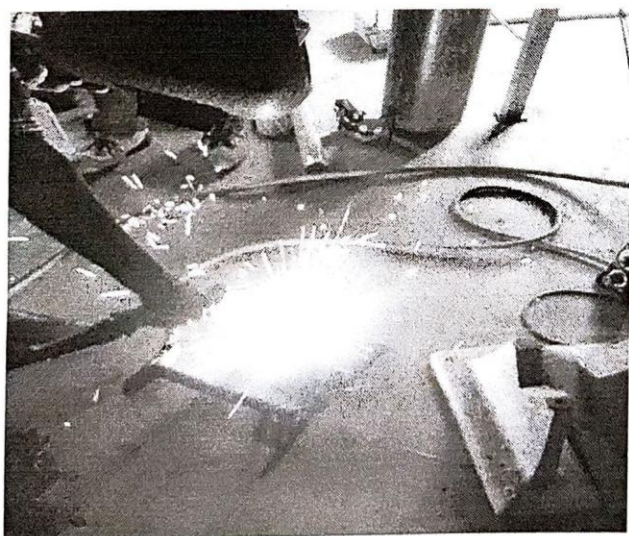
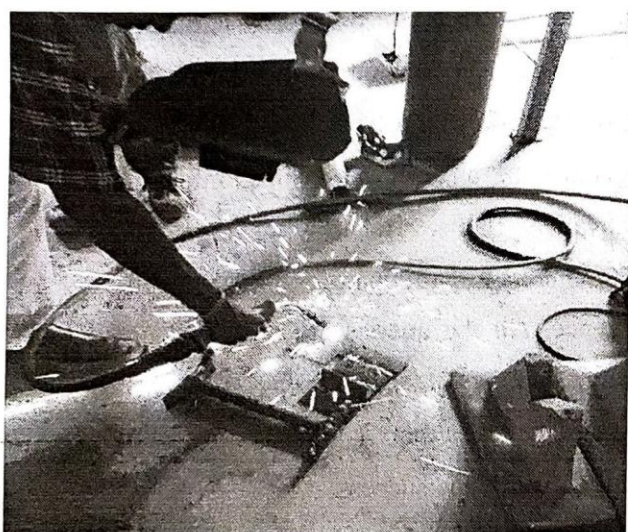
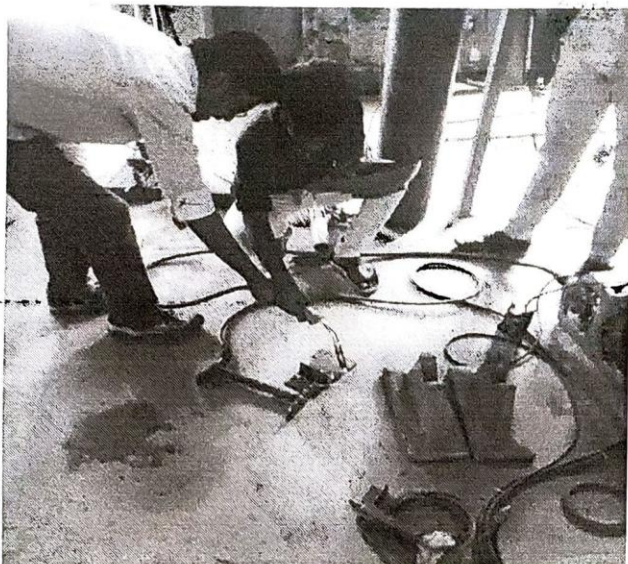
Dr.P.P.Shantharaman, Asso. Prof./Mech.
welcomed the gathering



Mr.R.Shankar, Asst.Prof./Mech. explained
the theoretical session of Workshop



Mr.G.Veeramani Technical Asst./ Mech. explained the safety measures in welding



Second and Third year Students were practiced the Arc, TIG and MIG welding techniques

Workshop Outcomes:

- Gained the knowledge about MIG in the Manufacturing processes.
- Learnt the concept and processes involved in welding.
- Understood the mechanism used in Welding Technologies.
- Students performed welding operations with appropriate process on various metals.


Staff Incharge


HOD

2.3.1 PROFESSIONAL CAREER ENHANCEMENT SKILLS

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3	Department of Electronics and Communication Engineering	45-54
4	Department of Electrical and Electronics Engineering	55-63
5	Department of Mechanical Engineering	64-77
6	Department of Science & Humanities	78-92



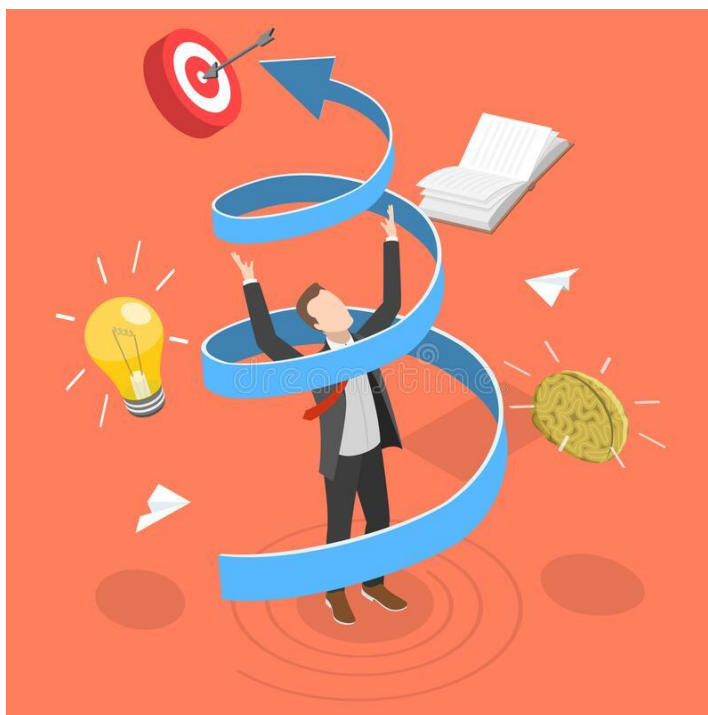


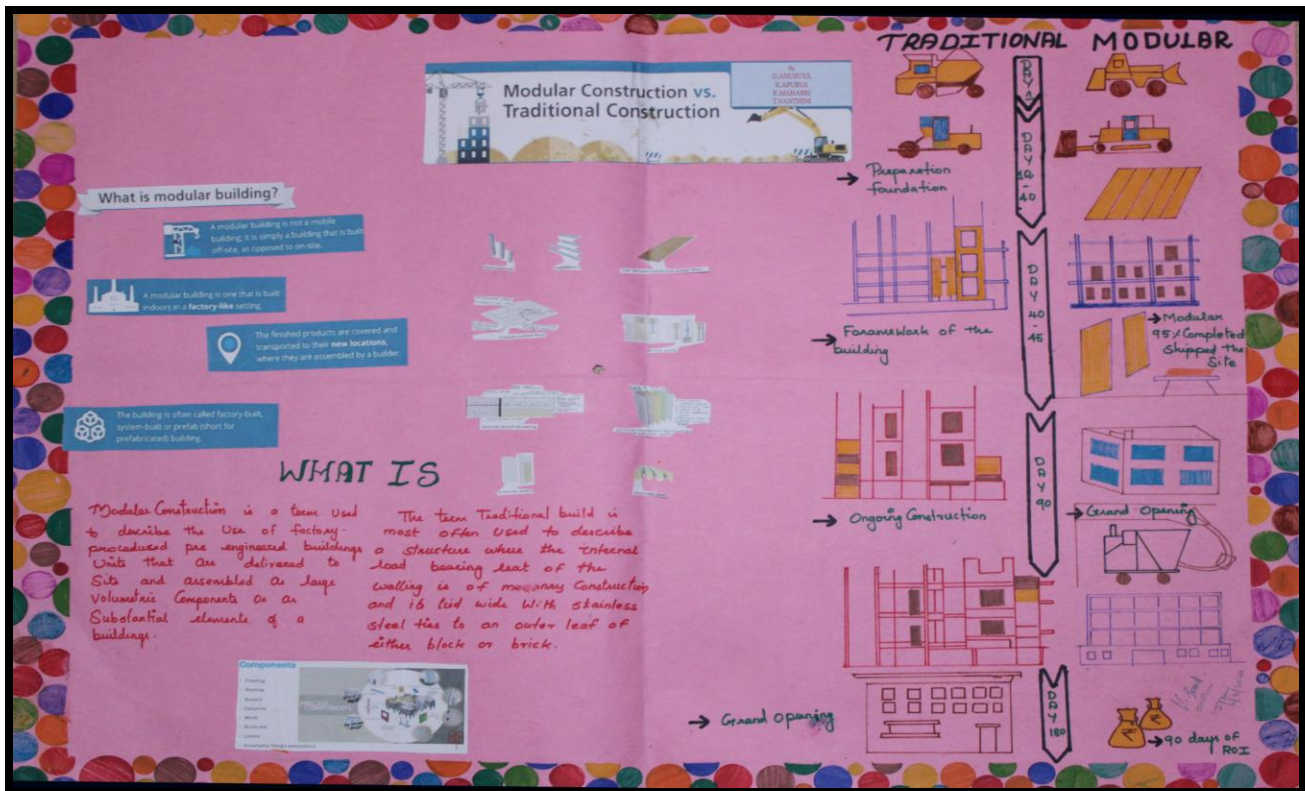
A NAAC Accredited Institution
KINGS
COLLEGE OF ENGINEERING
Recognized under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai



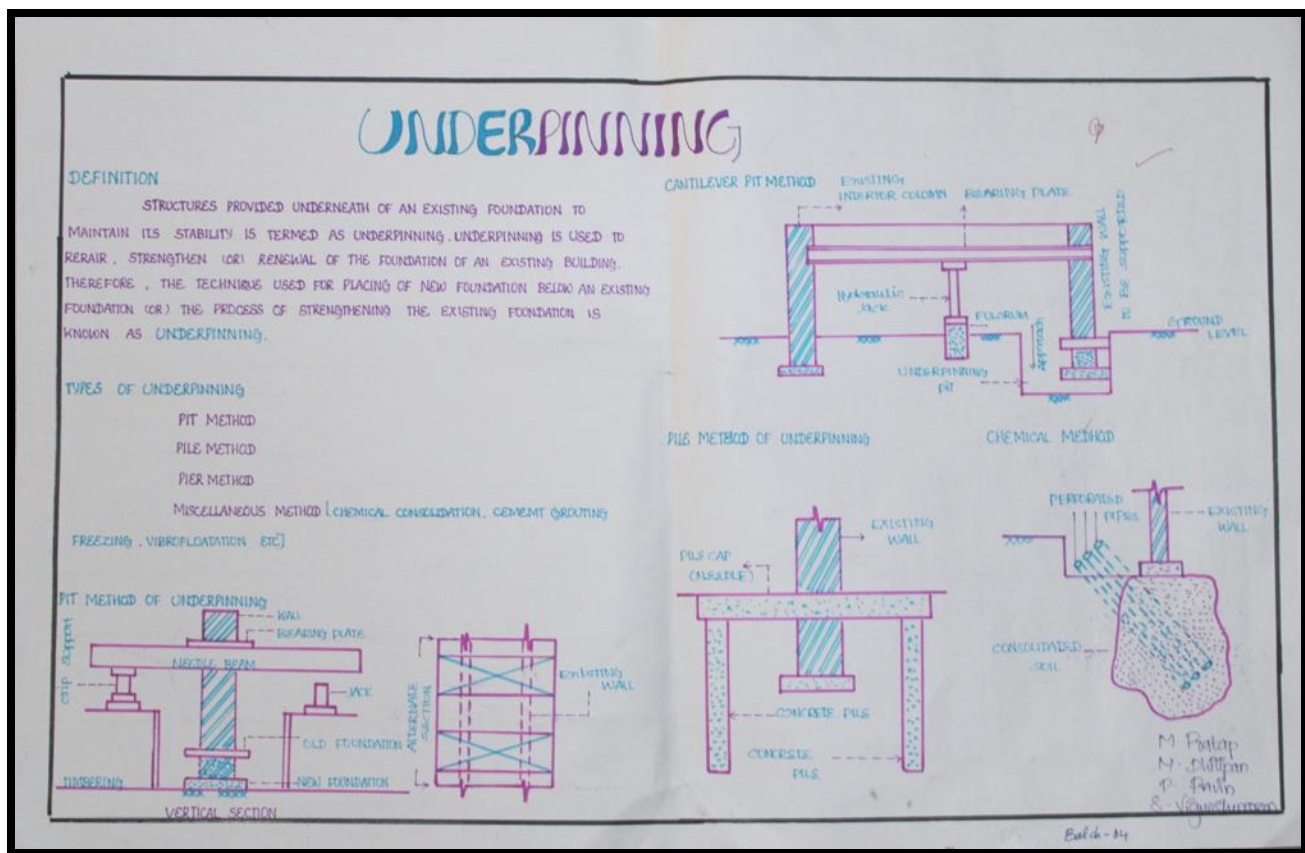
DEPARTMENT OF CIVIL ENGINEERING

PROFESSIONAL CAREER ENHANCEMENT SKILLS

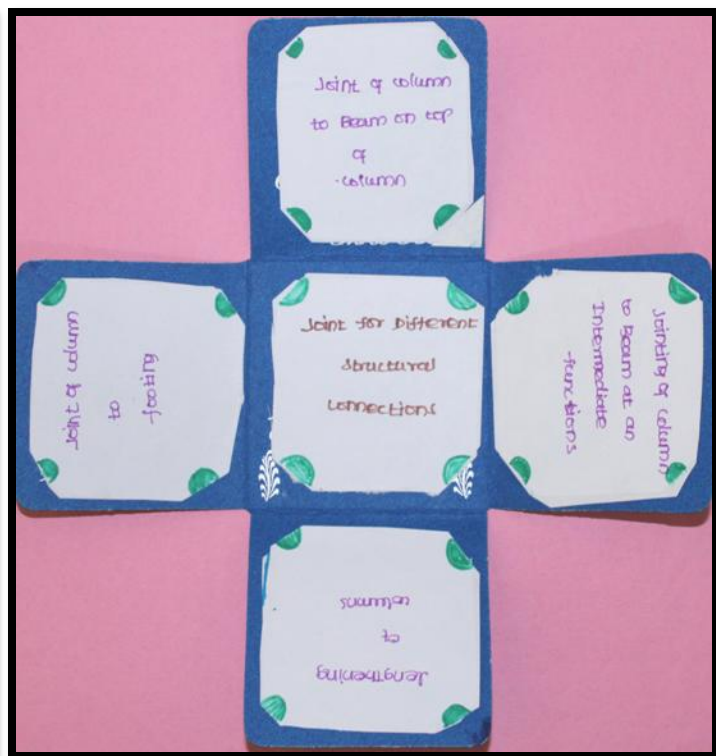




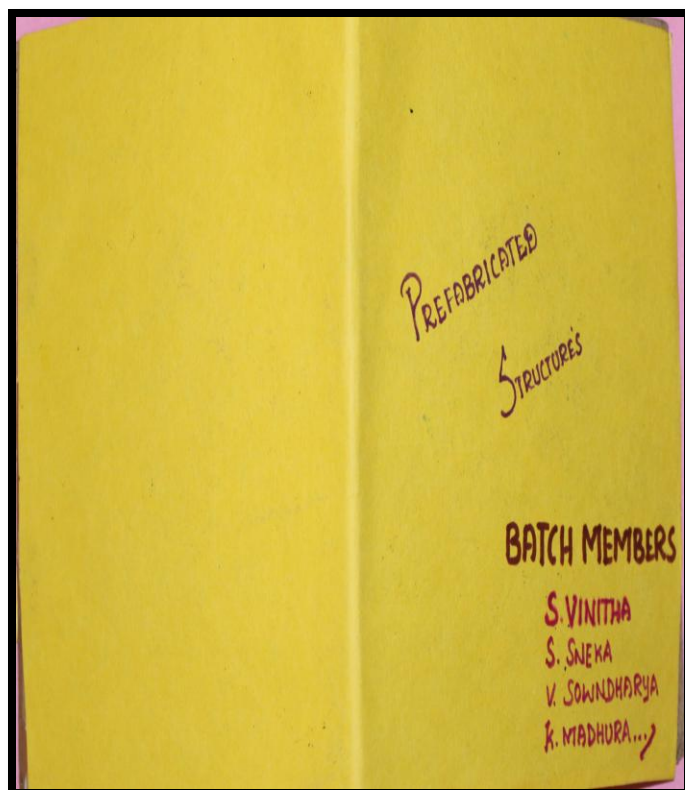
PCE ACTIVITY - POSTER PRESENTATION



PCE ACTIVITY- POSTER PRESENTATION



PCE ACTIVITY – POSTER PRESENTATION



PCE ACTIVITY – POSTER PRESENTATION

Year / Sem: IV/VIII
Date: 19/2/20

Name: M. Pradeep
Roll No: 24

1. The term which is used in construction industry to describe fabricating, transporting & assembling structures in site.
 - a) Conventional Method
 - b) Prefabrication
 - c) Post tensioning
 - d) Cast-in situ
2. These are selected in multiples of basic module
 - a) Basic
 - b) Box
 - c) Multi
 - d) Standard
3. Fundamental unit of size in modular coordination
 - a) Basic module
 - b) Multi module
 - c) Box Module
 - d) Standard Module
4. It can be done using cranes
 - a) Transportation
 - b) Casting
 - c) Erection
 - d) Moulding
5. Slab, Beam & Column are called Prefabricated
 - a) Items
 - b) Structures
 - c) Materials
 - d) Components
6. It is a system of Prefabrication
 - a) Easy
 - b) Medium
 - c) Multi
 - d) Hard
7. These type of concrete are used to reduce self-weight
 - a) Cellular
 - b) Light-weight
 - c) Precast
 - d) Cast-in-situ
8. It is the process of repeated production of standard sizes/dimensions.
 - a) Modular Coordination
 - b) Dimension Tolerance
 - c) Prefabrication
 - d) Standardization
9. Used in Multi-storied buildings for Erection purposes
 - a) Tower Crane
 - b) Mobile Crane
 - c) Pulley
 - d) Hoist
10. It is the sum of positive & negative Discrepancies of dimensions
 - a) Modular Coordination
 - b) Standardization
 - c) Dimension Tolerance
 - d) Prefabrication
11. This type of system are widely used in Prefabrication
 - a) Open
 - b) Closed
 - c) Frame
 - d) Special
12. Type of Modular Grid
 - a) Easy
 - b) Medium
 - c) Hard
 - d) Tartan
13. It can be done using Trucks/Wagons.
 - a) Prefabrication
 - b) Transportation
 - c) Erection
 - d) Assembling

14. This type of Construction is used for Large size Wall & Floor Panels

- a) Frame
- b) Box
- c) Mixed
- d) Large Panel

15. If the components are manufactured at the construction place, then it is called as

- a) On-site Prefabrication
- b) Factory Prefabrication
- c) Plant Prefabrication
- d) Open Prefabrication

16. Between two Prefabricated components, it should be provided

- a) Spacing
- b) Joints
- c) Module
- d) Dimensions

17. "M" is the representation of

- a) Multi Module
- b) Standard Module

c) Basic (Moduled) Grid Module

18. Which of the following is not a widely used Prefabricated material

- a) Aluminium
- b) Concrete
- c) Plastics
- d) Steel

19. The solution of problems connected with the transportation and placing of structures can be solved by

- a) Large panels
- b) Avoiding transportation
- c) cast-in site concreting
- d) Disuniting in to smaller members

20. It is a technique to review construction processes from start to finish during pre-construction phase.

- a) Flexibility
- b) Buildability
- c) Stability
- d) Accessibility

ANSWERS

1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	D
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D

11.	A	B	C	D
12.	A	B	C	D
13.	A	B	C	D
14.	A	B	C	D
15.	A	B	C	D
16.	A	B	C	D
17.	A	B	C	D
18.	A	B	C	D
19.	A	B	C	D
20.	A	B	C	D

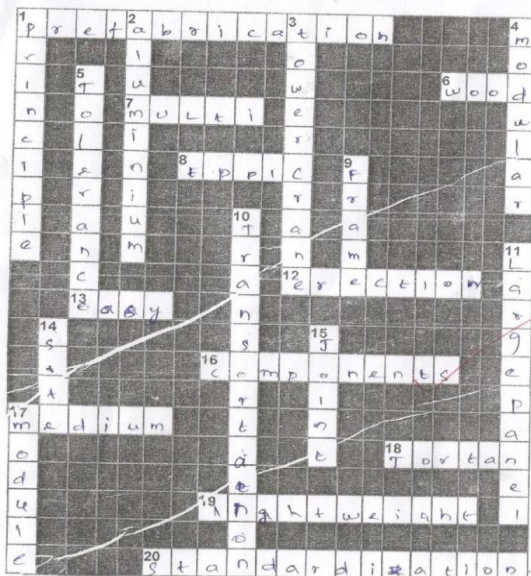
PCE ACTIVITY - TECHNICAL QUIZ USING JQUIZ

IV YR CIVIL

Roll No: - 36

CE6016 - PREFABRICATED STRUCTURES / PCE ACTIVITY

Crossword



Across:

- 1 Term used in construction industry to describe transporting & assembling structures in site.
- 6 A type of Prefabricated material
- 12 These are selected in multiples of basic module
- 13 Fundamental unit of size in modular coordination
- 16 It can be done using cranes
- 17 Components will be numbered/ marked for _____ Assembling
- 18 Slab, Beam & Column are called Prefabricated _____
- 19 It is a system of Prefabrication
- 20 Type of Modular Grid
- 21 These type of concrete are used to reduce self-weight
- 22 It is the process of repeated production of standard sizes/dimensions.

Down:

- 1 Time saving is the first _____ of Prefabrication.
- 2 A type of Prefabricated material
- 3 Used in Multi-storied buildings for Erection purposes
- 4 _____ Coordination is the Concept of providing constant Dimension & Space
- 5 It is the sum of positive & negative Discrepancies of dimensions
- 9 This type of system are widely used in Prefabrication
- 10 It can be done using Trucks/Wagons.
- 11 Large size Wall & Floor Panels. Construction is used for
- 14 If the components are manufactured at the construction place, then it is called as _____ Prefabrication
- 15 Between two Prefabricated components, it should be provided _____
- 17 "M" is the representation of Basic

PCE ACTIVITY - CROSSWORD USING JCROSS



KINGS
COLLEGE OF ENGINEERING
(NAAC Accredited Institution)
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)



**DEPARTMENT OF
CIVIL ENGINEERING**

CE6811

PROJECT WORK

"EXPERIMENTAL INVESTIGATION ON STRENGTH & STRUCTURAL PROPERTIES OF M40 GRADE CONCRETE USING RIVER SAND, MANUFACTURED SAND & DUNE SAND WITH CRUSHED STONE AGGREGATE"

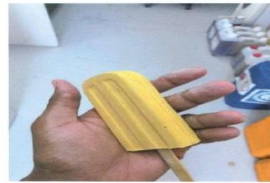
BATCH MEMBER

V.VIJAY - 821116103049

GUIDED BY:

Mrs. R.REVATHI M.Tech.,
HOD/CIVIL
KINGS COLLEGE OF ENGINEERING

FIELD VISIT REPORT



Coloured concrete



Concrete tiles



Aggregate samples

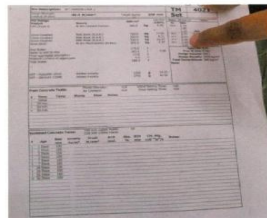


Aggregate dispersion

READYMIX ABUDHABI - MUSSAFAH BRANCH



Desert sand



Model mix design cube report



Permeability test apparatus



Cube crushing



with lab supervisor

FIELD VISIT AT THANJAVUR:

I have visited 3 sites in Thanjavur done by Ar.Venkatraj sir at different locations in and around Thanjavur. I went to analyzed the site which is under excavation and noted the faults in the construction procedures also visited other 2 sites which are luxurious bungalows of size 1575 sq.ft (G+3) & 1600 sq.ft (G+1).

V. Rood
J. Rood
2/2/2020

PCE ACTIVITY - FIELD VISIT PRESENTATION



Mentimeter

DEPARTMENT OF CIVIL ENGINEERING

CE8402 –
STRENGTH OF MATERIALS II

II YEAR CIVIL / IV SEM

PCE ACTIVITY – TECHNICAL QUIZ

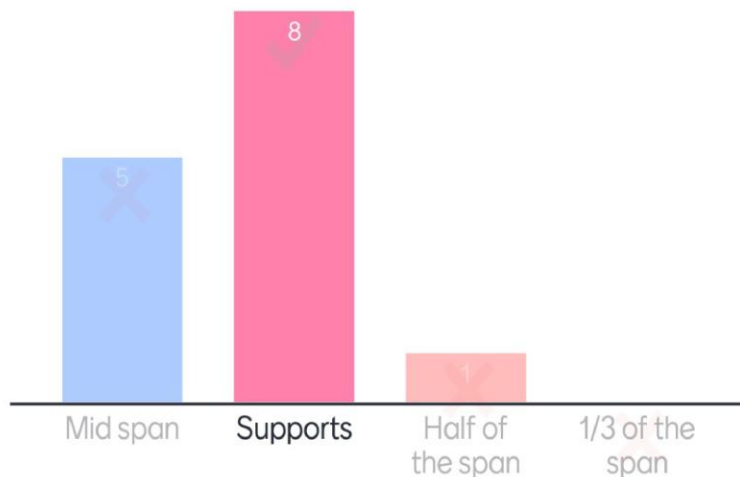
STAFF INCHARGE

ARUN.K
AP/CIVIL



The maximum negative bending moment in fixed beam carrying udl occurs at

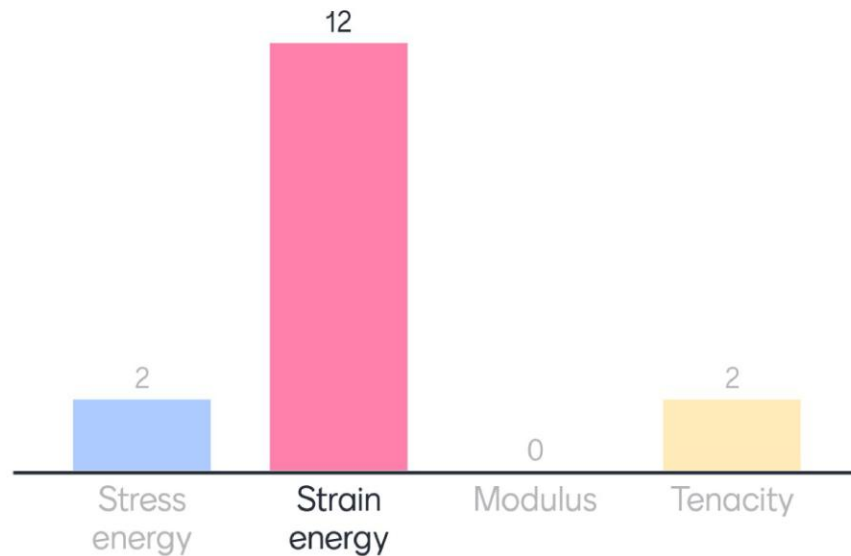
Mentimeter



PCE ACTIVITY – TECHNICAL QUIZ USING MENTIMETER

Resilience can also be termed as ____

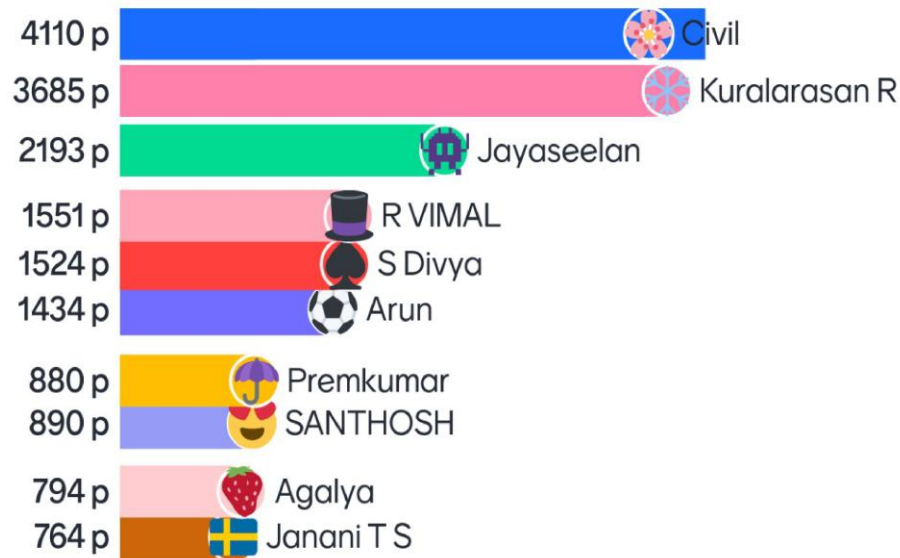
Mentimeter



16

Leaderboard

Mentimeter



16

PCE ACTIVITY - TECHNICAL QUIZ USING MENTIMETER

DELIVERING HIGH QUALITY STRUCTURAL STEEL FABRICATIONS TO THE GLOBAL MARKET

AL ITTIHAD FOOTBRIDGE ARCH, UAE


CASE STUDY

ESC Steel Structures was contracted by Wagner Bro Gulf Middle East Bridge Division for the specialty heavy steel fabrication of the heavy pipe arch for a new foot bridge over Al Ittihad Road, one of the busiest roads in Dubai.

ESC Steel Structures during the tender phase submitted detailed documentation, showing full workflow, timescales, previous similar case studies and the necessary certification for CE marking of both raw materials and end product to BS EN 1090-1 and BS EN 1090-2 Execution Class 3. ESC's engineers also effectively communicated with all the technical queries submitted both by the main contractor and the consultant in Europe. ESC had the advantage by having both offices and skilled personnel in the United Arab Emirates - the project country and the China - where the steel raw material was procured and the end product was fabricated.

ESC completed a comprehensive inspection & Test Plan (ITP) with a breakdown of all the processes which included: welder qualification review, raw material inspection, component dimensional inspection, weld inspection and coating inspection.


ESC completed and packed the pipe arch segments to minimize any chance for damage during shipment. The pipe segments were successfully delivered on time in May 2017 and construction is scheduled to commence in Q3 2017.



BY
VIJAY VENKATESAN
4TH CIVIL


V. Arund - 27/05/2017

Poster presentation




Harmful Effects of Noise Pollution


- Physiological effects
- Psychological effects
- Loss of hearing
- Annoyance
- Health effects
- Interference with communication
- Working efficiency



Noise pollution also known as environmental noise or sound pollution is the propagation of noise with harmful impact on the activity of human or animal life

health effects are air pollution water pollution soil contamination noise pollution and overillumination





Electronics noise pollution is defined as unwanted disturbances superposed on a useful signal that tend to obscure its information content noise pollution

roadways noise contributes a proportionately large share of the total societal noise pollution

Good 20/05/2017

Presented by
R. Raghava
R. Raghavathi
III - CIVIL

PCE ACTIVITY - CASE STUDY PRESENTATION



DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

PROFESSIONAL CAREER ENHANCEMENT SKILLS

PCE ACTIVITY - POSTER PRESENTATION

COMPUTER ARCHITECTURE

CODE-CS8491

J. Ramya (31)

IInd. CSE

Theme & Quick Styles

Logical Lib extend

Table

Smart Converter

Smart chart

Functions

Automatically arrange

Rich Libs

Make animation



Presentation



Teaching

Making kinds of charts



Good using Experience

Edraw Max Design

Supported formats

HTML

Graphics formats, like emf, temp....

PDF

SWF

DXF

Cooperate with MS office

EPS PS

XML for VIHO

SVG

PPT

Shape Sheet

Drawing tools

Provide a way to define libraries

Rich Objects & Samples

Flowcharts

ORG charts

Network Diagram

Business charts

Building plans

Electrical Engineering diagram & more

UML diagrams

Mindmap

work flows

Fashion designing

Directional maps

COMPUTER ARCHITECTURE

CODE - 658491

J. RAMYA

Ind - CSE.

(81)

Ind

MEMORY DEVICE

DEFINITION :

- * A memory is just like a human brain.
- * It is used to store data and instruction
- * A memory is divided into large number of

Small parts.

- * Each part is called cell and each location or cell has a unique address

EXAMPLE :

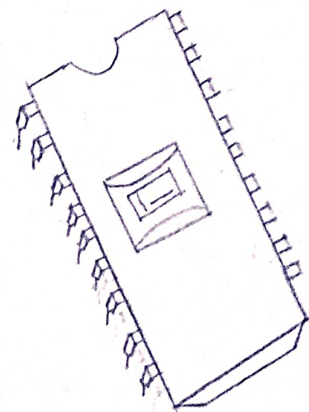
- * In computer has 64k words.
- * Memory Unit has $64 * 1024 = 65536$ memory location.
- * The address of these located varies from 0 to 65535.

TYPES OF MEMORY:-

- (i) Primary Memory
- (ii) Secondary Memory

(i) PRIMARY MEMORY.

(i) Primary memory also known as "main memory" or "internal memory" which is located in the mother board of system or we say which is directly connected to the CPU. It is the place where only little bit of data are stored either by manufacturer or by user.



Further divided into two parts:

(i) RAM

(ii) ROM

ROM for Primary Memory.

RAM further divided into two parts.

(i) SRAM

(ii) DRAM

ROM further divided into three parts

(i) PROM

(ii) EPROM

(iii) EEPROM

(ii) Secondary Memory :

* Secondary Storage devices are storage devices that operate alongside the computer's primary storage, RAM cache memory.

* Secondary storage is for any amount of data, from a few megabytes to petabytes

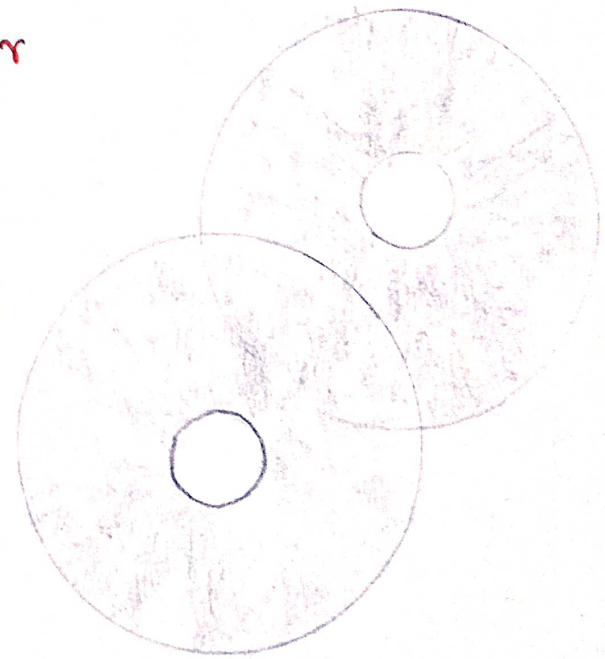
* Secondary storage typically back up primary storage through data duplication or other data backup methods.

Two methods to accessing data:

(i) Sequential :

(i) This method is use to search data sequentially or line by line until you find the desired data

Eg: Magnetic tape, etc,...



DVD for Secondary memory.

(ii) Direct :

(i) This is the method in which computer can go directly to the information that the user wants eg. magnetic disk, optical disk, etc,.

PRIM'S ALGORITHM

PCE ACTIVITY - POSTER PRESENTATION

Tree Vertices	Remaining Vertices	Illustration...
$a(-,-)$	$b(a,3)$ $c(-,\infty)$ $d(-,\infty)$ $e(a,6)$ $f(a,5)$	
$b(a,3)$	$c(b,1)$ $d(-,\infty)$ $e(a,6)$ $f(b,4)$	
$c(b,1)$	$d(c,6)$ $e(a,6)$ $f(b,4)$	
$f(b,4)$	$d(f,5)$ $e(f,2)$	
$e(f,2)$	$d(f,5)$	
$d(f,5)$		

G. Divyashree

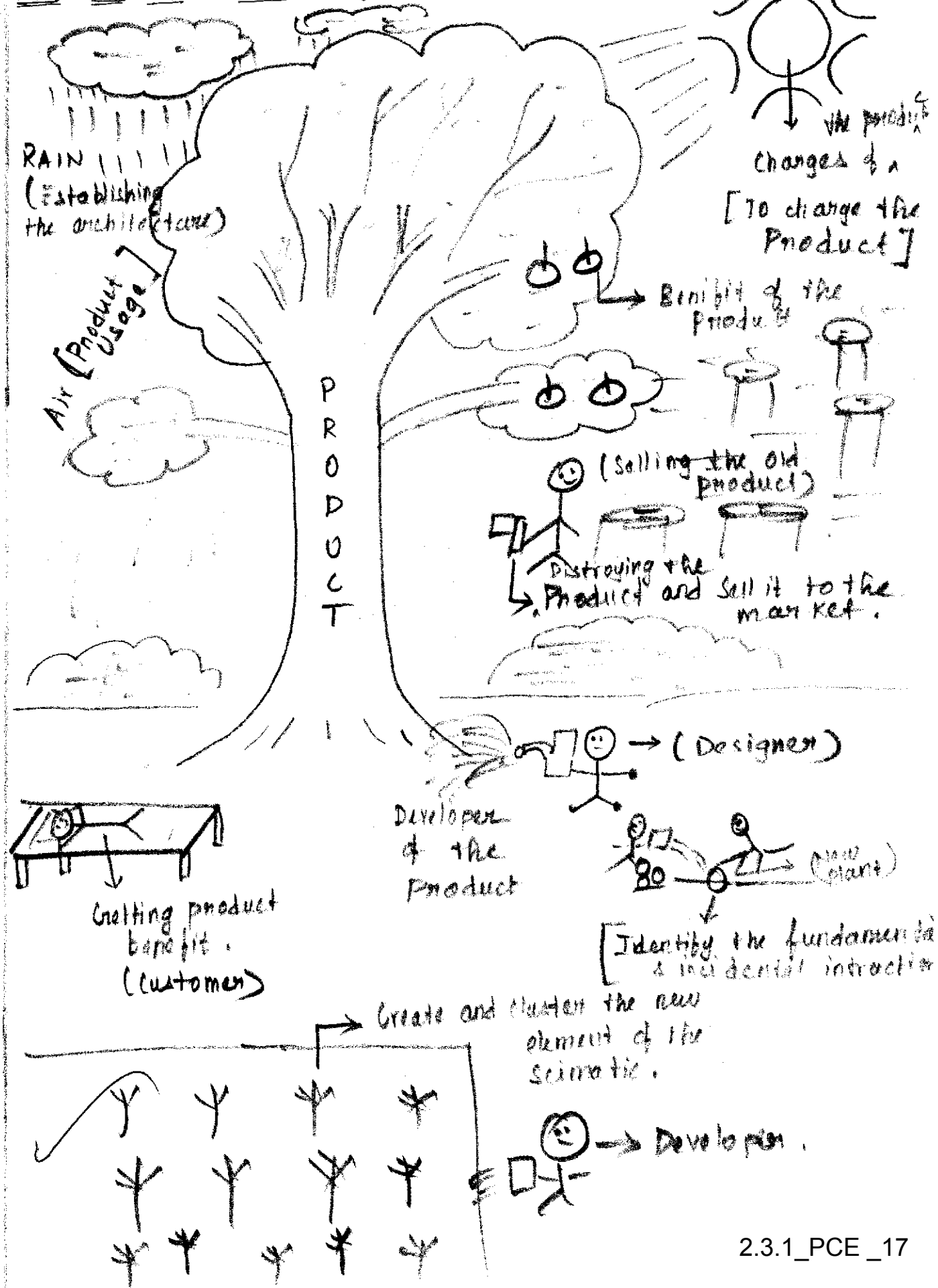
T. R. Divyashree

J. Grayathri
G. Divyashree
T. R. Divyashree
11 CSE

31.7.19

Product design and development
MINDMAP

MIND MAP FOR establishing the architecture



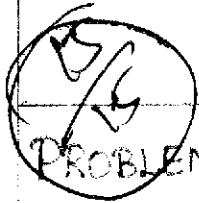
PCE ACTIVITY - ASSIGNMENT

CS8492 - DATABASE MANAGEMENT SYSTEMS

Name: J. Gayathri

Roll No: 14

Class : II - CSE



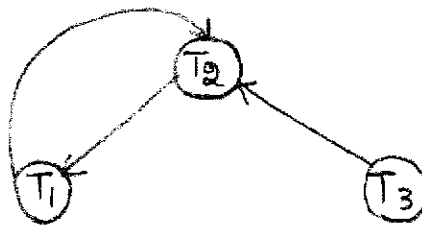
PROBLEM-1

Check whether the given schedule S is conflict serializable or not.

$S: R_1(A), R_2(A), R_1(B), R_2(B), R_3(B), W_1(A), W_2(B)$

T_1	T_2	T_3
$R(A)$		
	$R(A)$	
$R(B)$		
		$R(B)$
$W(A)$		
		$W(B)$

Precedence Graph



The given transaction has a cycle

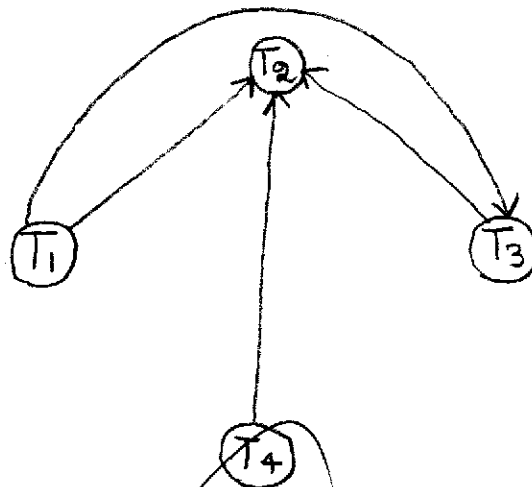
\therefore It is non-conflict serializable

PROBLEM - 02

Check whether the given schedule S is conflict serializable or not. If yes, determine all the possible serialized schedules.

T_1	T_2	T_3	T_4
			$R(A)$
	$R(A)$	$R(A)$	
$W(B)$			
	$W(A)$	$R(B)$	
	$W(B)$		

Precedence Graph :



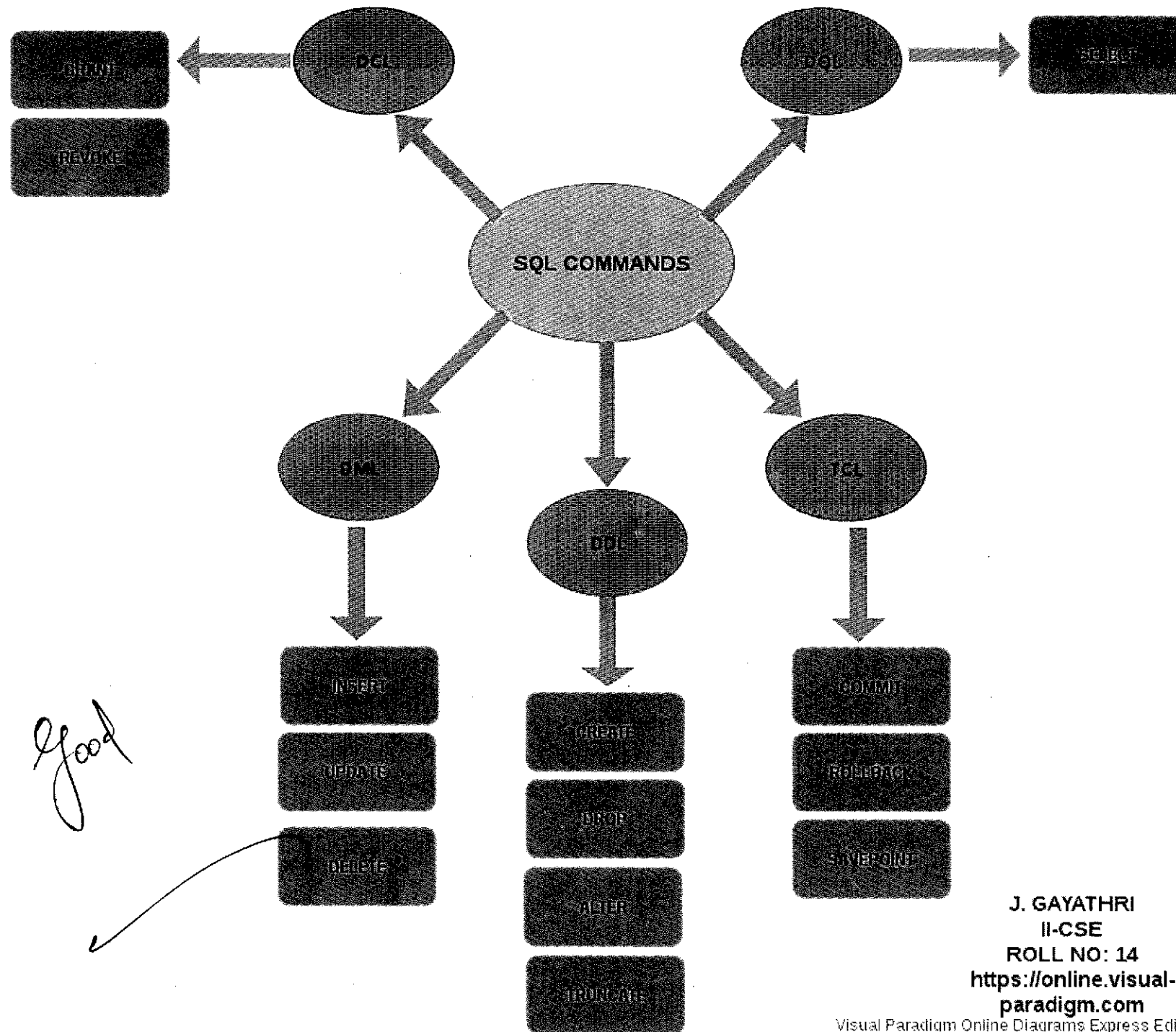
There is no cycle
 \therefore It is conflict serializable

Possible Serialized Schedules

$T_1 \rightarrow T_3 \rightarrow T_4 \rightarrow T_2$

$T_1 \rightarrow T_4 \rightarrow T_3 \rightarrow T_2$

$T_4 \rightarrow T_1 \rightarrow T_3 \rightarrow T_2$



J. GAYATHRI
II-CSE
ROLL NO: 14
<https://online.visual-paradigm.com>

CS8492

DATABASE MANAGEMENT SYSTEM

NAME : K.ABIRAMI

ROLL NO.: 18CS03

V. good

(15)

8/20/2

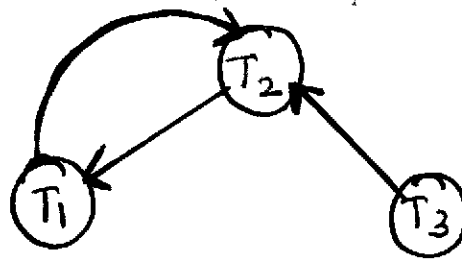
PROBLEM 1:

check whether the given schedule S is conflict serializable or not -

$S: R_1(A), R_2(A), R_1(B), R_2(B), R_3(B), W_1(A), W_2(B)$

T_1	T_2	T_3
$R_1(A)$		
	$R_2(A)$	
$R_1(B)$	$R_2(B)$	
		$R_3(B)$
$W_1(A)$		
	$W_2(B)$	

PRECEDENCE GRAPH :-



* The given transaction has a cycle

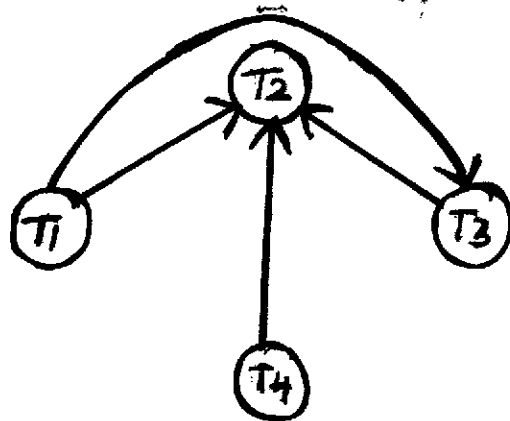
\therefore It is non-conflict serializable

PROBLEM 2 :

Check whether the given schedule S is conflict serializable or not. If Yes, then determine all the possible serialized schedules.

T_1	T_2	T_3	T_4
$W(B)$	$R(A)$	$R(A)$	$R(A)$
	$W(A)$		
		$R(B)$	
	$W(B)$		

PRECEDENCE GRAPH :-



* There is no cycle

\therefore It is conflict serializability.

POSSIBLE SERIALIZABLE SCHEDULE :-

$T_1 \rightarrow T_3 \rightarrow T_4 \rightarrow T_2$

$T_1 \rightarrow T_4 \rightarrow T_3 \rightarrow T_2$

$T_4 \rightarrow T_1 \rightarrow T_3 \rightarrow T_2$

PROBLEM 3:

Determine all the possible serializable schedules for the given schedules

T_1	T_2
$R(A)$ $A = A - 10$ $W(A)$ $R(B)$ $B = B + 10$ $W(B)$	$R(A)$ $\text{Temp} = 0.2 \times A$ $W(A)$ $R(B)$ $B = B + \text{Temp}$ $W(B)$

Sin :-

T_1	T_2
$R(A)$ $W(A)$ $R(B)$ $W(B)$	$R(A)$ $W(B)$ $R(B)$ $W(B)$

PRECEDENCE GRAPH :-



* There is no cycle

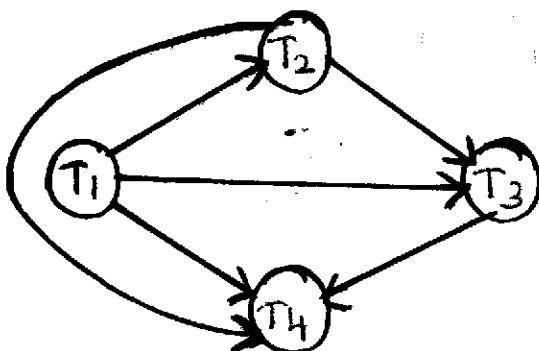
∴ It is non-conflict serializability

PROBLEM : 4

check whether the given statements schedules is
View serializable or not

T_1	T_2	T_3	T_4
$R(A)$	$R(A)$	$R(A)$	$R(A)$
$W(B)$	$W(B)$	$W(B)$	$W(B)$

PRECEDENCE GRAPH :-



* No cycle format

\therefore It is a conflict View serializable



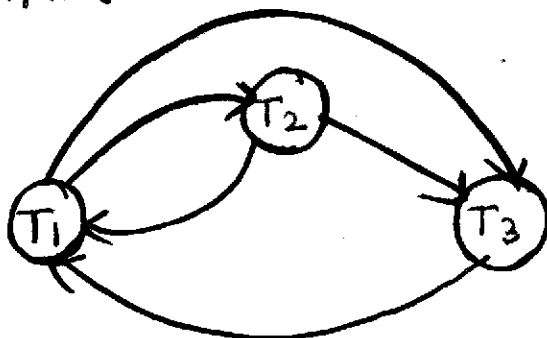
PROBLEM 5 :

check whether the given schedule S is View serializable or not. If Yes, then given the serial schedule

$S: R_1(A), W_2(A), R_3(A), W_1(A), W_3(A)$

T_1	T_2	T_3
$R(A)$	$W(A)$	$R(A)$
$W(A)$		$W(A)$

PRECEDENCE GRAPH :-



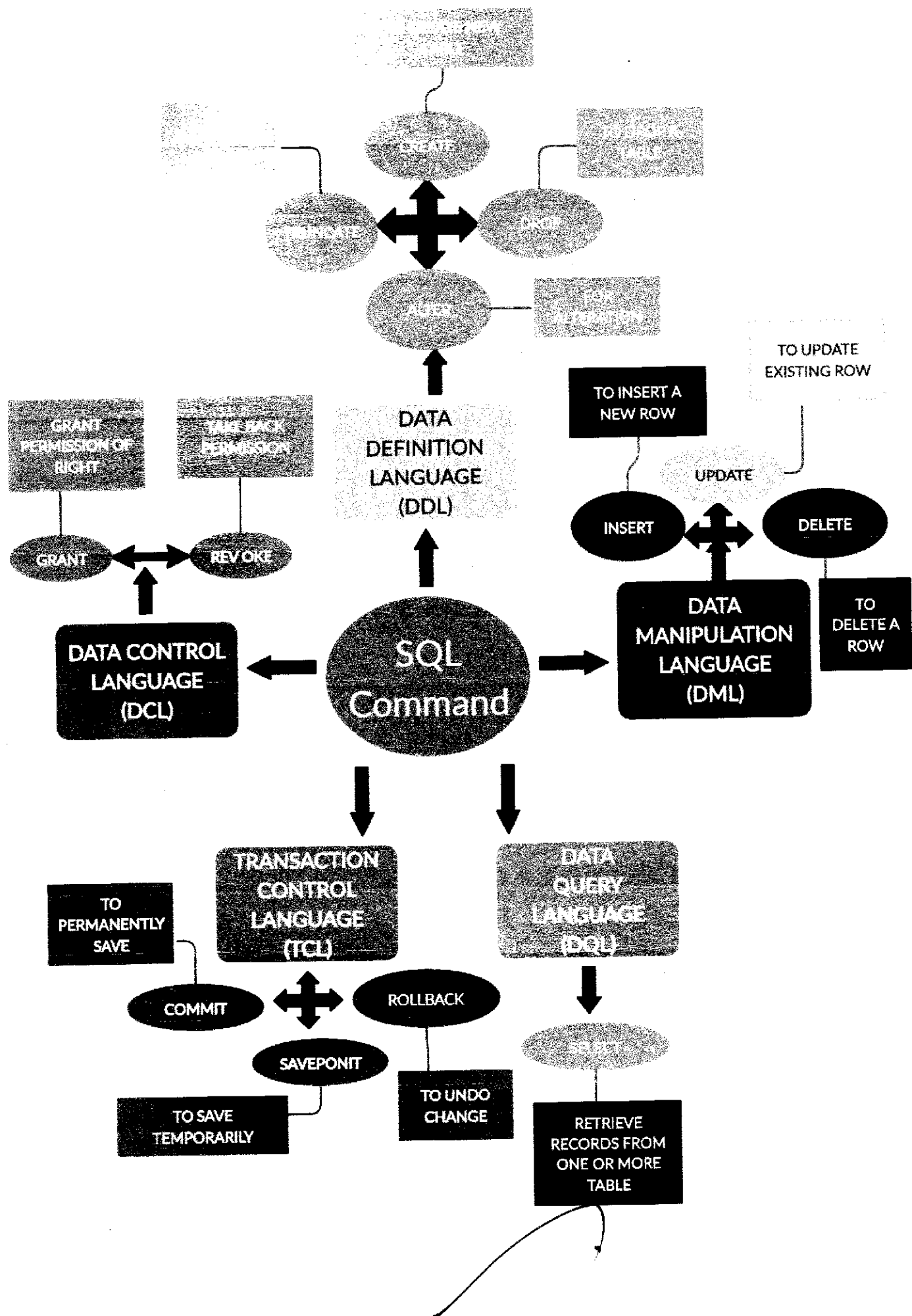
	A
INITIAL READ	T_1, T_3
UPDATE	T_2, T_1, T_3
FINAL UPDATE	T_3

$T_1 \rightarrow T_2 \rightarrow T_3$

CONCEPT MAP

SQL

COMMAND

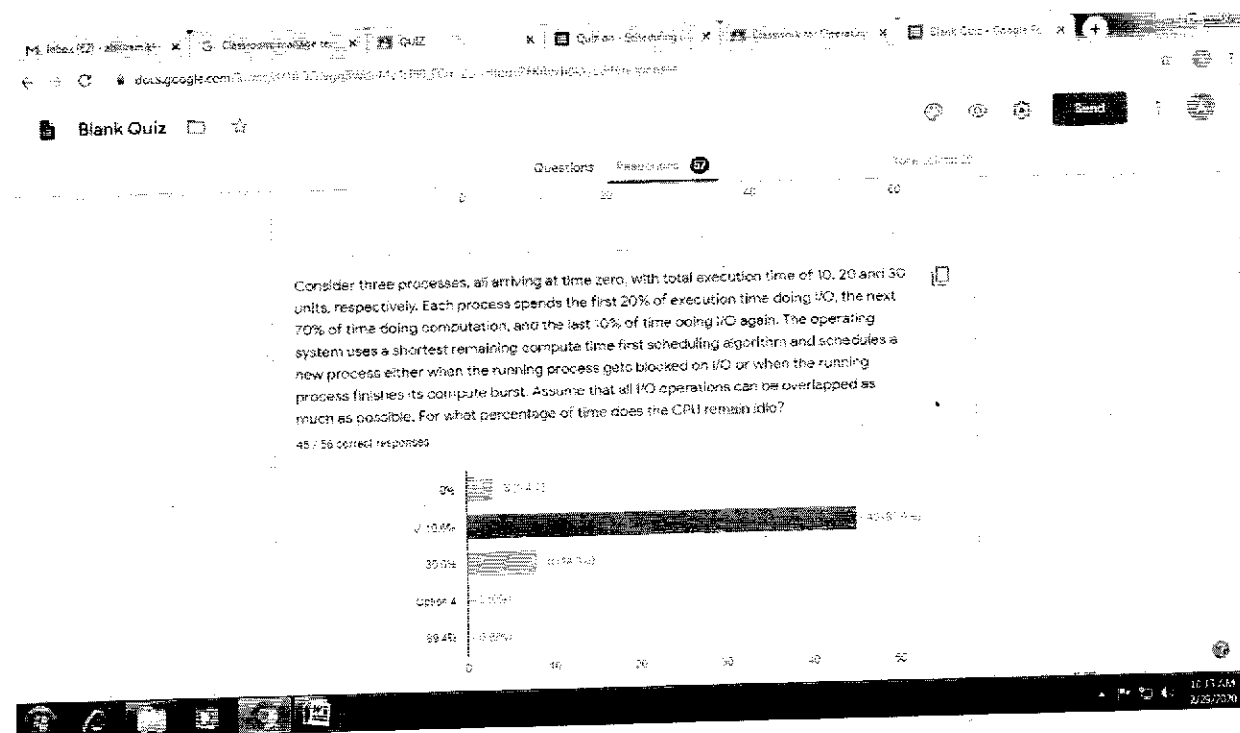
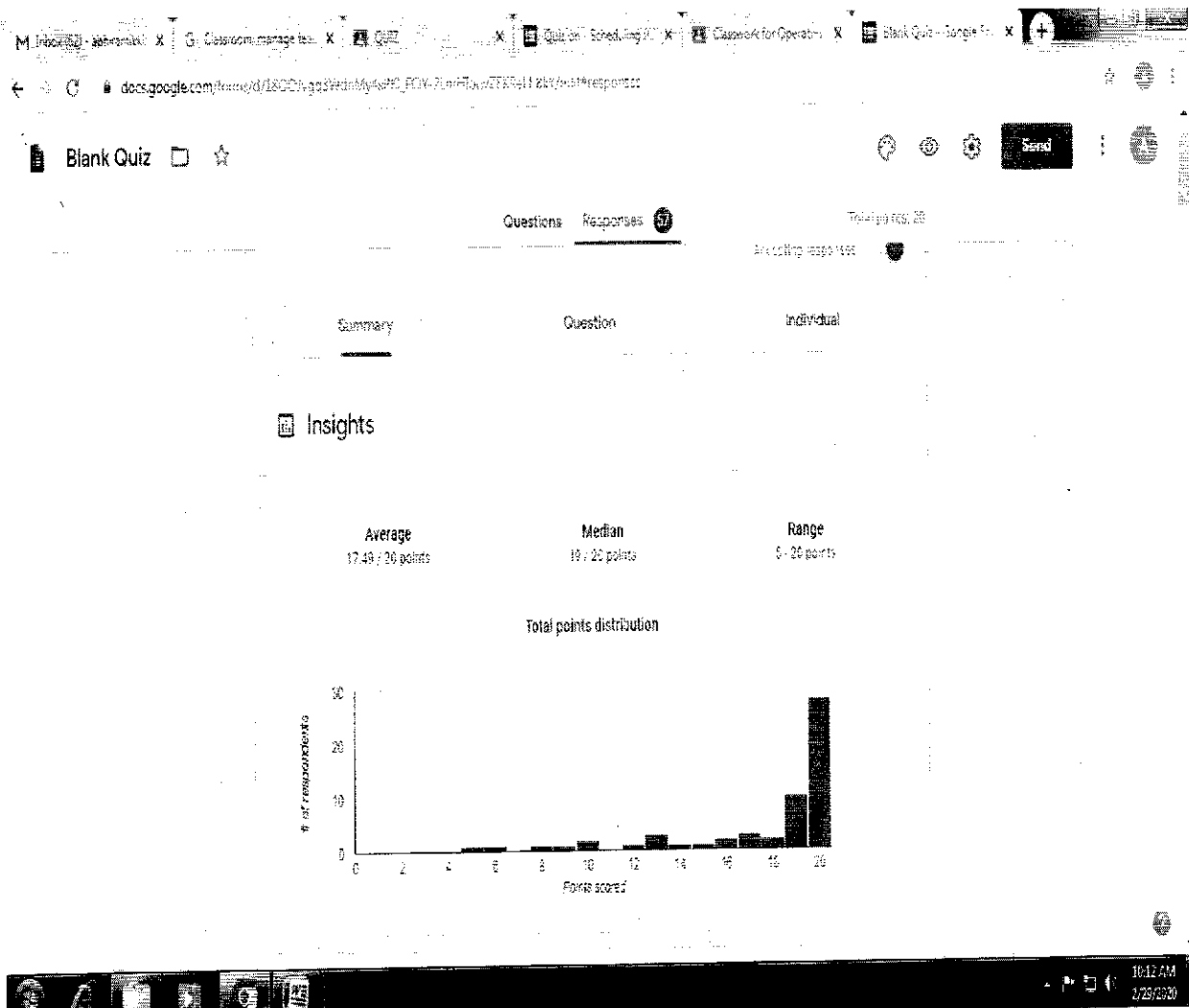


ACADEMIC YEAR 2019-20 (EVEN SEMESTER)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
CS8493 - OPERATING SYSTEMS
PCE SKILL ACTIVITY

ACTIVITY DETAILS			STUDENT NAME	SIGNATURE
TITLE	TEAM NUMBER	DATE		
CASE STUDY PRESENTATION				
Real Time Operating System	T1	13.02.2020	HARISHARAN.E T. RATHNAKUMAR G. ARUNKUMAR	Harisharan.E T. Rathnakumar G. Arunkumar
Distributed OS	T2	21.02.2020	B. Gunaseelan S. Nandhakrishnan Surya R	B. Gunaseelan S. Nandhakrishnan R. A
Handheld OS	T3	19.02.2020	K. Kaniyachandran R. Sarathkumar Gopinathan.D V. Naveen Sundhar	K. Kaniyachandran R. Sarathkumar
MultiProgramming OS	T4	17.02.2020	R. Pathmanaban S. Vithyatharan M. Babu	R. Pathmanaban S. Vithyatharan M. Babu
Desktop OS	T5	14.02.2020	T.R. Harshini J. Gayathri	T.R. Harshini J. Gayathri
Mobile OS-Ios	T6	18.02.2020	P. Abirami T. Abirvanayagi V. Keerthana	P. Abirami T. Abirvanayagi V. Keerthana
Mobile OS - Andriod	T7	17.02.2020	M. Abarna R. Prayadharshini M. Jemima Esther	M. Abarna R. Prayadharshini Jemima Esther

PICTURE PROMPT				
Main Memory	T8	18.02.2020	C. SRINITHI P. VAISHNAVI K. SODMIYA	C. Srinithi P. Vaishnavi K. Soudmya
Virtual Memory	T9	18.02.2020	G. DIVYABHARATHI N. NATHIYA DEVI S. SRUTHI	G. Divyabharathi N. Nathiyadevi S. Sruithi
Page Replacement Algorithm	T10	19.02.2020	T. selvarani K. Aishwarya M. kamalapriya	T. Selvarani K. Aishwarya M. Kamalapriya
ROLE PLAY				
Deadlock	T11	20.02.2020	A. Archana S. Ishwarya N. Naseem banu	A. Archana S. Ishwarya N. Naseem banu
Inter Process Communication	T12	14.02.2020	J. Ramya G. priya V. Deepika	J. Ramya G. Priya V. Deepika
Threads	T13	19.02.2020	P. Priyadharshini T. Sivaranjani K. Sneha S. Sneha	T. Siji K. Sneha
APPLICATION OF CONCEPT				
CPU Scheduling	T14	20.02.2020	R. Sindhu N. Abinaya M. Priyadharshini	R. Sindhu N. Abinaya M. Priyadharshini
Process Synchronization	15	17.02.2020	M. Abirami K. Abirami K. Gayathri	M. Abirami K. Abirami K. Gayathri


STAFF IN-CHARGE



PCE ACTIVITY - BLANK QUIZ

LINUX DESIGN PRINCIPLES

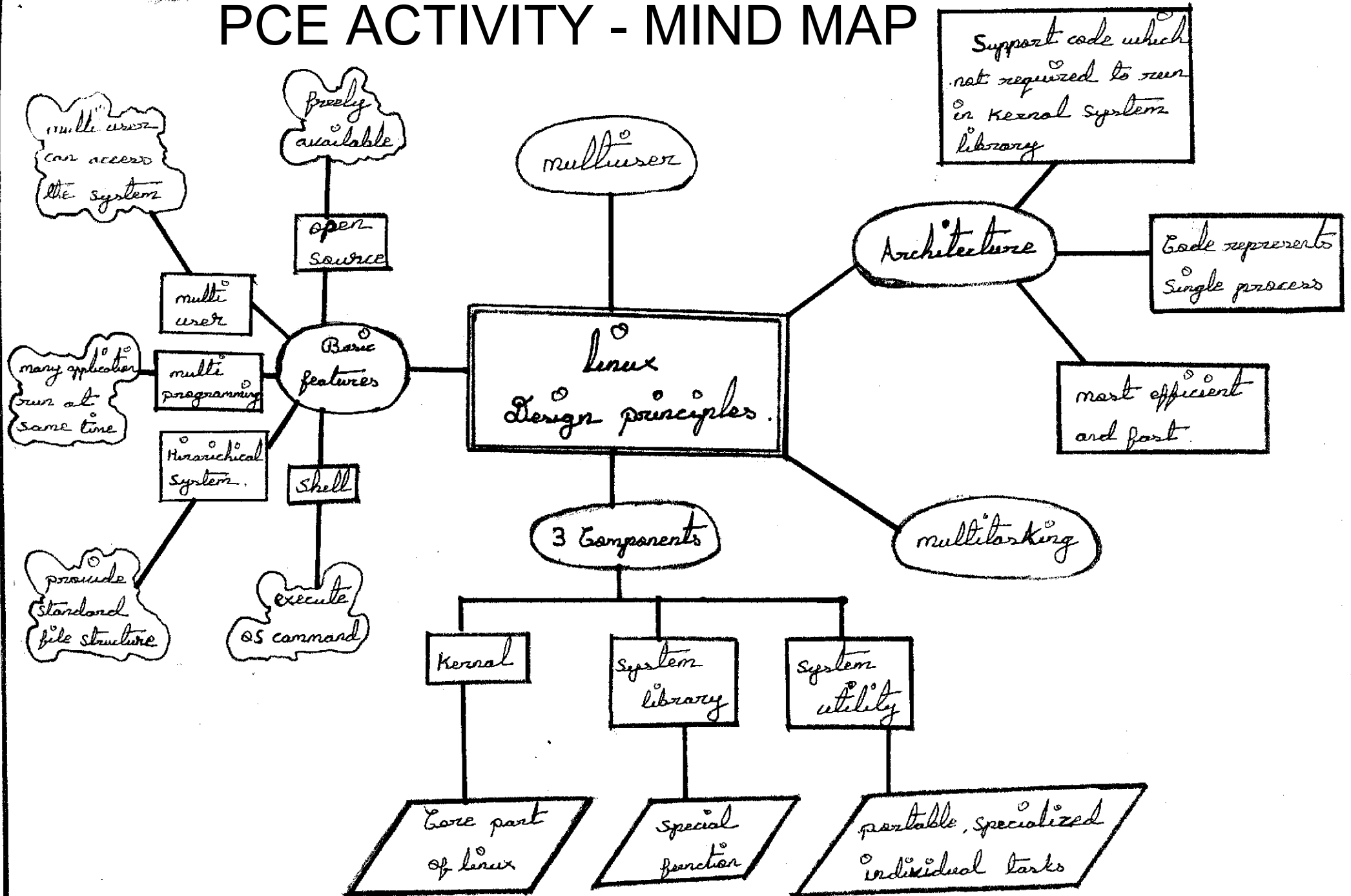
BY

R. Sarathkumar.

V. Naveen Sundhar.

K. Kaviyachelvan.

PCE ACTIVITY - MIND MAP



REALTIME

OPERATING

SYSTEM

BY

E HARIHARAN

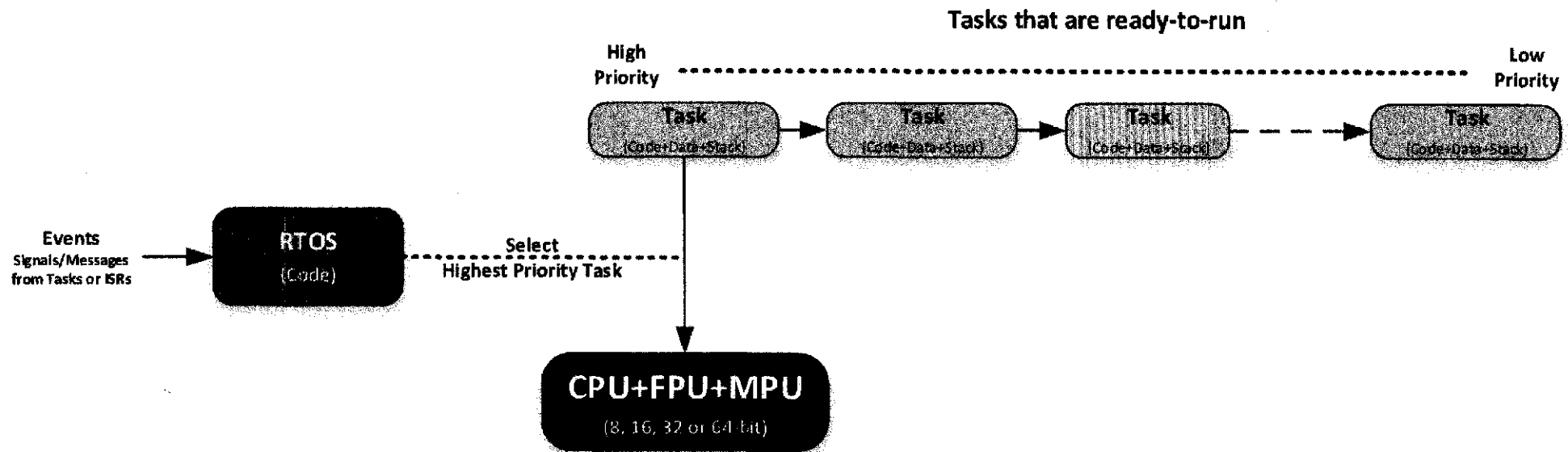
T. RATHNAKUMAR

G. ARUNKUMAR

K. edla
13/2

An RTOS Allows Multitasking

- An RTOS is software that manages the **time** and **resources** of a CPU
 - Application is split into **multiple tasks**
 - The RTOS's job is to **run the most important task** that is *ready-to-run*
 - On a single CPU, only **one task executes** at any given time



PCE ACTIVITY - ASSIGNMENT

Questions:-

⇒ Asking about the picture

- i) what is main memory?
- ii) what is secondary memory?
- iii) what is page table?
- iv) what is demand table?
- v) what is page fault?
- vi) why we go for page replacement?
- vii) what is invalid & valid bit?
- viii) what is frame?
- ix) How main memory can be divided?
- x) How Pagetable can be divided?

Picture Representation 1.

Questions :

1. What do you think about this picture?
2. What is the first box it represents?

clue : partition logical address.

3. What is the second box it represents?

clue : to refer both addresses.

4. What is the third box it represents?

clue : partition physical address.

5. What is the disk diagram represents?

Picture : 2

1. What do you think about this picture.

clue :- First block represent stack

✓ The arrows indicates the space shrinks and growing.

✓ The third block represent heap.

2. Why heap structure we using in any place?

3. What is known as the space between heap and stack structure in this diagram?

Picture : 3

1. What is your overall think about this picture?
2. In the first box the number 0-8 indicates what?
3. In the second box the column numbers indicates what is it?
4. the 'i' and 'v' means what is it?
5. In the third box the numbers 0-14 indicates what?
6. In Second box why some values are indicate i or v?
7. The disk diagram represents what?



ACADEMIC YEAR 2019-20 (ODD SEMESTER)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
CS8493 – OPERATING SYSTEMS
PCE SKILL ACTIVITY PLAN

Activity 1: Application of concept (Team 14,15)

- CPU Scheduling
- Process Synchronization (real world problem)

Activity 2: GATE questionnaire (combined with Quiz questions)

Activity 3: Case study presentation (TEAM 1-7)

- Distributed OS
- Real time OS
- Clustered OS
- Mutiprogramming OS
- Handheld OS

Activity 4: Role Play (Team 11-13)

- Deadlock
- IPC
- Thread

Activity 5: Picture Prompt Activity (Team 8-10)

- Memory management
- Virtual Memory
- Page Replacement Algorithm

Activity 6: Google classroom – Quiz (Common to all)

PCE SKILL ACTIVITY MARK ALLOCATION (A1,A3,A4,A5-10, A2,A6(5))

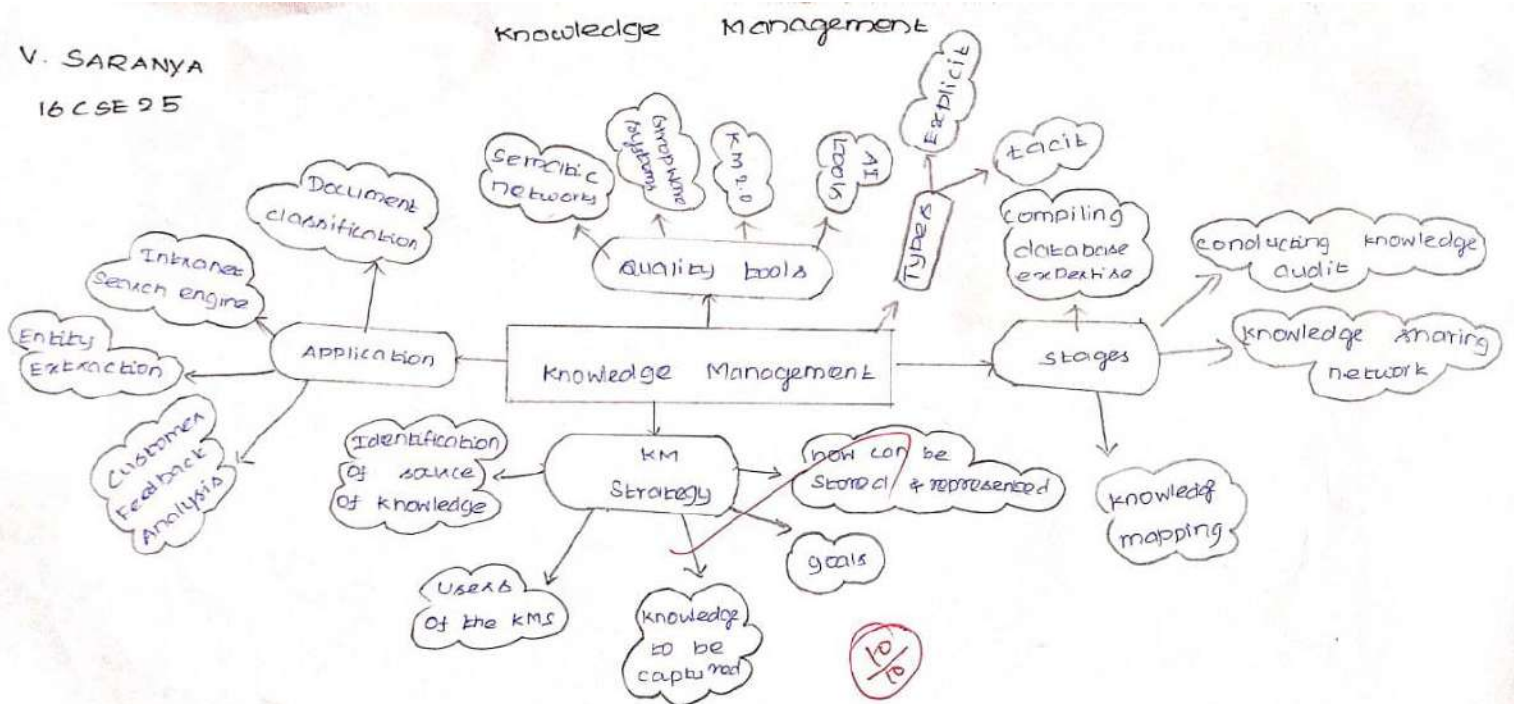
S.NO	REGISTER NO	NAME	A1	A2	A3	A4	A5	A6	TOTAL
1.	821118104001	Abarna M		5	10			5	20
2.	821118104002	Abinaya N	10	5				5	20
3.	821118104003	Abirami K	10	5				5	20
4.	821118104004	Abirami M	10	5				5	20
5.	821118104005	Abirami P		5	10			5	20
6.	821118104006	Aburvanayaki T		5	10			5	20
7.	821118104007	Aiswarya K		5			10	5	20
8.	821118104008	Archana A		5			10	5	20
9.	821118104009	Arunkumar G		5	10			5	20
10.	821118104010	Babu M		5	9			5	19
11.	821118104011	Deepika V		5			10	5	20
12.	821118104012	Dharshini T R		5	10			5	20
13.	821118104013	Divyabharathi G		5		10		5	20
14.	821118104014	Gayathri J		5	10			5	20
15.	821118104015	Gayathri K	10	5				5	20
16.	821118104016	Gunaseelan B		5	10			5	20
17.	821118104017	Hariharan E		5	10			5	20
18.	821118104018	Iswarya S		5		10		5	20
19.	821118104019	Jemima Esther Grace M		5	10			5	20
20.	821118104020	Kamalapriya M		5			10	5	20
21.	821118104021	Kaviyachelvan K		5	10			5	20
22.	821118104022	Keerthana V		5	10			5	20
23.	821118104024	Nandha kishore S		5		9		5	19
24.	821118104025	Nasrin banu N		5			10	5	20
25.	821118104026	Nathiya devi N		5		10		5	20
26.	821118104027	Naveen sundhar V		5	9			5	19
27.	821118104028	Pathmanaban R		5	10			5	20
28.	821118104029	Priya G		5			10	5	20
29.	821118104030	Priyadharshini M		5			9	5	19
30.	821118104031	Priyadharshini R		5	10			5	20
31.	821118104032	Ramya J		5			10	5	20
32.	821118104033	Rathnakumar T		5	10			5	20
33.	821118104034	Sarathkumar R		5	9			5	19
34.	821118104035	Selvarani T		5		10		5	20
35.	821118104036	Sivaranjani T		5		9		5	19
36.	821118104037	Sneha K		5		9		5	19
37.	821118104038	Sneka S		5		9		5	19
38.	821118104039	Sowmiya K		5		10		5	20
39.	821118104040	Srinithi C		5		10		5	20
40.	821118104041	Suruthi S		5		10		5	20
41.	821118104042	Surya R		5	9			5	19
42.	821118104043	Vaishnavi P		5		10		5	20
43.	821118104044	Vithyatharan S		5	10			5	20
44.		Gopinathan.D		5	10			5	20
45.		Sindu.P	10	5				5	20

K.C. 21/2/2020
 Steff J Incharge

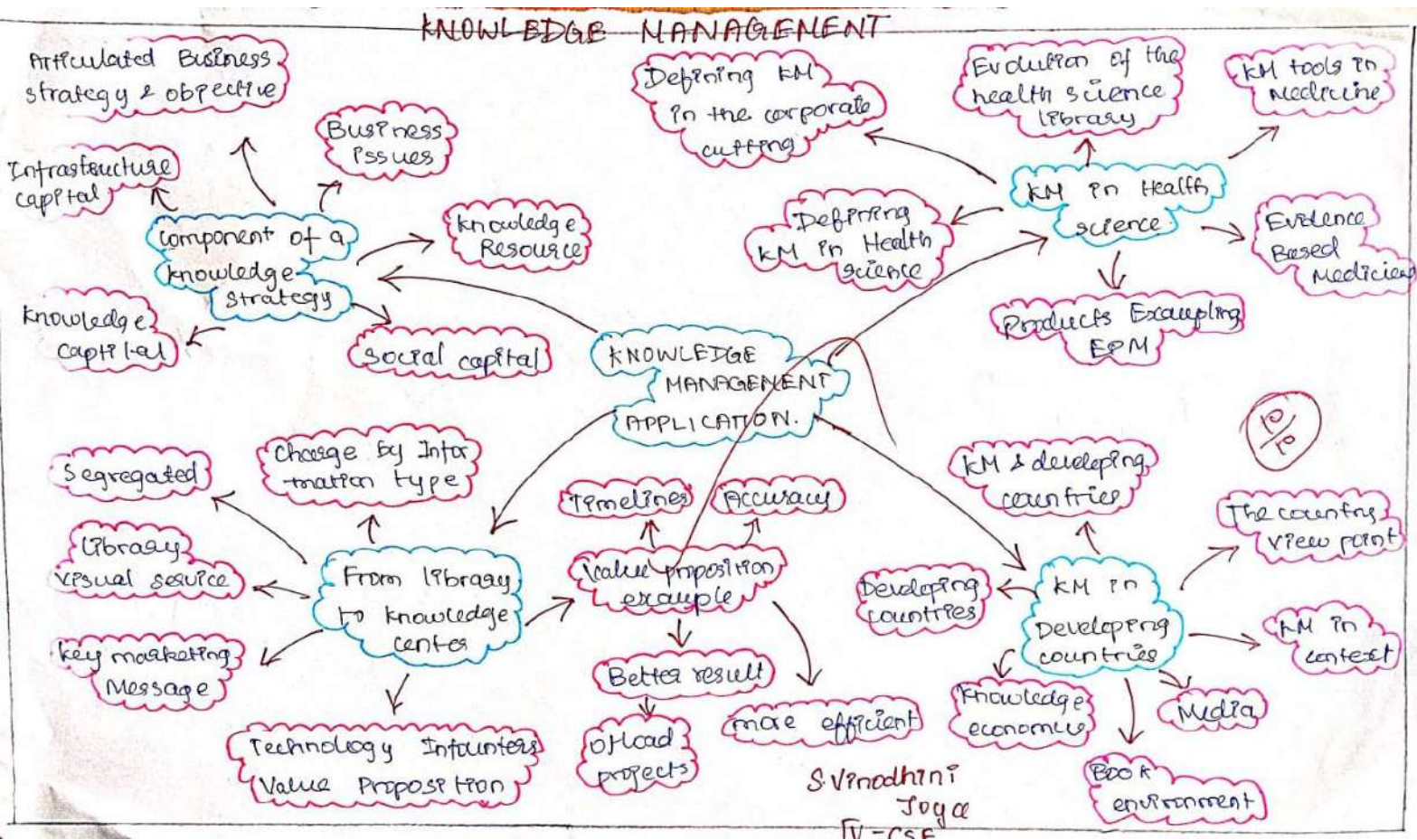
Excellent
 - Unique activities
 - more no. of activities
 - be followed by all
 - these classes
 - HOD/CSE

PCE ACTIVITY - MIND MAP

V. SARANYA
16CSE25



PCE ACTIVITY - MIND MAP



PCE ACTIVITY - QUIZ USING KAHOOT TOOL

MODE: KAHOOT TOOL

CLASS : I- CSE

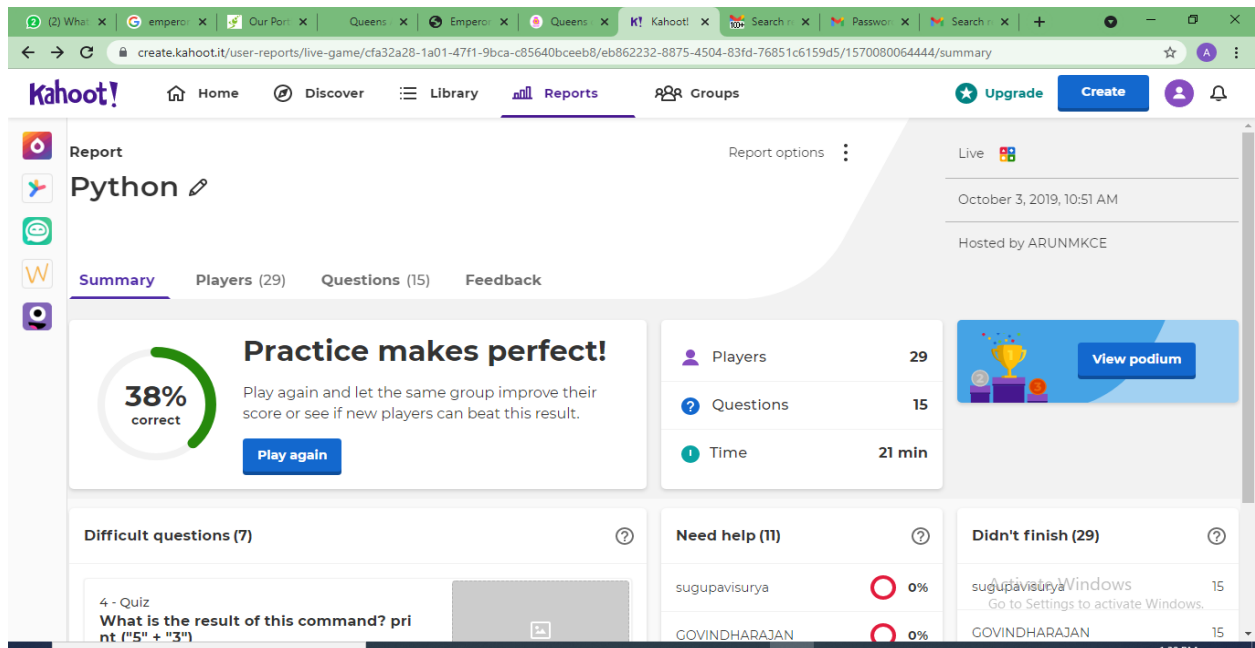


Fig: Profile Page

The screenshot shows the Kahoot! Score Sheet page for the same Python quiz. The table displays the following data:

Nickname	Rank	Correct answers	Unanswered	Final score
KANISH,AJAY	1	67%	2	8 834
divakaran,viswa	2	60%	2	8 638
nandhini	3	67%	1	8 152
Suruthi Fasila	4	60%	1	7 992
gokul,avudiappa	5	53%	1	7 464
kuzhalikamali	6	53%	2	7 359
Dharani	7	53%	1	6 709
sachin	8	47%	2	5 786
Varun	9	47%	2	5 780
sara	10	40%	3	5 702

See more

Fig: Score Sheet

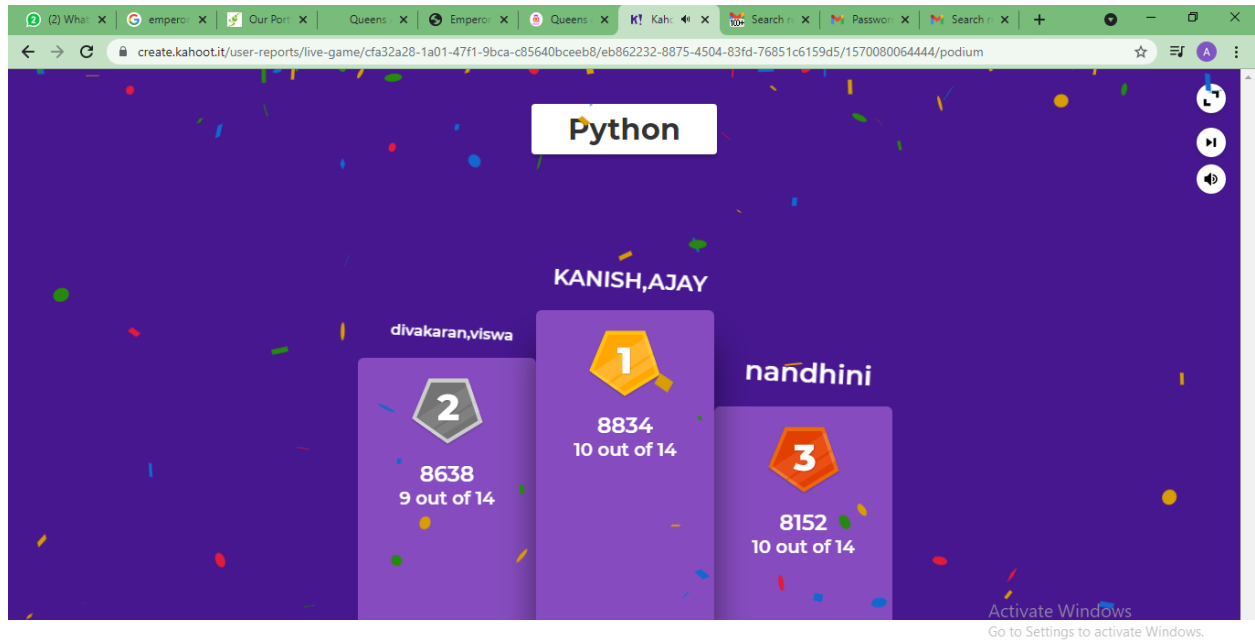


Fig: Final Results



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PCE ACTIVITY



NAME : S. HARIHARAN
 REGISTER NUMBER : 821117105302
 SUBJECT : EMBEDDED
 SYSTEM

A Seminar on Embedded Systems

For Exam in ECE401MS1

- Networks:
Ethernet, Controller Area Network, LonWorks, etc
- Timers:
P11(x), Capture/Compare and Time Processing Units
- Discrete IO:
General Purpose Input/Output (GPIO)
- Analog to Digital/Digital to Analog (ADC/DAC)

- An embedded system is a special-purpose computer system designed to perform certain dedicated functions. It is usually embedded as part of a complete device including hardware and mechanical parts.

What is an Embedded system?

- An embedded system is one that has computer hardware with software embedded in it as one of its components. Or
- We can define an embedded system as "A microprocessor based system that does not look like a computer". Or
- we can say that it is "A combination of computer hardware and software, and perhaps additional mechanical or other parts, designed to perform a dedicated function. In some cases, embedded systems are part of a larger system or product, as is the case of an antilock braking system in a car".

Mobile Devices

Mobile devices such as mobile phones, Personal Digital Assistants (PDAs), smart phones etc. are a special category of embedded systems. Though the PDAs do many general purpose tasks, they need to be designed just like the 'conventional' embedded systems.

Communication Interfaces

For embedded systems to interact with the external world, a number of communication interfaces are available. They are

- Serial Communication Interfaces (SCI):
RS-232, RS-422, RS-485 etc
- Synchronous Serial Communication Interface:
I2C, ITAG, SPI, SSC and ESSI
- Universal Serial Bus (USB)

Languages for Programming Embedded Systems

Assembly language was the pioneer for programming embedded systems till recently. Nowadays there are many more languages to program these systems. Some of the languages are C, C++, Ada, Forth, and Java together with its new enhancement (JME).

The presence of tools to model the software in UML, SQL is sufficient to indicate the maturity of embedded software programming

Embedded systems everywhere?

Embedded systems span all aspects of modern life and there are many examples of their use.

- Biomedical Instrumentation – ECG Recorder, Blood cell recorder, patient monitor system
- Communication systems – pagers, cellular phones, cable TV terminals, fax and transceivers, video games and so on.
- Peripheral controllers of a computer – Keyboard controller, DRAM controller, DMA controller, Printer controller, LAN controller, disk drive controller.

Were the embedded systems existing earlier?

Yes, We have been enjoying the grace of embedded system quite a long time! But they were not so popular because in those days most of the embedded systems were designed around a microprocessor unlike today's systems which were built around a microcontroller.

As we know a microprocessor by itself does not possess any memory, ports etc. So everything must be connected externally by using peripherals like 8255, 8257, 8259 etc. So the embedded system designed using microprocessor was not only complicated in design but also large in size. At the same time the speed of microprocessor is also a limitation for high end applications.

Significance

Due to their compact size, low cost and simple design aspects made embedded systems very popular and encroached into human lives and have become indispensable. They are found everywhere from kitchen ware to space craft. To emphasize this idea here are some illustrations.

- Industrial Instrumentation – Process controller, DC motor controller, robotic systems, CNC machine controller, close loop engine controller, industrial moisture recorder and controller.
- Scientific – digital storage system, CRT display controller, spectrum analyzer.

Thank
you!

PCE ACTIVITY - POWER POINT PRESENTATION

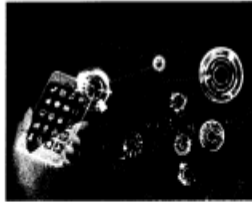
M. MEGALA

IV-ECE

EC6801

WIRELESS

COMMUNICATION



APPLICATION OF
WIRELESS COMMUNICATION

Teambuilding Games



Be Healthy



Stay Safe



Enjoy and
Achieve



Make a
Positive
Contribution



Achieve
Economic
Wellbeing

To 4/2
Do 1/3



Youth

2

Trust Game

Blind Fold Obstacle Course

Equipment:	How to:
None	<ul style="list-style-type: none">Get the group to create a obstacle courseGet the group into two or threeOne person will be blind folded and the other will guide them around the course
Time :	<ul style="list-style-type: none">Get everyone to go at the same time starting at different elementsWhen they get back to the start they swap overThis activity may benefit from trust building activities first
Recommended numbers	4+
Tip	None
Recommended age:	10+
	Every Child Matters Outcomes:

Youth

3

Team Building Circle Game

Equipment:	How to:
No equipment needed	<ul style="list-style-type: none">Get the group to hold hands in a circle around 1 member of the groupThe member in the middle has to start walking forwardsThe rest of the group will then start walking away so that the person in the middle does not walk into themThe person in the middle has to try get out without walking into any oneTo make it harder get the circle moving in a clockwise direction, start hopping etc
Time :	10 minutes
Recommended numbers	6
Tip	None
Recommended age:	7+
	Every Child Matters Outcomes:

Youth

4

Team Building Egg Rocket

Equipment:	How to:
Paper, Eggs	<ul style="list-style-type: none">Split the group into teamsGive each group some paper, tape and a eggTell them that they have to build a rocket which is going to be throwing up in the air or dropped from a height and their rocket has to protect the egg from smashingOnce the rockets are made the egg is put into place and the leader has to throw them all the same height. Or drop them from the same heightThe egg which is in the best condition wins.If none of the eggs smash keep going higher until they do
Time :	5 - 20 minutes
Recommended numbers	4+
Tip	None
Recommended age:	8+
	Every Child Matters Outcomes:

Youth

communication theory

1. A 400 W carrier is amplitude modulated with $m = 0.75$. The total power in AM is (1 point)
 - ☐ 400 W
 - ☐ 512 W
 - ☐ 588 W
 - ☐ 650 W
2. A 1000 kHz carrier is simultaneously modulated with 300 Hz, 800 Hz and 2 kHz audio sine waves. Which of the following frequency is least likely to be present in the output? (1 point)
 - ☐ 999.2 kHz
 - ☐ 998.0 kHz
 - ☐ 1002 kHz
 - ☐ 1000 kHz
3. VSB modulation is preferred in TV because (1 point)
 - ☐ it reduces the bandwidth requirement to half
 - ☐ it avoids phase distortion at low frequencies
 - ☐ it results in better reception
 - ☐ none of the above
4. In FM signal with a modulation index m_f is passed through a frequency tripler. The wave in the output of the tripler will have a modulation index of (1 point)
 - ☐ m_f
 - ☐ $3m_f$
 - ☐ m_f^3
 - ☐ m_f^9
5. A carrier is simultaneously modulated by two sine waves having modulation indices of 0.4 and 0.3. The total modulation index will be (1 point)
 - ☐ 0.7
 - ☐ 0.35
 - ☐ 0.1
 - ☐ 0.5
6. The rate at which information can be carried through a communication channel (1 point)

depends on

- ☐ transmitted power
 - ☐ bandwidth
 - ☐ transmission loss
 - ☐ carrier frequency
7. Which of the following is the indirect way of FM generation? (1 point)
 - ☐ Reactance bipolar transistor modulator
 - ☐ Armstrong modulator
 - ☐ Varactor diode modulator
 - ☐ Reactance FM modulator
 8. In an FM system, when the AF is 500 Hz and the AF voltage is 2.4 V, the deviation is 4.8 kHz. If the AF voltage is now increased to 7.2 V, the new deviation will be (1 point)
 - ☐ 9.6 kHz
 - ☐ 4.8 kHz
 - ☐ 14.4 kHz
 - ☐ 28.8 kHz
 9. In an AM wave the carrier and one of the side bands is suppressed. If $m = 0.5$, the percentage saving in power is (1 point)
 - ☐ 83.3%
 - ☐ 100%
 - ☐ 94.4%
 - ☐ 50%
 10. Radio broadcasts are generally (1 point)
 - ☐ frequency modulation
 - ☐ both amplitude and frequency modulation
 - ☐ neither amplitude nor frequency modulation
 - ☐ amplitude modulation

communication theory Results

To all students:-

Filter by name / partition by tag / group by name Search Export to CSV: Point Grid | Response Grid | Copy to Clipboard View Audit Logs

Average Score 98% Average Time 0:02:29 Responses 41 Score Histogram 50% to 100% 0:00:16 to 0:22:30

Name	Score	Started On	Finished On	Time	1	2	3	4	5	6	7	8	9	10
					100%	95%	100%	100%	98%	100%	98%	98%	98%	98%
Akanya	100% (10/10)	2020-02-16 1:09 a.m.	2020-02-16 1:10 a.m.	0:00:50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
A.Sarika	100% (10/10)	2020-02-15 11:31 p.m.	2020-02-15 11:32 p.m.	0:00:35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aarthi	100% (10/10)	2020-02-15 10:30 p.m.	2020-02-15 10:31 p.m.	0:00:21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aasha	100% (10/10)	2020-02-15 10:31 p.m.	2020-02-15 10:31 p.m.	0:00:16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anantha Valli	100% (10/10)	2020-02-15 10:30 p.m.	2020-02-15 10:30 p.m.	0:00:19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anura	100% (10/10)	2020-02-15 10:28 p.m.	2020-02-15 10:28 p.m.	0:00:54	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B.Ganesh	100% (10/10)	2020-02-15 11:00 p.m.	2020-02-15 11:05 p.m.	0:04:27	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B.Kiruthika	100% (10/10)	2020-02-15 11:20 p.m.	2020-02-15 11:20 p.m.	0:00:34	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B.Thamiselvan	100% (10/10)	2020-02-15 10:50 p.m.	2020-02-15 10:50 p.m.	0:00:22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C.Nivetha	100% (10/10)	2020-02-15 11:19 p.m.	2020-02-15 11:21 p.m.	0:02:44	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Types of Motivation

There are mainly two types of motivations such as

- Extrinsic Motivation
- Intrinsic Motivation

Extrinsic Motivation is geared toward external rewards and reinforcers. Some examples of external rewards are money, praise, awards, etc. Some examples of external reinforcers are policy and procedures, disciplinary action, speeding tickets, boundary-setting, etc. Extrinsic motivation is external in nature. The most well-known and the most debated motivation is money. Below are some other examples.

- Employee of the month award
- Profit package
- Bonuses
- Organized activities

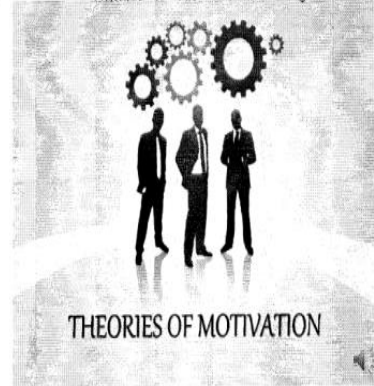
Intrinsic Motivation is geared toward internal rewards and reinforcers. People may work at a job because it gives them feelings of competence and a sense of personal control doing the job is fun, the work is matter of pride, the tasks are challenging, and so on. Our deep-rooted desires have the highest motivational power. Below are some examples.

- **Acceptance.** We all need to feel that we, as well as our decisions, are accepted by our co-workers.
- **Curiosity.** We all have the desire to be in the know.
- **Honesty.** We all need to respect the rules and to be ethical.
- **Independence.** We all need to feel we are unique.
- **Order.** We all need to be organized.
- **Power.** We all have the desire to be able to have influence.
- **Social contact.** We all need to have some social interactions.
- **Status.** We all have the desire to feel important.

Roll No: 42

G. KERRITHANA SHRI
ECE - (II - Year) - (V SEM)
821117106301

PRINCIPLE OF MANAGEMENT



THEORIES OF MOTIVATION

The term 'motivation' has been derived from the word 'motive'. Motive may be defined as an inner state of our mind that activates and directs our behaviour. It makes us move to act. Motivation is something that moves the individual to action and continues him in the course of action already initiated.

According to S.P. Robbins, "Motivation is the willingness to exert high levels of effort towards organizational goals, conditioned by the effort and ability to satisfy some individual need".

The relationship between the organization and its members is affected by what motivates them to work and the reward and fulfilment they get from it. The manager needs to know how best to elicit the co-operation of his subordinates and direct their performance to achieving the goals and objectives of the organization.

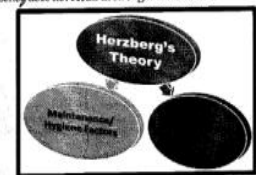
2. Herzberg's Motivation-Hygiene Theory.

The Herzberg's Motivation-Hygiene Theory is given by Frederick Herzberg and his associates, who studied the variables that are perceived to be desirable to achieve goals and the undesirable conditions to avoid. In this context, the study was conducted wherein the experiences and feelings of 200 engineers and accountants were analyzed.

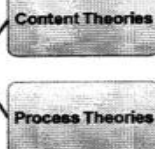
They were asked to share their previous job experiences in which they felt "exceptionally good" or "exceptionally bad." Through this study, Herzberg concluded that there are two job conditions independent of each other that affect the behavior differently.

The first set of job conditions has been referred to as **maintenance or hygiene factor**, wherein the same job conditions provide the same level of dissatisfaction, in case the conditions are absent, however, their presence does not motivate in a strong way.

The second set of job conditions is referred to as **motivational factors**, which primarily operate to build strong motivation and high job satisfaction, but their absence does not result in strong dissatisfaction.



Motivation Theories



- Maslow's Need Hierarchy
- Herzberg's Motivation-Hygiene Theory
- McClelland's Needs Theory
- Alderfer's ERG Theory
- Vroom's Expectancy Theory
- Adam's Equity Theory
- Goal Setting Theory
- Reinforcement Theory

Content Theories: The content theories find the answer to what motivates an individual and is concerned with individual needs and wants. Following theorists have given their theories of motivation in content perspective:

1. Maslow - Hierarchy Of Needs
2. Herzberg's Motivation-Hygiene Theory
3. McClelland's Needs Theory
4. Alderfer's ERG Theory

Process Theories: The process theories deal with "How" the motivation occurs, i.e. the process of motivation and following theories were given in this context:

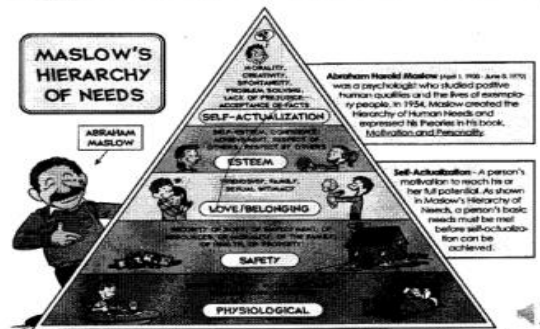
1. Vroom's Expectancy Theory
2. Adam's Equity Theory
3. Goal Setting Theory
4. Reinforcement Theory

Content Theories.

1. Maslow - Hierarchy Of Needs.

Maslow's hierarchy of needs is a theory in psychology proposed by Abraham Maslow in his 1943 paper "A Theory of Human Motivation" in psychological Review. Maslow subsequently extended the idea to include his observations of humans' innate curiosity.

Human behavior is goal-directed. Motivation causes goal-directed behaviour. It is through motivation that needs can be handled and satisfied purposely. This can be understood by understanding the hierarchy of needs of an individual. The needs of individual serves as a driving force in human behaviour. Therefore, a manager must understand the "hierarchy of needs". Maslow has proposed "The Need Hierarchy Model".



PCE ACTIVITY - SEMINAR SAMPLES ON THEORIES OF MOTIVATION



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2019-2020 (EVEN SEMESTER)

Sub. Code : EC 6019 Branch / Year / Sem : B.E ECE / IV / VIII
Sub.Name : Data Converters Batch : 2016-2020
Staff Name : Mrs. D.Vennila Academic Year : 2019-20 (EVEN)

OBJECTIVE QUESTIONS WITH ANSWERS

1. Depending on the value of input and reference voltage a comparator can be named as
 - a) Voltage follower
 - b) Digital to analog converter
 - c) Schmitt trigger
 - d) Voltage level detector
2. Why clamp diodes are used in comparator?
 - a) To reduce output offset voltage
 - b) To increase gain of op-amp
 - c) To reduce input offset current
 - d) To protect op-amp from damage
3. How the op-amp comparator should be chosen to get higher speed of operation?
 - a) Large gain
 - b) High slow rate
 - c) Wider bandwidth
 - d) None of the mentioned
4. How to obtain high rate of accuracy in comparator?
 - a) All of the mentioned
 - b) High voltage gain
 - c) High CMRR
 - d) Input offset
5. Zero crossing detectors is also called as
 - a) Square to sine wave generator
 - b) Sine to square wave generator
 - c) Sine to triangular wave generator
 - d) All of the mentioned
6. What is the drawback in zero crossing detectors?
 - a) Low frequency signal and noise at output terminal
 - b) High frequency signal and noise at input terminal
 - c) Low frequency signal and noise at input terminal
 - d) High frequency signal and noise at output terminal

To 44
Ms DV

7. State a method to overcome the drawback of zero crossing detectors?
 - a) Increasing input voltage
 - b) Use of positive feedback
 - c) Connect a compensating network
 - d) None of the mentioned
8. Name the comparator that helps to find unknown input.
 - a) Time marker generator
 - b) Zero crossing detectors
 - c) Phase meter
 - d) Window detector
9. Which among the following is used to increase phase angle between different voltages?
 - a) Phase detector
 - b) Window detector
 - c) Zero crossing detector
 - d) None of the mentioned
10. A radio receiver has of amplification
 - a) One stage
 - b) Two stages
 - c) Three stages
 - d) More than one stages
11. RC coupling is used for amplification
 - a) Voltage
 - b) Current
 - c) Power
 - d) None of the above
12. In an RC coupled amplifier, the voltage gain over mid-frequency range
 - a) Changes abruptly with frequency
 - b) Is constant
 - c) Changes uniformly with frequency
 - d) None of the above
13. In obtaining the frequency response curve of an amplifier, the
 - a) Amplifier level output is kept constant
 - b) Amplifier frequency is held constant
 - c) Generator frequency is held constant
 - d) Generator output level is held constant
14. An advantage of RC coupling scheme is the
 - a) Good impedance matching
 - b) Economy
 - c) High efficiency
 - d) None of the above

15. The best frequency response is of coupling
 - a) RC
 - b) Transformer
 - c) Direct
 - d) None of the above
16. Transformer coupling is used for amplification
 - a) Power
 - b) Voltage
 - c) Current
 - d) None of the above
17. In an RC coupling scheme, the coupling capacitor C_c must be large enough
 - a) To pass d.c. between the stages
 - b) Not to attenuate the low frequencies
 - c) To dissipate high power
 - d) None of the above
18. In RC coupling, the value of coupling capacitor is about
 - a) 100 pF
 - b) 0.1 μ F
 - c) 0.01 μ F
 - d) 10 μ F
19. When a multistage amplifier is to amplify d.c. signal, then one must use coupling
 - a) RC
 - b) Transformer
 - c) Direct
 - d) None of the above
20. coupling provides the maximum voltage gain
 - a) RC
 - b) Transformer
 - c) Direct
 - d) Impedance

Answers:

1. d	6. c	11. a	16. a	a
2. d	7. b	12. b	17. b	b
3. c	8. d	13. d	18. d	b
4. a	9. a	14. b	19. c	c
5. b	10. d	15. c	20. b	c

PCE ACTIVITY - TECHNICAL QUIZ FOR DATA CONVERTERS

Quiz Grading | Edmodo <https://new.edmodo.com/quiz-grade/17357041>

objective type questions
Due February 25, 11:05 PM
N ILC - Academic year 19-20
1

Overview Students

IV BCE - Academic year 19-20
enroll

Student Time Submitted Score

arshone thoyaganjan	February 7, 1:45 AM	17 / 20
ariya varshini	February 7, 1:55 AM	15 / 20
kaya devi	February 7, 1:55 AM	17 / 20
Cherupadavest Cherupadavest	February 7, 2:01 AM	18 / 20
JenJen	February 7, 2:04 AM	17 / 20
Basirekha V	February 7, 2:05 AM	18 / 20
vithya kesavan	February 7, 2:06 AM	20 / 20
poovitha R	February 7, 2:07 AM	17 / 20
Riya Karasekhar	February 7, 2:12 AM	20 / 20
megha megha	February 7, 2:14 AM	20 / 20
adamo iqbal	February 7, 2:15 AM	18 / 20
Sardhya R	February 7, 2:17 AM	18 / 20
vithya K	February 7, 2:20 AM	14 / 20
S. Dharmasanthi Sekar	February 7, 2:23 AM	20 / 20
k meera	February 7, 2:24 AM	16 / 20
agalya sundar	February 7, 2:26 AM	20 / 20
Praya G	February 7, 2:27 AM	13 / 20
Sowmya R	February 7, 2:28 AM	20 / 20
Sadha Latha	February 7, 2:30 AM	20 / 20
Ekavya R	February 7, 2:32 AM	20 / 20
ELAKOTA KOWBENA	February 7, 2:33 AM	20 / 20

1 of 2 2/21/2020 10:20 AM

Quiz Grading | Edmodo <https://new.edmodo.com/quiz-grade/17357041>

KOWSALYA MURALI	February 7, 2:35 AM	20 / 20
Ranjitha D	February 7, 2:35 AM	11 / 20
yasu Devi	February 7, 5:22 AM	20 / 20
Dhana Sekaran	February 9, 7:31 AM	19 / 20
Dhivakar 12520	February 11, 6:07 AM	20 / 20
Tamir Ganes	February 12, 8:01 AM	20 / 20
Alalya Kannan	February 12, 8:08 AM	20 / 20
Tamir T	February 13, 8:23 PM	20 / 20
M sucha	February 14, 8:50 PM	20 / 20
Abana P	February 14, 8:55 PM	20 / 20
dhruva kovand25	February 14, 9:00 PM	20 / 20
Indhuja J	February 16, 6:33 AM	20 / 20
balaraman balaraman	February 16, 10:12 PM	20 / 20
ALLEN VANDIYAR	February 17, 8:17 AM	20 / 20
Vinitha Vj	February 18, 12:45 AM	13 / 20
priyadharanirip	February 18, 1:17 AM	19 / 20
Ranjitha C	February 18, 7:08 PM	20 / 20
Mani Chitra	February 18, 10:40 PM	17 / 20
Yash Rahman	February 18, 10:54 PM	17 / 20
Abinaya Karthika	February 18, 10:57 PM	20 / 20
s jeeva vandiyar	February 18, 11:02 PM	2 / 20
Jayashar KJ	February 18, 11:04 PM	9 / 20
pugilendhi pugil	February 20, 8:15 AM	8 / 20
poovithi A	February 20, 8:06 PM	16 / 20

PCE ACTIVITY - TECHNICAL QUIZ FOR DATA CONVERTERS IN EDMODO

Handwritten notes: T47 MSR, APH, Technical Seminar, E. ILANKHATIR, IV, ECE, 2/17/2020, WIRELESS COMMUNICATION.

WHAT IS GMSK????

Gaussian Minimum Shift Keying, GMSK is a form of modulation based on frequency shift keying that has no phase discontinuities and provides efficient use of spectrum as well as emitting high efficiency radio power amplifiers.

Gaussian Minimum Shift Keying, or to give it its full title Gaussian Minimum Shift Keying, GMSK, is a form of frequency modulation that is used in radio communication systems.

GMSK AND 2G NETWORK

GMSK is probably more widely associated with the 2G GSM (Global System for Mobile communications) system where it played a role as an effective form of modulation.

It was one of the reasons that GSM cellphones had a long battery life in spite of the high efficiency that could be obtained from the RF power amplifiers.

WHY GMSK ????

GMSK modulation is based on MSK, which is itself a form of continuous phase frequency shift keying, CPFSK.

One of the problems with standard forms of PSK is that sidebands extend out from the carrier.

To overcome this, MSK and its derivative GMSK can be used.

BASIC PRINCIPLES OF GMSK

MSK and also GMSK modulation are what is known as a continuous phase scheme.

There are no phase discontinuities because the frequency changes occur at the carrier zero crossing points.

This arises as a result of the unique factor of MSK that the frequency difference between the logical one and logical zero states is always equal to half the data rate.

As a result, signal is 0.5.

CONCEPT OF MSK

Diagram showing a square wave for data and a corresponding sinusoidal wave for MSK signal.

Concept of a minimum shift keying MSK signal.

2/17/2020

CONVERSION FROM MSK TO GMSK

A plot of the spectrum of an MSK signal shows sidebands extending well beyond a bandwidth equal to the data rate.

Thus, in the standard for passing the modulating signal through a low pass filter prior to applying it to the carrier.

Other requirements for the filter are that it should have a sharp cutoff, narrow bandwidth and its impulse response should show no overshoot. The ideal filter is known as a Gaussian filter which has a Gaussian shaped response to an impulse and no ringing.

The way the basic MSK signal is converted to GMSK modulation.

SPECTRAL DENSITY OF MSK AND GMSK

Graph showing the spectral density of MSK and GMSK signals.

MSK signal has a higher spectral density than GMSK signal.

GMSK signal has a lower spectral density than MSK signal.

GMSK MODULATION TECHNIQUES

METHOD 1 :-

Diagram showing the block diagram of Method 1 for GMSK modulation.

METHOD 2 :-

Diagram showing the block diagram of Method 2 for GMSK modulation.

METHOD 1 (GMSK)

The most obvious way to filter the modulating signal using a Gaussian filter and then apply MSK to a frequency modulator where the modulation index is set to 0.5.

This method is very simple and straightforward but it has the drawback that the modulation index must exactly equal 0.5.

In practice this analogue method is not suitable because component tolerances will not permit the set exactly.

METHOD 2 (GMSK)

More subtle is known as a quadrature modulator is used. The term quadrature means that the phase of a signal is 90 degrees or $\pi/2$ degrees to another one.

This quadrature modulation uses two signals that are said to be in phase and another that is quadrature to MSK.

In some of the frequency and quadrature elements this type of modulation is often used to be an MSK modulation.

Using this type of modulation the modulation index can be maintained at exactly 0.5 without the need for any settings or adjustments. This makes it much easier to use, and capable of providing the required level of performance without the need for adjustment, this modulation can be used in MSK.

ADVANTAGE OF GMSK

One advantage of GMSK is that it can be used for a narrow bandwidth and narrow sidebands. This is because there are no elements of the signal that are carried as amplitude variations, this results in lower levels of sideband emissions.

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Another advantage of GMSK is that it can be used for a narrow bandwidth and narrow sidebands. This is because there are no elements of the signal that are carried as amplitude variations, this results in lower levels of sideband emissions.

PCE ACTIVITY -APH ON WIRELESS COMMUNICATION

TLRF2020 Page 1 of 4

TLRF2020
Your score: 100% (20/20)

*Online test
Mr. Babbar Kumar*

S Akash

1. A transmission line with $R = G = 0$ has a characteristic impedance that is 1/1 point
Your Answer: ☒ Correct
☐ Purely reactive ☐ Purely resistive ☐ Purely inductive ☐ Purely capacitive

2. A lossless transmission line is excited by a 200 MHz signal. If the dielectric constant is 2.25, the phase shift constant is 3/3 points
Your Answer: ☒ Correct
☐ 2.71 rad/m ☐ TE rad/m ☐ 1.5 rad/m ☐ none of the above

3. With reference to transmission lines, the normalised load impedance is determined by 1/1 point
Your Answer: ☒ Correct
☐ the product of load resistance and the characteristic impedance of the line
☒ dividing the load resistance by characteristic impedance of the line
☐ dividing the resistance value by 100 ☐ none of the above

TLRF2020 Page 2 of 4

4. A 50 Ω transmission line is terminated in a load impedance of $(50 + j 100) \Omega$. The normalised load impedance is 3/3 points
Your Answer: ☒ Correct
☐ $(2500 + j 5000)/0$ ☐ $(1 + j 2)$ ☐ $C_2(0.5 + j)$ ☐ none of the above

5. Which type of transmission line/s exhibit/s less capacitance in comparison to underground cables? 1/1 point
Your Answer: ☒ Correct
☐ Open-wire ☐ Co-axial cables ☐ Waveguides ☐ All of the above

6. By which phenomenon does the energy transmission take place between the walls of the tube in waveguides? 1/1 point
Your Answer: ☒ Correct
☐ Reflection ☐ Refraction ☐ Dispersion ☐ Absorption

7. What would be the depth of penetration for copper at 2 MHz frequency with $\sigma = 5.8 \times 10^7$? 3/3 points
Your Answer: ☒ Correct
☐ 46.72 μm ☐ 56.90 μm ☐ 66.08 μm ☐ 76.34 μm

PCE ACTIVITY - ONLINE QUIZ ON TRANSMISSION LINES AND RF SYSTEM

Kings College of Engineering
Department of Electronics and Communication Engineering
III ECE
Microprocessors and Microcontrollers- Quiz for PCE

1. The 8259-A is a _____
 A. priority Interrupt Controller
 B. priority Resolver
 C. interrupt Request Registry
 D. control Logic
ANSWER: A

2. The 8259A is used to manage _____ hardware in the system
 A. Single
 B. Multiple
 C. Double
 D. none
ANSWER: B

3. 8255A contains _____ ports each of 8 bit lines.
 A. 2
 B. 4
 C. 5
 D. 3
ANSWER: D

4. In 8255A the _____ is controlled by control registers.
 A. port A
 B. port B
 C. port C
 D. port D
ANSWER: C

5. In 8255A _____ is used for input operation
 A. mode 0
 B. mode 2
 C. mode 3
 D. mode 1
ANSWER: A

6. In 8255A _____ is used for handshaking operation
 A. mode 0
 B. mode 1
 C. mode 2
 D. mode 3
ANSWER: B

7. In 8255 A _____ is used to perform bidirectional operation
 A. mode 0
 B. mode 1
 C. mode 2
 D. mode 3
ANSWER: C

8. Data transfer between the microprocessor for peripheral takes place through _____
 A. i/o port
 B. input port
 C. output port
 D. multi port
ANSWER: A

9. In 8255A, there are _____ I/o lines
 A. 24
 B. 12
 C. 20
 D. 10
ANSWER: A

10. _____ is useful for the generation of accurate time delay
 A. 8254
 B. 8255A
 C. 8237A
 D. 8279
ANSWER: A

PCE ACTIVITY - TECHNICAL QUIZ ON MICROPROCESSOR AND MICROCONTROLLER



A NAAC Accredited Institution
KINGS
COLLEGE OF ENGINEERING
Recognized under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Professional Career Enhancement Activity





Recognized under 2(f) & 12(B) act of UGC

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019 - 2020 / EVEN SEMESTER
SUB CODE/NAME: EE8602 PROTECTION AND SWITCH GEAR

Objective type questions

- 1. What is / are the main disadvantage of using oil as the quenching medium in the circuit breakers?**
 - a. Need periodical replacement.
 - b. Risk of formation of explosive mixture with air.
 - c. Possibility of causing fire hazards.
 - d. All of the above.
- 2. A thermal protection switch provides protection against what?**
 - a. Overload
 - b. Temperature
 - c. Short circuit
 - d. Over voltage
- 3. Which of the following circuit breakers is used for the railway electrification?**
 - a. Air blast circuit breaker
 - b. SF6 circuit breaker
 - c. Bulk oil circuit breaker
 - d. Minimum oil circuit breaker
- 4. Which circuit breaker is preferred to be installed in extra high voltage AC system?**
 - a. Bulk oil type circuit breaker
 - b. Air blast circuit breaker
 - c. SF6 circuit breaker
 - d. Vacuum circuit breaker
- 5. Which among these circuit breakers produce the least arc energy?**
 - a. Plain oil
 - b. Minimum oil
 - c. Air blast
 - d. Air break
- 6. The rating of the circuit breaker is usually determined on the basis of _____ fault.**
 - a. Symmetrical
 - b. Line to line
 - c. Single line to ground
 - d. Double line to ground
- 7. Which of the following circuit breaker is highly reliable and has a least maintenance?**
 - a. Oil circuit breakers
 - b. Air blast
 - c. Vacuum circuit breakers
 - d. SF6 circuit breakers
- 8. Circuit breakers usually operate under**
 - a. Steady short circuit current
 - b. Sub transient state of short circuit current
 - c. Transient state of short circuit current
 - d. None of these
- 9. What is the making capacity of the circuit breaker?**
 - a. Less than the asymmetrical breaking capacity of the breaker
 - b. Greater than the asymmetrical breaking capacity of the breaker
 - c. Equal to the asymmetrical breaking capacity of the breaker
 - d. Equal to the symmetrical breaking capacity of the breaker

10. A three phase circuit breaker is rated 2000 MVA, 33 kV. What will be its making current?
- 35 kA
 - 49 kA
 - 70 kA
 - 89 kA
11. Why is an isolator installed?
- To isolate one portion of the circuit from another
 - As a substitute for the circuit breaker
 - It used on either sides of the circuit breaker
 - Both (a) and (c)
12. For which among the following the current ratings are not required?
- Circuit breakers
 - Relays
 - Isolators
 - Load break switch
13. The isolators used in the transmission lines are capable of breaking
- Fault current
 - No current
 - charging current
 - Load current
14. What is the major cause of the failure of the circuit breaker?
- Trip circuit open
 - Trip latch defective
 - spring defective
 - All of these
15. What is the purpose of back up protection?
- To increase the speed
 - To increase the reach
 - To leave no blind spot
 - To guard against failure of primary
16. What is the actuating quantity for the relays?
- Magnitude
 - Frequency
 - Phase angle
 - All of these
17. Protective relays can be designed to respond to _____.
- Light intensity, impedance
 - Temperature, resistance, reactance
 - Voltage and current
 - All of these
18. On what factor does the operating speed of the relay depend?
- Rate of flux built up
 - Armature core air gap
 - Spring tension
 - All of these
19. Plug setting of a electromagnetic relay can be altered by varying
- Number of ampere turns
 - Air gap of magnetic path
 - Adjustable back stop
 - None of these
20. The most efficient torque producing actuating structure for the induction type relays is
- Shaded pole structure
 - Watt hour meter structure
 - Induction cup structure
 - Single induction loop structure



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019-2020 / EVEN SEMESTER
PCE FOR AT - II
TECHNICAL QUIZ - EE8602 PROTECTION AND SWITCHGEAR

Roll Number : 17EE01

Date : 14.2.2020

Name of the Student : S. Adithyan

Answers :

1. D 2. A 3. A 4. C 5. C 6. A 7. D 8. B 9. B 10. D
11. A 12. C 13. C 14. D 15. A 16. D 17. D 18. D 19. A 20. C

Total Marks :

18

[Signature]
14/2



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019-2020 / EVEN SEMESTER
PCE FOR AT - II
TECHNICAL QUIZ - EE8602 PROTECTION AND SWITCHGEAR

Roll Number : 17EE10

Date : 14.02.2020

Name of the Student : D. Raghul

Answers :

1. D 2. A 3. A 4. C 5. C 6. A 7. D 8. B 9. B 10. D
11. A 12. B 13. C 14. D 15. B 16. C 17. D 18. A 19. B 20. C

Total Marks :

15

[Signature]
Staff in-charge

PCE ACTIVITY - TECHNICAL QUIZ FOR EE8602 PROTECTION AND SWITCHGEAR

ST. JOSEPH'S
COLLEGE OF ENGINEERING AND TECHNOLOGY

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Elupatti, Thanjavur - 613403



E-MISSION 2K20

2nd National Level Technical Symposium

organized by

DEPARTMENTS OF CSE, ECE & EEE

Certificate

This is to certify that ~~Dr.~~ / Mr. / Ms. M. Nandhini / III year / EEE
of Kings College of Engineering
has presented a paper entitled "Ultra Mini Hydro Power
Plant" and won II place in
the "E-MISSION 2K20 - 2nd National Level Technical Symposium" organized
by Departments of CSE, ECE and EEE held on 19th February, 2020.


CONVENOR


PRINCIPAL


ADMINISTRATOR

**PCE ACTIVITY- PAPER PRESENTATION IN SYMPOSIUM FOR EE8005 SPECIAL ELECTRICAL
MACHINES**

Power Transformer Protection

K.Prabhakaran
3rd Year
EEE
Protection of switch gears

Why do Transformers Fail?

- The electrical windings and the magnetic core in a transformer are subject to a number of different forces during operation, for example:
 - Expansion and contraction due to thermal cycling
 - Vibration
 - Local heating due to magnetic flux
 - Impact forces due to through-fault current
 - Excessive heating due to overloading or inadequate cooling

Costs and other factors to be considered

- Cost of repairing damage
- Cost of lost production
- Adverse effects on the balance of the system
- The spread of damage to adjacent equipment
- The period of unavailability of the damaged equipment

What fails a Transformer?

- Isolating
 - Switching
 - Control
 - Interlocking
- Isolation
 - Overload
 - Overvoltage
 - Overcurrent
 - Overheating

What fails a Transformer?

- Isolating
 - Switching
 - Control
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What fails a Transformer?

- Isolating
 - Switching
 - Control
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- Isolation
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 - Overheating

Failure Statistics of Transformers

	1995-1996		1997-1998		1999-2000	
	Number	% of Total	Number	% of Total	Number	% of Total
Winding failures	134	31	615	55	146	37
Tap changer failures	49	19	231	21	85	22
Insulating failures	41	15	154	10	62	16
Terminals/connections failures	15	7	71	6	13	3
Core failures	7	3	34	3	5	1
Accessories	12	4	72	6	101	26
Total	262	100	1127	100	389	100

Detection Elements

- Abnormal Operating Conditions
 - Open Circuits: 46
 - Overexcitation: 24
 - Undervoltage: 27
 - Abnormal Frequency: 81U
 - Breaker Failure: 50BF, 50SF-N

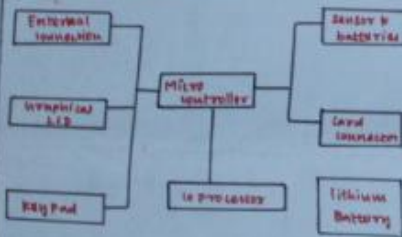
SMART CARD READER

SMART CARD:

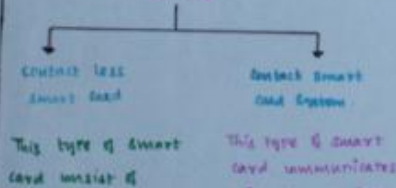
A card is a special type of card like device which contains an IC embedded on it.

The IC chip can be a Micro Processor with memory or just simple memory circuit.

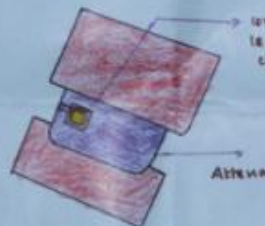
BLOCK DIAGRAM:



TYPES



CANTACTLESS SMART CARD SYSTEM:



ADVANTAGES:

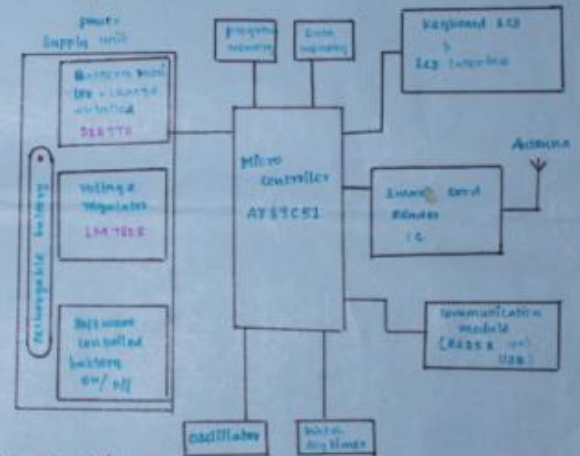
- Reusable
- Secure transactions
- Gives more security

APPLICATION:

- Tele communication → SIM CARD

Card reader interfaced to computer using RS485.

BLOCK DIAGRAM:



PCE ACTIVITY – POSTER PRESENTATION - EE8691 EMBEDDED SYSTEMS

HVDC TRANSMISSION

HVDC TRANSMISSION

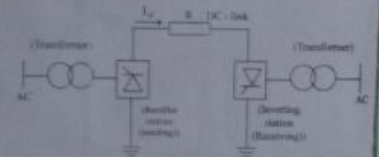
High voltage direct current transmission

The use of DC for this application is much older than that of AC. The first electric railway was installed by Edison in New York in 1892 which operated at 550 DC.

In India the first HVDC line was commissioned in between Rihand - Delhi with capacity of ≈ 500 kV, 800 MW.

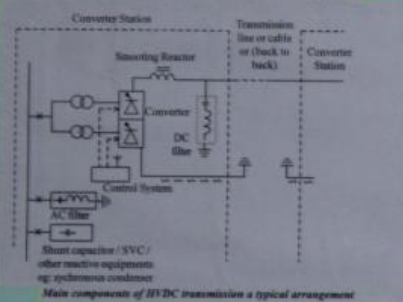
Principle of HVDC system:

HVDC transmission consists of two converter stations which are connected to either by DC cable or an overhead line.



In HVDC transmission, power is taken from one point in an AC network, where it is converted to DC at a converter station (rectifier), transmitted to another converter station (inverter) via line or a cable and injected into AC system.

Components (or) Terminal equipments of an HVDC system.



Converter station:

The converter station consist of valves and converter transformers. The valves convert AC to DC, and the transformers provide a suitable voltage ratio to achieve the desired direct voltage and galvanic separation of the AC and the DC systems.

Smoothing Reactors:

Smoothing reactors are used in the DC circuits, which reduces the harmonic currents in the DC line, and possible transient over currents.

Filters:

The converter action produces harmonics in the DC transmission, which may produce undesirable noise in the other circuits. Thus filters are used to reduce or suppress these harmonics generated at the conversion. These filters also provide some reactive power compensation.

Reactive power sources:

The control of HVDC converter (α, γ) introduces phase shift between the fundamentals of AC current and voltage. Thus the converter consumes reactive power. As a result from this, the converter transformers also consume reactive power. The reactive power demand is usually in the range of 50 - 60 % of the transmitted active power. The reactive power may be supplied from:

- AC filters
- shunt capacitors (least costly)
- Static compensators (SVCs) (for fast voltage regulation)
- Synchronous condensers (if AC network is used)

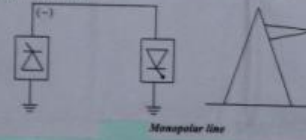
Communication link:

Certain information or data has to be continuously communicated between the two converter station for perfect operation. Thus a high speed communication link is required in between the two stations.

Types of HVDC links:

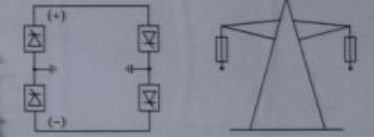
(i) Monopolar HVDC transmission:

The line has one energised conductor with the return path through the earth or sea. They are generally maintained at negative polarity with respect to ground. It may be noted that the earth has a much lower resistance to DC as compared to AC. These types of lines are called as monopolar.



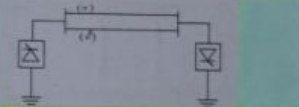
(ii) Bipolar HVDC transmission:

A bipolar transmission gives two circuits which are almost independent of each other.



(iii) Homopolar HVDC transmission:

Homopolar lines have two or more conductors having the same polarity, normally negative as the corona loss and radio interference are reduced, and they always operate with ground as return.



(iv) Back to Back DC link:

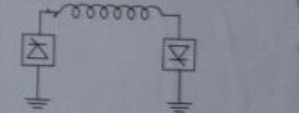


Fig.1.52

In Back-to-back dc link, where rectification and inversion is carried out in the same converter station with very small or no dc lines. This is basically used to control the power and stabilise different frequency system.

Advantages:

The main advantage of HVDC transmission over HVAC transmission are:

- These systems are economical for long distance bulk power transmission.
- There is greater power per conductor and simpler line construction.
- Ground return is possible.
- There is no charging current & skin effect.

Disadvantages:

- High cost of terminal equipments.
- Converters require considerable reactive power.
- Harmonics are generated which requires filters.
- Converters do not have overload capability.

Applications of HVDC:

The main areas of application based on the economics and technical performances are:

- Long - distance bulk power transmission
- Underground or submarine cables
- Asynchronous connection of AC system with different frequencies
- Control and stabilise the power system with power flow control.

PCE ACTIVITY - POSTER PRESENTATION - HVDC TRANSMISSION

Time Response of First Order System with Various inputs

First Order System:

The most general form of differential equation representing a first order system is

$$T \frac{dy(t)}{dt} + y(t) = K x(t)$$

Where $y(t)$ and $x(t)$ are state variables

T is the time constant of the system

K is the gain of the system

$x(t)$ is input and $y(t)$ is the output of the system

By taking Laplace transform on both the sides for above equation, we get

$$T s Y(s) + Y(s) = K X(s)$$

$$Y(s) \times (T s + 1) = K X(s)$$

$$\frac{Y(s)}{X(s)} = \frac{K}{(1 + sT)}$$

The above equation represent the transfer function of the first order system

Response of First Order System for Unit Step Input.

The closed loop transfer function of 1st order system,

$$\frac{C(s)}{R(s)} = \frac{1}{1 + sT}$$

If the input is unit step then, $r(t) = 1$ and $R(s) = \frac{1}{s}$

∴ The response in S -domain, $C(s) = R(s) \times \frac{1}{(1 + sT)}$

$$C(s) = \frac{1}{s} \times \frac{1}{(1 + sT)} = \frac{1}{s} \times \frac{1}{T} \times \frac{1}{(1/T + s)}$$

By partial fraction expansion,

$$C(s) = \frac{1}{s} \times \frac{1}{T} \times \frac{1}{(1/T + s)} = \frac{A}{s} + \frac{B}{(s + 1/T)}$$

A is obtained by Multiply $C(s)$ by s and letting $s = 0$

$$A = C(s) s \Big|_{s=0} = \frac{1}{T} \times \frac{1}{(1/T + s)} \Big|_{s=0} = \frac{1}{T} \times \frac{1}{1/T} = 1$$

$B \rightarrow$ Multiply $C(s)$ by $(s + 1/T)$, $s = -1/T$

$$B = C(s) \left(s + \frac{1}{T}\right) \Big|_{s=-1/T} = \frac{1}{s} \times \frac{1}{T} \times \left(s + \frac{1}{T}\right) \Big|_{s=-1/T} = \frac{1}{-1/T} \times \frac{1}{T} = -1$$

$$\therefore C(s) = \frac{1}{s} - \frac{1}{s + 1/T}$$

The response in time domain is given by,

$$C(t) = \mathcal{L}^{-1}\{C(s)\} = \mathcal{L}^{-1}\left\{\frac{1}{s} - \frac{1}{s + 1/T}\right\} = 1 - e^{-t/T}$$

Various forms of first order Transfer function

Gain - Time constant form

$$G(s) = \frac{K}{1 + sT}$$

Pole - Zero form

$$G(s) = \frac{K}{s + a}$$

Impulse Response of First Order System:

Let the transfer function of a first order system is

$$\frac{C(s)}{R(s)} = \frac{K}{1 + sT}$$

Let impulse input $r(t) = \delta(t)$, $R(s) = 1$

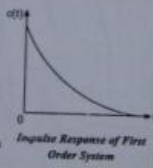
Then $C(s) = \frac{K}{1 + sT} = \frac{K}{T} \times \frac{1}{(1/T + s)}$ By taking inverse Laplace

Transform, we get $C(t) = \mathcal{L}^{-1}\left\{\frac{K}{T} \times \frac{1}{(1/T + s)}\right\}$

$$C(t) = \frac{K}{T} e^{-t/T}$$

At $t = 0$, $C(t) = \frac{K}{T}$ and $t = \infty$, $C(t) = 0$

∴ The output starts at $\frac{K}{T}$ at $t = 0$ and decreases exponentially and reaches to zero at $t = \infty$



Speed of Response:

The open loop gain K has an effect on the steady state value of the output and it has no effect on the speed of the response.

Let us consider three systems having same open loop gain with different time constants.

$$G_1(s) = \frac{5}{0.5s + 1}$$

$$G_2(s) = \frac{5}{2s + 1}$$

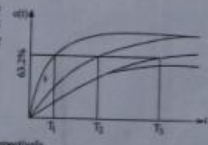
$$G_3(s) = \frac{5}{5s + 1}$$

The time constants of these systems are $T_1 = 0.5$, $T_2 = 2$ and $T_3 = 5$ respectively. The unit step responses of these systems are

$$C_1(t) = 5[1 - e^{-0.2t}] = 5[1 - e^{-t/5}]$$

$$C_2(t) = 5[1 - e^{-0.5t}] = 5[1 - e^{-t/2}]$$

$$C_3(t) = 5[1 - e^{-0.2t}] = 5[1 - e^{-t/5}]$$



Time response of first order system

The Laplace transform of first order differential equations (transfer function)

$$C(s) = \frac{K}{1 + sT} R(s)$$

Substituting input signal and taking inverse Laplace transform, we get

$$c(t) = \mathcal{L}^{-1}\{C(s)\} = \mathcal{L}^{-1}\left\{\left[\frac{K}{1 + sT}\right] R(s)\right\}$$

Unit Ramp Response of a First Order System:

The transfer function of a first order system is given by $\frac{C(s)}{R(s)} = \frac{K}{1 + sT}$

For a unit ramp input $r(t) = t$

By taking Laplace transform, we get $R(s) = \frac{1}{s^2}$

$$C(s) = R(s) \times \frac{K}{1 + sT}$$

$$C(s) = \frac{K}{s^2(1 + sT)} = \frac{K}{s^2} \times \frac{1}{(1 + sT)} = \frac{K}{s^2} \times \frac{A}{s} + \frac{B}{s^2} + \frac{C}{1 + sT}$$

$$\text{Where } A = \frac{d}{ds} \left[\frac{1}{s^2(1 + sT)} \right] \Big|_{s=0} = \frac{-T}{(1 + sT)^2} \Big|_{s=0} = -T$$

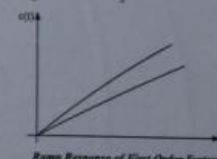
$$B = s^2 \times \frac{1}{s^2(1 + sT)} \Big|_{s=0} = 1$$

$$C = \left(s + \frac{1}{T} \right) \times \frac{1}{s^2(1 + sT)} \Big|_{s=-1/T} = \frac{1}{T} \times \frac{1}{\left(-\frac{1}{T} \right)^2} = T$$

$$\therefore C(s) = K \left[\frac{-T}{s} + \frac{1}{s^2} + \frac{T}{1 + sT} \right]$$

By taking inverse Laplace transform

$$C(t) = K \left[-T + t + T e^{-t/T} \right]$$



PCE ACTIVITY - POSTER PRESENTATION - CONTROL SYSTEMS



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DEPARTMENT OF Mechanical ENGINEERING

Professional Career Enhancement Activity





Kings College of Engineering
Department of mechanical engineering
PCE Activities for Heat and Mass Transfer

M:Subaneh ceoemr

MECHB

17 MEF

13/20

1.	Unit of thermal conductivity in M.K.S. units is (a) kcal/kg m ² °C (b) kcal-m/hr m ² °C (c) kcal/hr m ² °C (d) kcal-m/hr °C (e) kcal m/m ² °C.	b ✓
2.	Unit of thermal conductivity in S.I. units is (a) J/m ² sec (b) J/m °K sec (c) W/m °K (d) (a) and (c) above (e) (b) and (c) above.	✓
3.	Thermal conductivity of solid metals with rise in temperature normally (a) increases (b) decreases (c) remains constant (d) may increase or decrease depending on temperature (e) unpredictable.	b ✓
4.	Which of the following is the case of heat transfer by radiation (a) blast furnace (b) heating of building (c) cooling of parts in furnace (d) heat received by a person from fireplace (e) all of the above.	d ✓
5.	Heat transfer takes place as per - (a) zeroth law of thermodynamics (b) first law of thermodynamic (c) second law of the thermodynamics (d) Kirchoff's law (e) Stefan's law.	c ✓
6.	When heat is transferred from one particle of hot body to another by actual motion of the heated particles, it is referred to as heat transfer by (a) conduction (b) convection (c) radiation (d) conduction and convection (e) convection and radiation.	d ✓
7.	When heat is transferred from hot body to cold body, in a straight line, without affecting the intervening medium, it is referred as heat transfer by (a) conduction (b) convection (c) radiation	d ✓

	(d) conduction and convection (e) convection and radiation.	
8.	Sensible heat is the heat required to (a) change vapour into liquid (b) change liquid into vapour (c) increase the temperature of a liquid or vapour (d) convert water into steam and superheat it (e) convert saturated steam into dry steam.	c
9.	The insulation ability of an insulator with the presence of moisture would (a) increase (b) decrease (c) remain unaffected (d) may increase/decrease depending on temperature and thickness of insulation (e) none of the above.	b
10.	When heat is Transferred by molecular collision, it is referred to as heat transfer by (a) conduction (b) convection (c) radiation (e) scattering (f) convection and radiation.	b
11.	Heat transfer in liquid and gases takes place by (a) conduction (b) convection (c) radiation (d) conduction and convection (e) convection and radiation.	b
12.	Heat is closely related with (a) liquids (b) energy (c) temperature (d) entropy (e) enthalpy.	c
13.	Metals are good conductors of heat because (a) their atoms collide frequently (b) their atoms are relatively far apart (c) they contain free electrons (d) they have high density (e) all of the above.	a
14.	Total heat is the heat required to (a) change vapour into liquid (b) change liquid into vapour (c) increase the temperature of a liquid or vapour (d) convert water into steam and superheat it	a

15.	Cork is a good insulator because it has (a) free electrons (b) atoms colliding frequency (c) low density (d) porous body	b f
16.	Pick up the wrong case. Heat flowing from one side to other depends directly on (a) face area (b) time (c) thickness (d) temperature difference	c f
17.	Thermal conductivity of water in general with rise in temperature (a) increases (b) decreases (c) remains constant (d) may increase or decrease depending on temperature	d f
18.	Thermal conductivity of water at 20°C is of the order of (a) 0.1 (b) 0.23 (c) 0.42 (d) 0.51 (e) 0.64.	d ✓
19	Temperature of steam at around 540°C can be measured by (a) thermometer (b) radioactivity pyrometer (c) thermistor (d) thermocouple	a ✓
20	The time constant of a thermocouple is (a) the time taken to attain the final temperature to be measured (b) the time taken to attain 50% of the value of initial temperature difference (c) the time taken to attain 63.2% of the value of initial temperature difference (d) determined by the time taken to reach 100°C from 0°C	c ✓

PCE - ACTIVITY – TECHNICAL QUIZ FOR HEAT AND MASS TRANSFER

FEA EVEN 201920

1. In weighted residual technique, the methods adopted are

(1 point)

- ☒ complex elements
☐ compound element
☐ linear element
☐ none

2. FEM also operates the parameters like

(1 point)

- ☐ Heat transfer
☐ Temperature
☐ both heat and temperature
☒ none

3. On gathering stiffness and loads, the system of equations is given by

(1 point)

- ☒ $KQ=F$
☐ $KQ \neq F$
☐ $K=QF$
☐ $K \neq QF$

4. Number of displacement polynomials used for an element depends on

(1 point)

- ☐ Nature of element
☐ type of an element
☐ degrees of freedom
☒ nodes

5. A six noded triangular element is known as

(1 point)

- ☐ linear strain triangular element
☒ constant strain triangular element
☐ variable strain triangular element

☐ differable strain triangular element

6. In weighted residual technique, the methods adopted are

(1 point)

- ☐ point collocation method
☐ least squares method
☐ galerkin's method
☒ all

7. Range of poisson's ratio for metals is

(1 point)

- ☐ 0.25-0.33
☐ 0.22-0.45
☐ 0.22-0.25
☒ 0.25-0.50

8. The eight node quadrilateral element belongs to Family of elements

(1 point)

- ☒ Serendipity
☐ interdipity
☐ sardipity
☐ none

9. A triangular plane stress element has degree's of freedom

(1 point)

- ☐ 5
☐ 8
☒ 6
☐ 3

10. The art of subdividing a structure into a convenient number of smaller components is called

(1 point)

- ☒ discretization
☐ numbering of nodes
☐ continuum
☐ both a & b

SN	Name	Perce nt	Points Earned	Points Possible	A tri	Nun	FEM	Ran	In w	In w	The	On g	A six	art
1	ABBAS MOHAMED S	100	10	10	1	1	1	1	1	1	1	1	1	1
2	ABDUL SHIMAK J	100	10	10	1	1	1	1	1	1	1	1	1	1
3	ABISHEK S	100	10	10	1	1	1	1	1	1	1	1	1	1
4	AJITHKUMAR K	90	9	10	1	1	1	1	1	1	1	1	1	0
5	AJITHKUMAR K	90	9	10	1	1	1	1	0	1	1	1	1	1
6	ALAGESAN K	100	10	10	1	1	1	1	1	1	1	1	1	1
7	ANNAMALAI K	100	10	10	1	1	1	1	1	1	1	1	1	1
8	ARAVIND SAMY R	100	10	10	1	1	1	1	1	1	1	1	1	1
9	ARJUN KUMAR R	100	10	10	1	1	1	1	1	1	1	1	1	1
10	AUGUSTINE ALBERT J	100	10	10	1	1	1	1	1	1	1	1	1	1
11	BALA MURUGAN M	100	10	10	1	1	1	1	1	1	1	1	1	1
12	BHARATH M	100	10	10	1	1	1	1	1	1	1	1	1	1
13	DHIVAKARAN K	100	10	10	1	1	1	1	1	1	1	1	1	1
14	DINESH E	90	9	10	1	1	0	1	1	1	1	1	1	1
15	ENOCH EBENEZER P	100	10	10	1	1	1	1	1	1	1	1	1	1
16	HARIHARAN R	100	10	10	1	1	1	1	1	1	1	1	1	1
17	HARIHARAN V	100	10	10	1	1	1	1	1	1	1	1	1	1
18	INFANT RAJA R	100	10	10	1	1	1	1	1	1	1	1	1	1
19	JEROME NICHOLAS A	100	10	10	1	1	1	1	1	1	1	1	1	1
20	KABILAN S	100	10	10	1	1	1	1	1	1	1	1	1	1
21	KANNAN K	100	10	10	1	1	1	1	1	1	1	1	1	1
22	KARAN K	100	10	10	1	1	1	1	1	1	1	1	1	1
23	KARTHICK M 24	100	10	10	1	1	1	1	1	1	1	1	1	1
24	KATHIRAVAN R	100	10	10	1	1	1	1	1	1	1	1	1	1
25	KAVIYARASAN N	100	10	10	1	1	1	1	1	1	1	1	1	1
26	KAVIYARASU P	90	9	10	1	1	1	1	1	1	1	1	0	1
27	KEERTHIVASAN K	90	9	10	1	1	1	1	1	1	1	1	0	1
28	KRISHNA S	90	9	10	1	1	1	1	1	1	0	1	1	1
29	MADHESH D	90	9	10	1	1	0	1	1	1	1	1	1	1
30	MAHESWARAN C	90	9	10	1	1	1	0	1	1	1	1	1	1
31	MANIMARAN G	90	9	10	1	0	1	1	1	1	1	1	1	1
32	MANIMARAN S	90	9	10	1	0	1	1	1	1	1	1	1	1
33	MOHAMED YASIN SHARIF R	100	10	10	1	1	1	1	1	1	1	1	1	1
34	MUKILAN R	90	9	10	1	1	1	1	0	1	1	1	1	1
35	MURUGESAN A	90	9	10	0	1	1	1	1	1	1	1	1	1
36	MUTHU MANIKANDAN J	90	9	10	1	1	1	1	1	1	1	0	1	1
37	MUTHU S	90	9	10	0	1	1	1	1	1	1	1	1	1
38	PRAGATHESH R	90	9	10	1	1	0	1	1	1	1	1	1	1
39	PRAKASH B	90	9	10	1	1	1	1	1	1	1	1	0	1
40	PRAKASH M	90	9	10	1	0	1	1	1	1	1	1	1	1
41	PRASANTH M	90	9	10	0	1	1	1	1	1	1	1	1	1
42	PREMKUMAR K	90	9	10	1	1	1	1	1	0	1	1	1	1
43	RAGHUDEVAN P	90	9	10	1	1	1	1	0	1	1	1	1	1
44	RAGHUL T	100	10	10	1	1	1	1	1	1	1	1	1	1
45	RAJA RAJESWARAN B	90	9	10	1	1	0	1	1	1	1	1	1	1
46	RENGARAJAN N	90	9	10	1	0	1	1	1	1	1	1	1	1
47	RUBAN S	90	9	10	1	1	1	1	1	1	1	0	1	1
48	SANTHOSH SHIVAN	90	9	10	1	0	1	1	1	1	1	1	1	1
49	SANTHOSHKUMAR N	90	9	10	1	1	1	1	1	1	0	1	1	1
50	SARATHKUMAR M	90	9	10	1	1	0	1	1	1	1	1	1	1
51	SATHYAMOORTHY M	100	10	10	1	1	1	1	1	1	1	1	1	1
52	SENTHAMILPRIYAN BD	90	9	10	1	1	1	1	1	1	1	0	1	1
53	SENTHAMIZSUDAR K	90	9	10	1	1	1	1	1	0	1	1	1	1

54	SENTHIL R	90	9	10	1	1	1	1	0	1	1	1	1	1
55	SHRIRAM SUNDAR K	90	9	10	1	0	1	1	1	1	1	1	1	1
56	SIVA S	90	9	10	1	1	1	0	1	1	1	1	1	1
57	SRIHARAN R	90	9	10	1	1	1	1	1	1	0	1	1	1
58	SUBANESHWARAN M	90	9	10	1	1	1	1	1	1	1	0	1	1
59	SURIYA A	80	8	10	1	1	1	0	1	1	1	1	0	1
60	SUTHARSAN P	90	9	10	1	1	0	1	1	1	1	1	1	1
61	THIRUPUGAZH D	100	10	10	1	1	1	1	1	1	1	1	1	1
62	VENKATESH M	90	9	10	1	1	1	1	1	1	1	0	1	1
63	VENKATESWARAN M	100	10	10	1	1	1	1	1	1	1	1	1	1
64	VIJAYCHANDRU J	90	9	10	1	1	1	1	1	1	1	1	1	0
65	VISHNU S	90	9	10	1	1	1	1	1	0	1	1	1	1
66	WILBER JUDSON RL	90	9	10	1	1	1	1	1	1	0	1	1	1

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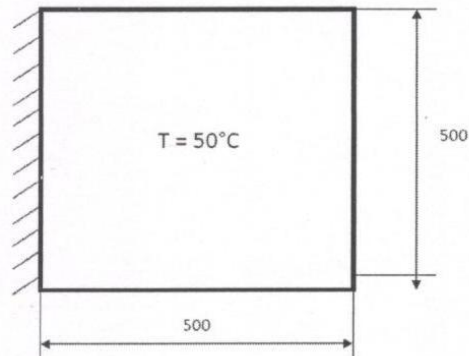
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DEPARTMENT OF MECHANICAL ENGINEERING

PCE for AT-II / ME8692 - FEA / III Mech-A / Even 2019-20 / 10.02.20 to 20.02.20

Perform thermal stress analysis of a 2D component by using ANSYS software.



Young's modulus *	=	200 GPa
Poisson's Ratio	=	0.3
Thermal expansion coefficient	=	12×10^{-6}

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DAL SOLUTION

EP=1

B =1

ME=1

JM (AVG)

YS=0

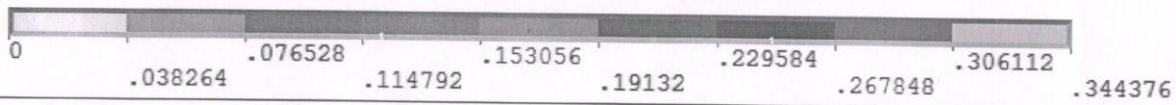
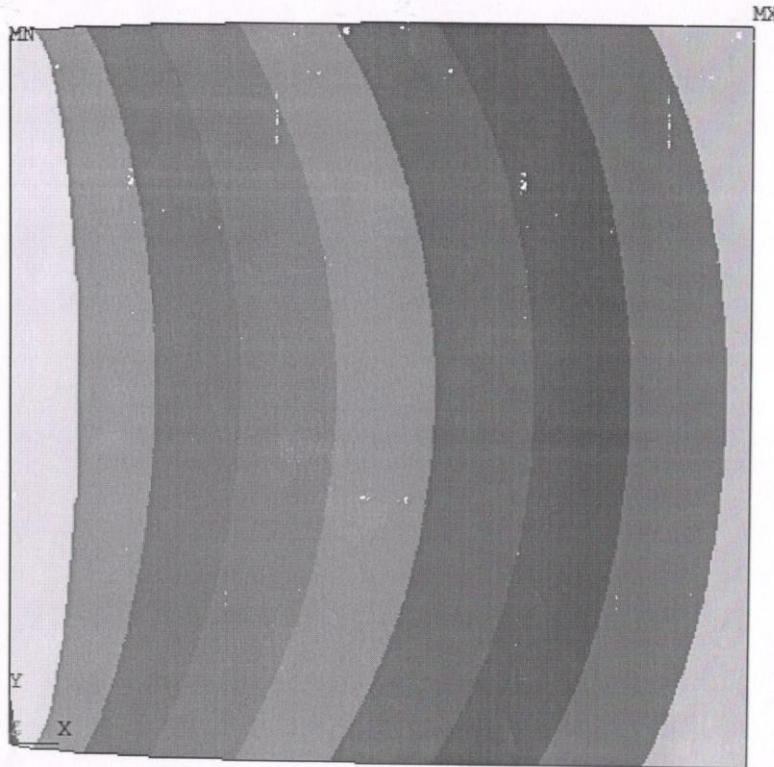
$\epsilon = .344376$

$\epsilon = .344376$

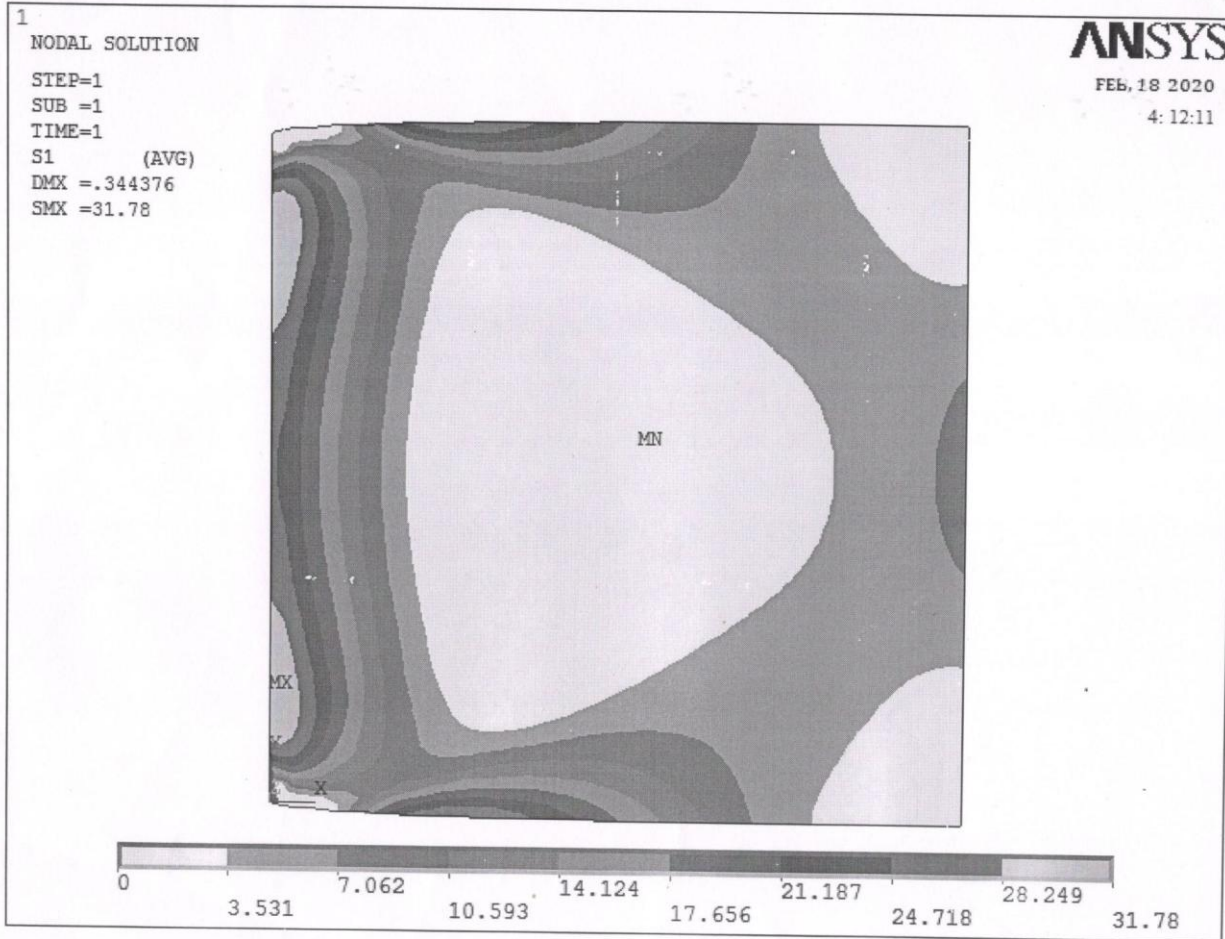
ANSYS

FEB, 18 2020

4: 12:11



S-Infant Regia
17mE15
Wmecu'n



A. Jerome
Nicholas
111 'mech-n'
(7mE)7

PCE - ACTIVITY - SIMULATION

Gate Questions

1) Which program location is allocated to the program counter by the reset function in Power-on-Reset (POR) action modes?

- a. Initial address
- b. Middle address
- c. Final address
- d. At any address reliable for reset operations

2) When does it become very essential to use the external RC components for the reset circuits?

- a. Only if initialization is necessary for RAM locations
- b. Only if V_{DD} power-up slope is insufficient at a requisite level
- c. Only if voltage drop exceeds beyond the limit
- d. Only if current limiting factor increases rapidly

3) Which among the below mentioned PICs do not support the Brown-Out-Reset (BOR) feature?

- a. PIC 16C66
- b. PIC 16C74
- c. PIC 16C61
- d. PIC 16C71

- a. A & B
- b. C & D
- c. A & C
- d. B & D

4) Which crucial feature/function of Brown-Out-Reset (BOR) makes the PIC to be completely unique and distinct from other microcontrollers?

- a. It can reset the PIC automatically in running condition
- b. It can reset the PIC even when the supply voltage increases above 4V
- c. It can reset the PIC without enabling the power-up timer
- d. All of the above

5) What happens when the supply voltage falls below 4V during the power-up timer delay of 72ms in PIC?

- a. CPU resets PIC once again in BOR mode
- b. BOR reset mode gets disabled
- c. PIC does not remain in BOR mode until the voltage increases irrespective of stability
- d. Power-up timer kills 72ms more again

6) What output is generated by OSC2 pin in PIC oscillator comprising RC components for synchronizing the peripherals with PIC microcontroller?

- a. $(1/2) \times$ frequency of OSC1
- b. $(1/4) \times$ frequency of OSC1
- c. $(1/8) \times$ frequency of OSC1
- d. $(1/16) \times$ frequency of OSC1

7) Which form of clocking mechanism is highly efficient and reliable for crystal or ceramic clock sources for operating at the range of 5- 200 kHz in PIC?

- a. RC
- ☒ b. LP (Low-Power Clocking)
- c. XT
- d. HS (High Speed)

8) Which significant feature/s of crystal source contribute/s to its maximum predilection and utility as compared to other clock sources?

- a. High accuracy
- b. Proficiency in time generation
- c. Applicability in real-time operations
- ☒ d. All of the above

9) What is the executable frequency range of High speed (HS) clocking method by using crystal/ceramic/ resonator or any other external clock source?

- a. 0-4 MHz
- b. 5-200 KHz
- c. 100kHz- 4 MHz
- ☒ d. 4-20 MHz

10) How many bits are required for addressing 2K & 4K program memories of PIC 16C61 respectively?

- a. 4 & 8 bits
- b. 8 & 16 bits
- c. 11 & 12 bits
- ☒ d. 12 & 16 bits

11) What location is attributed to 'goto Mainline' instruction in the program memory of PIC 16C61?

- ☒ a. 000H
- b. 004H
- c. 001H
- d. 011H

12) When do the special address 004H get automatically loaded into the program counter?

- a. After the execution of RESET action in program counter
- b. After the execution of 'goto Mainline' instruction in the program memory
- ☒ c. At the occurrence of interrupt into the program counter
- d. At the clearance of program counter with no value

13) How many bits are utilized by the instruction of direct addressing mode in order to address the register files in PIC?

- a. 2
- b. 5
- ☒ c. 7
- d. 8

14) Which registers are adopted by CPU and peripheral modules so as to control and handle the operation of device inhibited in RFS?

- a. General Purpose Register
- b. Special Purpose Register

- ☒ c. Special Function Registers
d. All of the above

15) Which among the below specified registers are addressable only from bank1 of RFS?

- ☒ a. PORTA (05H)
b. PORTB (06H)
c. FSR (04H)
d. ADCON0 (07H)

16) Which register acts as an input-output control as well as data direction register for PORTA in bank 2 of RFS?

- a. INDF (80H)
b. TRISB (85H)
☒ c. TRISA (85H)
d. PCLATH (8A)

17) Which bank of RFS has a provision of addressing the status register?

- a. Only Bank 1
b. Only Bank 2
☒ c. Either Bank 1 or Bank 2
d. Neither Bank 1 nor Bank 2

18) Which bit of OPTION register has a potential to decide the falling or rising edge sensitivity for the external interrupt INT?

- a. RBPU
☒ b. INTEDG
c. PSA
d. RTS

19) Where are the prescaler assignments applied with a usage of PSA bit?

- a. Only RTCC
b. Only Watchdog timer
☒ c. Either RTCC or Watchdog timer
d. Neither RTCC nor Watchdog timer

20) Where is the exact specified location of an interrupt flag associated with analog-to-digital converter?

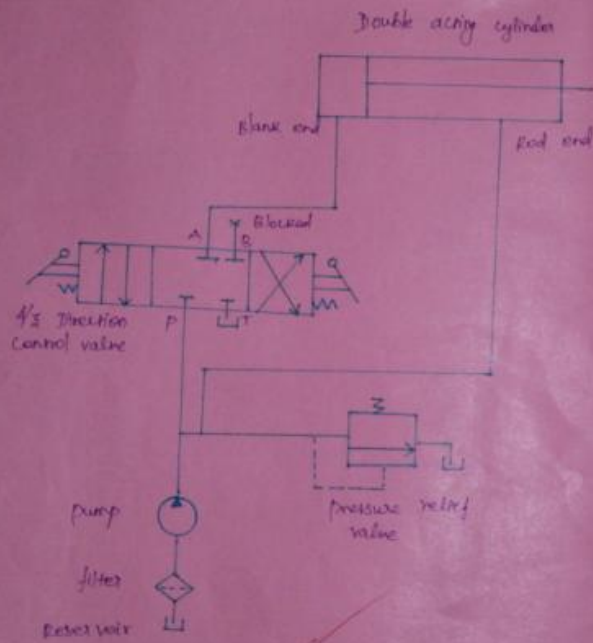
- ☒ a. INTCON
☒ b. ADCON0
c. ADRES
d. PCLATH

19
20

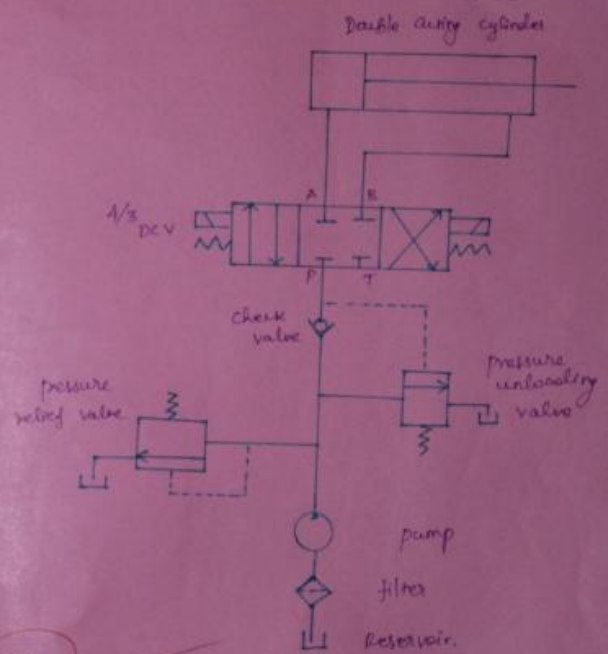
21.08

PCE - ACTIVITY -GATE QUESTIONS

REGENERATIVE CIRCUIT:-



PUMP UNLOADING CIRCUIT:-



10

PCE - ACTIVITY - POSTER PRESENTATION



A NAAC Accredited Institution
KINGS
COLLEGE OF ENGINEERING
Recognized under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai



DEPARTMENT OF SCIENCE AND HUMANITIES

PCE ACTIVITY



Quiz Questions

1. Write the Newton's backward difference formula

(a) $y = y_n + p \nabla y_n + \frac{p(p+1)}{2} \nabla^2 y_n$ (b) $y = y_n - \nabla y_n + \frac{(p+1)}{2} \nabla^2 y_n$ (c) $y = y_n + p \nabla y_n + p(p-1)$

2. Find the sixth term in the sequence Newton's forward difference

(a) $(1+\Delta)^5 y_0$ (b) $(1-\Delta)^5 y_0$ (c) $(1+\Delta)^5$

3. Write the Newton's forward difference formula

(a) $P_n(x) = 1 + \frac{x}{1} \Delta y_0 + \frac{x(x-1)}{2} \Delta^2 y_0 + \frac{x(x-1)(x-2)}{3} \Delta^3 y_0 + \dots$ (b) $P_n(x) = 1 + \frac{x}{1} \Delta y_0 + \frac{x(x-1)}{2} \Delta^2 y_0 + \frac{x(x-1)(x-2)}{3} \Delta^3 y_0 + \dots$

(c) $P_n(x) = 1 + \frac{x}{1} \Delta y_0 + \frac{x(x-1)}{2} \Delta^2 y_0 + \frac{x(x+1)(x+2)}{3} \Delta^3 y_0 + \dots$

4. Write the Trapezoidal rule.

(a) $\int_a^b f(x) dx = \frac{h}{2} [(y_0 + y_4) + 2(y_1 + y_2 + y_3)]$ (b) $\int_a^b f(x) dx = \frac{h}{2} [(y_0 + y_4) + 2(y_1 + y_2 + y_3)]$

(c) $\int_a^b f(x) dx = \frac{h}{2} [(y_0 + y_4) + (y_1 + y_2 + y_3)]$

5. State Simpson's 1/3 rule formula

(a) $\int_a^b y dx = \frac{h}{3} [(y_0 + y_n) + 4(y_1 + y_3 + \dots + y_{n-1}) + 2(y_2 + y_4 + \dots + y_{n-2})]$

(b) $\int_a^b y dx = \frac{h}{3} [(y_0 + y_n) + (y_1 + y_3 + \dots + y_{n-1}) + (y_2 + y_4 + \dots + y_{n-2})]$

(c) $\int_a^b y dx = \frac{h}{3} [(y_0 + y_n) + 4(y_1 + y_3 + \dots + y_{n-1}) + 2(y_2 + y_4 + \dots + y_{n-2})]$

6. What is the order of error in Simpson's formula?

(a) h^1 (b) h^3 (c) h^2

7. What is the error term in Trapezoidal formula?

(a) $E = \frac{(b-a)h^2}{12} y''(\xi)$ (b) $E = \frac{(b-a)h^2}{12} y'(\xi)$ (c) $E = \frac{(b-a)h^2}{12} y''(\xi)$

8. What is the error term in Simpson's rule?

(a) $E = \frac{-h^4}{180} (b-a)$ (b) $E = \frac{-h^4}{180} (b-a)$ (c) $E = \frac{-h^4}{180} (b-a)$

9. In the Newton's Backward difference formula what is v ...

(a) $v = \frac{x-x_n}{h}$ (b) $v = x - x_n$ (c) $v = \frac{(x-x_n)^2}{h}$

10. In Trapezoidal Rule number of intervals may be _____


(a) Odd only (b) even or odd (c) Even only

11. In Simpson's 1/3 rule number of intervals is _____

(a) Odd only (b) even or odd (c) Even only

12. Trapezoidal Rule Principal part of the error in the interval $(x_1, x_2) =$
 (a) $-\frac{h^2}{12} y_1''$ (b) $\frac{h^2}{12} y_1''$ (c) $-\frac{h^2}{12}$
13. Simpson's 1/3 rule Principal part of the error in the interval $(x_1, x_2) =$
 (a) $\frac{h^5}{90} y_1^{iv}$ (b) $-\frac{h^5}{90}$ (c) $-\frac{h^5}{90} y_1^{iv}$
14. In the second derivative using Newton's Backward difference formula, what is the coefficient of $\nabla^3 f(a)$
 (a) $-\frac{1}{h^2}$ (b) $\frac{1}{h^2}$ (c) $\frac{11}{12}$
15. In the second derivative using Newton's Forward difference formula, what is the coefficient of $\Delta^4 f(a)$
 (a) $\frac{1}{2}$ (b) $\frac{11}{2h}$ (c) $\frac{11}{12h^2}$
16. In the third derivative using Newton's Forward difference formula, what is the coefficient of $\Delta^3 f(a)$
 (a) $\frac{1}{2}$ (b) $\frac{1}{h^3}$ (c) $\frac{11}{12h^2}$
17. The highest order of polynomial integrand for which Simpson's 1/3 rule of integration is exact is
 (a) first (b) second (c) third
18. The value of $\int_{0.2}^{2.2} e^x dx$ by using 2-segment Simpson's 1/3 rule most nearly is
 (a) 7.8036 (b) 7.8423 (c) 8.4433
19. The value of $\int_{0.2}^{2.2} e^x dx$ by using 4-segment Simpson's 1/3 rule most nearly is
 (a) 7.8036 (b) 7.8062 (c) 7.8423
20. Newton-Cote's quadrature formula becomes Trapezoidal when n is
 (a) 1 (b) 2 (c) 3


 Staff Incharge


 Coordinator/Mathematics

PCE ACTIVITY - QUIZ COMPETITION

INDEX

D.S.K.
IEEE

Name: K. KARTHIKEYAN

Std.:

Sec

Roll No.:

08

School:

Subject: MA8491 - NUMERICAL METHODS [HOME WORK NOTE]

S.No.	Date	Title	Marks	Teacher Sign / Remark
1.	06-01-2020	FIXED ITERATION METHOD	10	
2.	20-01-2020	GAUSS ELIMINATION	10	
3.	22-01-2020	GAUSS JACOBI	10	
4.	23-01-2020	GAUSS JACOBIAN	10	
5.	24-01-2020	GAUSS SEADAL	10	
6.	25-01-2020	POWER METHOD	10	
7.	04-02-2020	NEWTON'S FORWARD DIFFERENCE FORMULA	10	
8.	06-02-2020	NEWTON'S FORWARD DIFFERENCE FORMULA.	10	
9.	07-02-2020	ROMBERG'S METHOD.	10	
10.	13/02/2020	RUNGE-KUTTA METHOD	10	
11.	14/02/2020	RUNGE-KUTTA METHOD	10	

06-01-2020

1-

Find a positive root $3x - \log_{10} x = 6$ using fixed iteration method.

$$f(x) = 3x - \log_{10} x - 6$$

$$f(1) = -8 = -ve$$

$$f(2) = -0.30 = -ve$$

$$f(3) = 2.52 = +ve$$

The root lies between 2 & 3.

$$3x - \log_{10} x - 6 = 0$$

$$3x = \log_{10} x + 6$$

$$x = \frac{1}{3} [\log_{10} x + 6] = \phi(x)$$

$$\phi'(x) = \frac{1}{3} \left[\frac{1}{x} \log_{10} e \right]$$

$$\phi'(1) = 0.072 < 1$$

$$\phi'(2) = 0.048 < 1$$

Choose $x_0 = 2$

$$\phi(2) = \frac{1}{3} [\log_{10} 2 + 6] = 2.100$$

$$\phi(2.100) = \frac{1}{3} [\log_{10} 2.100 + 6] = 2.107$$

$$\phi(2.107) = \frac{1}{3} [\log_{10} 2.107 + 6] = 2.108$$

$$\phi(2.108) = \frac{1}{3} [\log_{10} 2.108 + 6] = 2.108.$$



The root is 2.108.

$$= 12.95 - 35.28 - 4.029$$

$$x = \frac{44805.383}{3.15}$$

$$x = 1.709 \quad (x, y, z) = (1.709, -1.800, 1.049)$$

3. solve by Gauss Jacobi

22/01/2020

$$3x + 4y + 5z = 18$$

$$2x - y + 8z = 13$$

$$5x - 2y + 7z = 20$$

$$AB = \begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 2 & -1 & 8 & | & 13 \\ 5 & -2 & 7 & | & 20 \end{bmatrix}$$

$$\begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 0 & -11 & 14 & | & 3 \\ 0 & -28 & -4 & | & -30 \end{bmatrix} \begin{array}{l} R_2 \Rightarrow 3R_2 - 2R_1 \\ R_3 \Rightarrow 3R_3 - 5R_1 \end{array}$$

$$= \begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 0 & -11 & 14 & | & 3 \\ 0 & 0 & 1 & | & 1 \end{bmatrix} \begin{array}{l} R_3 \Rightarrow -11R_3 + 28R_2 \end{array}$$

$$= \begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 0 & -11 & 14 & | & 3 \\ 0 & 0 & 1 & | & 1 \end{bmatrix}$$

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$$= \begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 0 & -11 & 14 & | & 3 \\ 0 & 0 & 1 & | & 1 \end{bmatrix} \begin{array}{l} R_3 \Rightarrow -11R_3 + 26R_2 \end{array}$$

$$= \begin{bmatrix} 3 & 4 & 5 & | & 18 \\ 0 & -11 & 14 & | & 3 \\ 0 & 0 & 1 & | & 1 \end{bmatrix}$$

$$= \begin{bmatrix} 3 & 4 & 0 & | & 13 \\ 0 & 1 & 0 & | & 1 \\ 0 & 0 & 1 & | & 1 \end{bmatrix} \begin{array}{l} R_1 \Rightarrow R_1 - 5R_3 \\ R_2 \Rightarrow R_2 - 4R_3 \end{array}$$

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22/01/2020

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22/01/2020

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$$= \begin{bmatrix} 3 & 4 & 0 & | & 13 \\ 0 & 1 & 0 & | & 1 \\ 0 & 0 & 1 & | & 1 \end{bmatrix} \begin{array}{l} R_1 \Rightarrow R_1 - 5R_3 \\ R_2 \Rightarrow R_2 - 4R_3 \end{array}$$

PCE ACTIVITY - HOMEWORK PROBLEMS

MA8151-ENGINEERING MATHEMATICS - 01

NAME: P. Susha

Roll No: 202127

PCE ACTIVITY - 01.

JACOBIANS.

$$\begin{vmatrix} \frac{\partial u_1}{\partial x_1} & \frac{\partial u_1}{\partial x_2} & \dots & \frac{\partial u_1}{\partial x_n} \\ \frac{\partial u_2}{\partial x_1} & \frac{\partial u_2}{\partial x_2} & \dots & \frac{\partial u_2}{\partial x_n} \\ \dots & \dots & \dots & \dots \\ \frac{\partial u_m}{\partial x_1} & \frac{\partial u_m}{\partial x_2} & \dots & \frac{\partial u_m}{\partial x_n} \end{vmatrix}$$

$$\frac{\partial(u_1, u_2, u_3, \dots, u_m)}{\partial(x_1, x_2, x_3, \dots, x_n)} \text{ or } J(u_1, u_2, u_3, \dots, u_m)$$

$$\frac{\partial(u_1, u_2)}{\partial(x_1, x_2)} = \begin{vmatrix} \frac{\partial u_1}{\partial x_1} & \frac{\partial u_1}{\partial x_2} \\ \frac{\partial u_2}{\partial x_1} & \frac{\partial u_2}{\partial x_2} \end{vmatrix}$$

$$\frac{\partial(u_1, u_2, u_3)}{\partial(x_1, x_2, x_3)} = \begin{vmatrix} \frac{\partial u_1}{\partial x_1} & \frac{\partial u_1}{\partial x_2} & \frac{\partial u_1}{\partial x_3} \\ \frac{\partial u_2}{\partial x_1} & \frac{\partial u_2}{\partial x_2} & \frac{\partial u_2}{\partial x_3} \\ \frac{\partial u_3}{\partial x_1} & \frac{\partial u_3}{\partial x_2} & \frac{\partial u_3}{\partial x_3} \end{vmatrix}$$

TAYLORS THEOREM.

$$f(x, y) = f(a, b) + \left[h f_x(a, b) + k f_y(a, b) \right] \frac{1}{1!} + \frac{1}{2!} \left[h^2 f_{xx}(a, b) + 2hk f_{xy}(a, b) + k^2 f_{yy}(a, b) \right] + \frac{1}{3!} \left[h^3 f_{xxx}(a, b) + 3h^2k f_{xxy}(a, b) + 3hk^2 f_{xyy}(a, b) + k^3 f_{yyy}(a, b) \right] + \dots$$

Where $h = x - a$ $k = y - b$

NOTE:

put $a = 0, b = 0$ in the above formula.
 $f(x, y) = f(0, 0) + \frac{1}{1!} [x f_x(0, 0) + y f_y(0, 0)] + \frac{1}{2!} [x^2 f_{xx}(0, 0) + 2xy f_{xy}(0, 0) + y^2 f_{yy}(0, 0)] + \dots$
 is known as Maclaurin's series for two variables.

LAGRANGIAN MULTIPLIER.

$$F(x, y, z) = f(x, y, z) + \lambda g(x, y, z)$$

$\lambda \rightarrow$ Lagrange Multiplier

$$\frac{\partial F}{\partial x} = 0, \frac{\partial F}{\partial y} = 0, \frac{\partial F}{\partial z} = 0$$

MAXIMA & MINIMA

FUNCTION TO VARIABLES.

If $f_x(a, b) = 0, f_y(a, b) = 0$ and $f_{xx}(a, b) = A, f_{xy}(a, b) = B, f_{yy}(a, b) = C$ then

$f(a, b)$ is maximum value if $AC - B^2 > 0$ and $A < 0$ (or) $B < 0$

$f(a, b)$ is minimum value if $AC - B^2 > 0$ and $A > 0$ (or) $B > 0$

$f(a, b)$ is not an extremum if $AC - B^2 < 0$ and

If $AC - B^2 = 0$, the test is inconclusive.

NOTE: If $AC - B^2 > 0$ then $A \neq 0, C \neq 0$.

INTEGRAL.

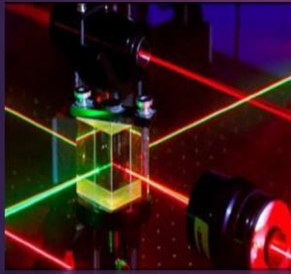
$$\int_a^b f(x) dx = \int_a^b f(t) dt$$

PROPERTIES OF DEFINITE INTEGRAL:

- $\int_a^b c dx = c[b - a]$, where c is any constant
- $\int_a^b [f(x) + g(x)] dx = \int_a^b f(x) dx + \int_a^b g(x) dx$
- $\int_a^b c f(x) dx = c \int_a^b f(x) dx$
- $\int_a^b [f(x) - g(x)] dx = \int_a^b f(x) dx - \int_a^b g(x) dx$
- $\int_a^b f(x) dx + \int_b^c f(x) dx = \int_a^c f(x) dx$

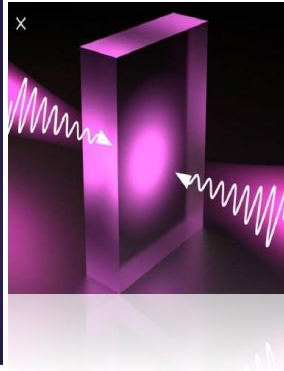
PCE ACTIVITY - POSTER PRESENTATION

Classification of Optical Materials



ANUSUYA V
20EC05

Classification

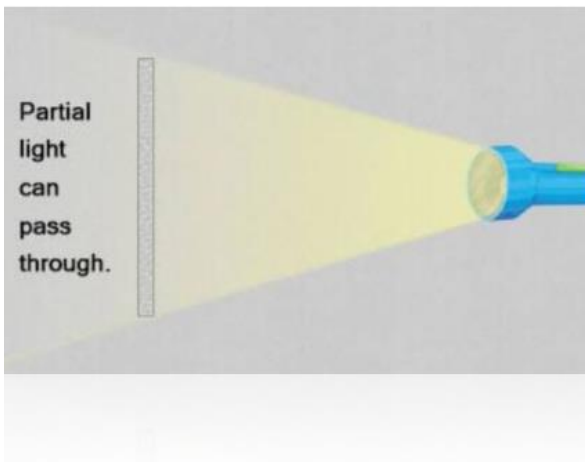


Transparent Materials

- When light passes straight through a material, that material is transparent.
- Transparent materials you can see completely through.



Translucent Material



Translucent Materials



- Translucent materials scatter light as it passes through them.
- You cannot see through translucent materials, but light will pass through them.

Opaque Material



Opaque Materials

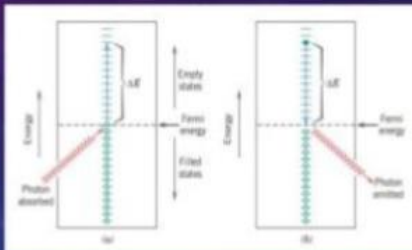
- Opaque materials do not allow any light to pass through them.
- All light that comes into contact with an opaque material is either reflected or absorbed.
- Opaque materials make a show when you shine light on them.



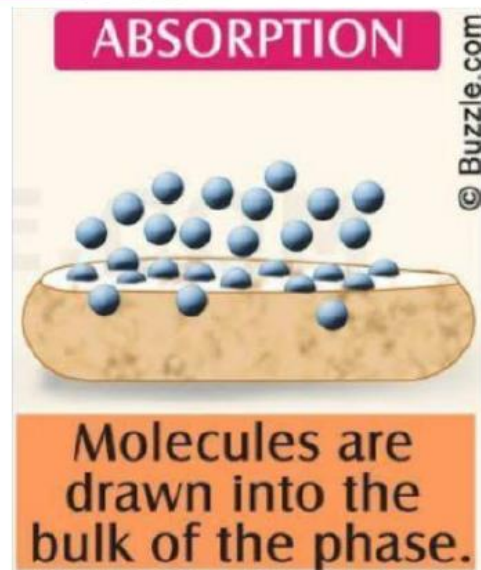
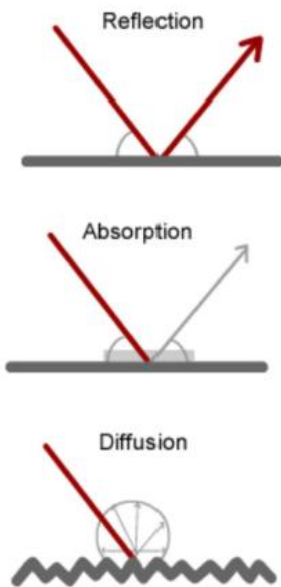
Optical Properties Of Metals

OPTICAL PROPERTIES OF METALS

- There are opaque to visible light due to crystallinity but are transparent to high frequency radiations (x-rays & gamma radiations)
- The incident radiation having frequencies within the visible range excites electrons into unoccupied energy states above the fermi energy
- All frequencies of visible light are absorbed by metals because of the continuously available empty electron states, which permit electron transitions.
- Absorption take place in a very thin outer layer, usually less than $0.1 \mu\text{m}$; thus only metallic films thinner than $0.1 \mu\text{m}$ are capable of transmitting visible light.



Absorption



Optical Properties Of Non – metals

OPTICAL PROPERTIES OF NONMETALS

- Non-metallic materials consist of various energy band structures. Thus, all four optical phenomena are important.
- They may be transparent, translucent or opaque
- Examples are glass, plastics and semiconductors.

Applications



Luminescence



Lasers



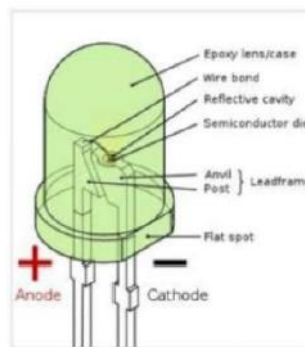
Optical fibre

Light Emitting Diode – LED



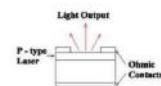
What is an LED?

- ◆ LED - Light Emitting Diode
- ◆ A semiconductor component similar to a transistor or an integrated circuit
- ◆ Electrical current through the semiconductor chip produces light
- ◆ Semiconductor materials used define the color of light produced



Esspinc.com

Planar LED



Advantages & Disadvantages



- Shift color due to age and temperature
- Must be supplied with the correct voltage and current at a constant flow
- Restricted by the technology
- Maybe more expensive than incandescent lights

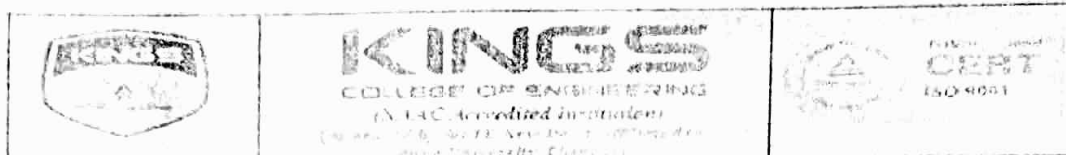


PCE ACTIVITY - POWERPOINT

Department of Science and Humanities

2.3.1-PROBLEM SOLVING- Maths Tutorial sample





DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2017-18 / EVEN SEMESTER

STUDENT NAME LIST

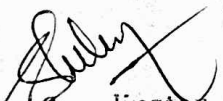
CLASS : II CSE

SEM: III

S.NO	R.NO	REG.NO	NAME OF THE STUDENT
1	16CSE01	821116104001	ABIRAMI. S
2	16CSE02	821116104002	ARAVINDH. S
3	16CSE03	821116104003	ARVIND SHIMA. P
4	16CSE04	821116104004	BAGYA SRI. T
5	16CSE05	821116104005	BHARANI DHARAN. N
6	16CSE06	821116104006	BHARATHVAJ.N
7	16CSE07	821116104007	EDWIN RAJ.K
8	16CSE08	821116104008	GAYATHIRI. R.R.
9	16CSE09	821116104009	GIRIJA. S
10	16CSE10	821116104010	HARITHA.M
11	16CSE11	821116104011	KARTHIKA.K
12	16CSE12	821116104012	MAKESH.K
13	16CSE13	821116104013	MOHAMMED ABRARA
14	16CSE14	821116104014	NANDHINI. S
15	16CSE15	821116104015	NATHIYA. K
16	16CSE16	821116104016	NITHISH KUMAR. P
17	16CSE17	821116104017	NITHIYA. R
18	16CSE18	821116104018	NIVASH. C
19	16CSE19	821116104019	PAVITHRA.R
20	16CSE20	821116104021	PRATHEEPA. M
21	16CSE21	821116104022	PRAVEEN RAJ. S
22	16CSE22	821116104023	PRIYA. K
23	16CSE23	821116104024	PRIYADHARSHINI.S
24	16CSE24	821116104025	PRIYANKA. M
25	16CSE25	821116104026	RAKSHNAH BEGUM. MS
26	16CSE26	821116104027	SAMBATH KUMAR.M

27	16CSE27	821116104028	SAMEENA FARIJIZ. M
28	16CSE28	821116104029	SARANYA.V
29	16CSE29	821116104030	SELVARANI. G
30	16CSE30	821116104031	SUBHIKSHA. M
31	16CSE31	821116104032	SURIYAPRAKASH. M
32	16CSE32	821116104033	SURIYAPRIYA.P
33	16CSE33	821116104034	THAYUMANAVAN.K
34	16CSE34	821116104035	THILAGAVATHI. S
35	16CSE35	821116104036	THOYAVAN.J
36	16CSE36	821116104037	VENKATESHWARAN. M
37	16CSE37	821116104038	VENKATESWARAN. G
38	16CSE38	821116104039	VIDHYADAR.R
39	16CSE39	821116104040	VIGNESH.S
40	16CSE40	821116104041	YAZHITHILIPAN. I
41	16CSE41	-	ANANTHAPATHMA PRIYA.A
42	16CSE42	-	VINODHINI JOYCE. S
43	16CSE43	-	DEVA SUBITCHA.S
44	16CSE44	-	RHUVANAPRIYA.A

Total No. of Students - 43


Class Coordinator
(Mrs.S.HEMALATHA)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TIME TABLE (DEC 2017 - MAY 2018, EVEN SEM)
B.E - CSE (Regulation 2013) - With Effect from 18.12.17

Batch:2016-2020

Strength:43

Year: II

Semester: IV

Class Room : 222

Block: II

Session	1	2	10.45 am - 11.00 am	3	4	12.30 pm - 01.15 pm	5	6	02.45 pm - 03.00 pm	7	8
Day	09.15am - 10.00am	10.00am - 10.45am		11.00am - 11.45am	11.45am - 12.30pm		01.15pm - 02.00pm	02.00pm - 02.45pm		03.00pm - 03.45pm	03.45pm - 04.30pm
MON	EC6504	CS6401	BREAK	CS6403	MA6453	LUNCH BREAK	CS6551	CS6411	BREAK	CS6411	
TUE	CS6551	CS6402		MA6453	CS6403		MA6453	CS6401		CS6551	EC6504
WED	MA6453	CS6402		CS6403	CS6551		EC6504	CS6413		CS6413	
THU	CS6402	CS6403		MA6453	CS6551		CS6401	CS6412		CS6412	
FRI	CS6401	EC6504		T&P(S)	MA6453		CS6403	LIB/NET		CS6401	CS6402

SUB CODE	NAME OF THE SUBJECT	CREDITS	NAME OF THE STAFF	DEPT	PERIODS/WEEK
TUTORIAL (T), ELECTIVE (E)					
MA6453	Probability & Queuing Theory	4(T)	Mr.G.Jeyakrishnan	MATHS	6
CS6551	Computer Networks	3	Mr.D.Sivakumar	CSE	5
CS6401	Operating System	3	Mr.S.Rajaraman	CSE	5
CS6402	Design & Analysis of Algorithm	3	Mr.R.Sriramkumar	CSE	4
EC6504	Microprocessor & Microcontroller	3	Ms.P.Nalayini	CSE	4
CS6403	Software Engineering	3	Ms.S.Hemalatha	CSE	5
PRACTICAL					
CS6411	Networks Laboratory	2	Ms.R.SuganthaLakshmi & Ms.S.Puvaneswari	CSE	3
CS6412	Microprocessor & Microcontroller lab	2	Ms.P.Nalayini & Ms.R.Ranitha	CSE	3
CS6413	Operating Systems Laboratory	2	Mr.S.Rajaraman & Mr.J.Jegan	CSE	3
VALUE ADDITION INITIATIVES (VAI)					
LIB/NET	Library/Internet	-	Ms.S.Hemalatha	CSE	1
T&P (S)	Training & Placement - Softskills	VAI	Mr.J.Radhakrishnan	ENG	1

CLASS CO-ORDINATOR	NAME OF THE REPRESENTATIVES	ROLL NO
Ms.S.Hemalatha	K.Nathiya	15
	M.Suryaprakash	31
CLASS COMMITTEE CHAIR PERSON	Ms.B.Sangeetha	

S. Ravi
DEPT. TTC

[Signature]
HOD

[Signature]
PRINCIPAL

DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM:1

A supermarket has 2 servers servicing at counters. The customer arrives in a Poisson fashion at the rate 10 per hour. The service time for each customer is exponential with mean 4 mins. Find

- i) The probability that a customer has to wait for the service
- ii) Average queue length
- iii) The average time spend by a customer in the queue.

Answer

$$C = 2 ; \lambda = 10 \text{ per hour} ; \mu = 4 \text{ mins per Customer (or)} \\ = 15 \text{ persons per hour}$$

$$P_0 = \frac{1}{\sum_{n=0}^{C-1} \frac{(\lambda/\mu)^n}{n!} + \frac{(\lambda/\mu)^C}{C!} \times \frac{C\mu}{C\mu - \lambda}} = 0.5$$

(i) prob. of a Customer has to wait for the service

$$P(W_s > 0) = 1/6$$

(ii) Average queue length

$$L_q = \frac{1}{C! \cdot C} \left(\frac{\lambda}{\mu}\right)^{C+1} \frac{1}{(1 - \frac{\lambda}{C\mu})} P_0 = 0.083$$

(iii) Average waiting time in the queue

$$W_q = \frac{L_q}{\lambda} = \frac{0.083}{10} = 0.0083 \text{ hrs.}$$

A Supermarket has 2 Servers servicing at Counters. The customers arrive in a poisson fashion at the rate of 10 p.h. The service time for each customer is exponential with mean 4 min. Find i) The probability that a customer has to wait for the service
 ii) avg queue length
 iii) The avg time spend by a customer in the queue.

Solution.

2 servers = multiple server.

Arrival of customer - ∞ .

This model is $(M/M/c)$ or $(\infty/FIFO)$

$$C = 2$$

$$\lambda = 10 \text{ p.h.}$$

$$\mu = 4 \text{ (mins) per customer}$$

$$\frac{\lambda}{\mu} = \frac{2}{3}$$

$$= 15 \text{ persons p.h.}$$

$$P_0 = \frac{1}{\sum_{n=0}^{c-1} \frac{(\frac{\lambda}{\mu})^n}{n!} + \frac{(\frac{\lambda}{\mu})^c}{c!} \times \frac{c\mu}{c\mu - \lambda}}$$

$$= \frac{1}{\sum_{n=0}^{2-1} \frac{(\frac{\lambda}{\mu})^n}{n!} + \frac{(\frac{\lambda}{\mu})^2}{2!} \times \frac{2\mu}{2\mu - \lambda}}$$

$$= \sum_{n=0}^{\infty} \frac{\left(\frac{2}{3}\right)^n}{n!} + \frac{\left(\frac{2}{3}\right)^2}{2!} \times \frac{2(15)}{2(15)-10}$$

$$\frac{\left(\frac{2}{3}\right)^0}{0!} + \frac{\left(\frac{2}{3}\right)^1}{1!} + \frac{4}{9 \times 2} \times \frac{30}{20}$$

$$= \frac{1}{1 + \frac{2}{3} + \frac{1}{3}} = 0.5$$

i) Probability of a customer has to wait for the service

$$P(w_s > 0) = \frac{\left(\frac{\lambda}{\mu}\right)^c}{c! \left(1 - \frac{\lambda}{\mu}\right)} \times P_0$$

$$= \frac{\left(\frac{2}{3}\right)^2}{2! \times \left(1 - \frac{1}{3}\right)} \times 0.5 = \frac{1}{6}$$

ii) Avg queue length

$$L_q = \frac{1}{c!} \left(\frac{\lambda}{\mu}\right)^{c+1} \frac{1}{\left(1 - \frac{\lambda}{\mu}\right)} P_0$$

$$= \frac{1}{2! \times 2} \left(\frac{2}{3}\right)^3 \frac{1}{\left(1 - \frac{10}{15}\right)^2} \times 0.5$$

$$= \frac{1}{4} \left(\frac{8}{27}\right) \times \frac{1}{\left(\frac{30-10}{30}\right)^2} \times 0.5$$

$$= \frac{1}{4} \times \frac{8}{27} \times \frac{9}{4} \times \frac{1}{2}$$

$$= \frac{1}{12}$$

$$= 0.083 \text{ customer}$$

ii) Avg waiting time in the queue.

$$w_q = \frac{L_q}{\lambda} = \frac{0.083}{10}$$

$$= 0.0083 \text{ hours}$$



DEPARTMENT OF MATHEMATICS
 TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM:2

Consider a single server queuing system with Poisson input, exponential service times. Suppose the mean arrival rate is 3 calling units per hour, the expected service time is 0.25 hours and the maximum calling units in the system is 2.

Find (i) Average number of waiting units in the system and in the queue

(ii) Find the number of calling units in the system and in the queue?

Answer

$$\lambda = 3 \text{ units / hour}$$

$$\frac{1}{\mu} = 0.25$$

$$\mu = \frac{1}{0.25} = 4 \text{ units / hour.}$$

Capacity of the system $N=2$.

$$\rho = \frac{\lambda}{\mu} = \frac{3}{4} = 0.75$$

(i)

$$W_s = \frac{L_s}{\lambda'}$$

$$\lambda' = \mu (1 - P_0) = 4(1 - 0.4324) = 2.27$$

$$= \frac{0.81}{2.27} = 0.3568$$

$$W_q = \frac{L_q}{\lambda'} = \frac{0.25}{2.27} = 0.1057$$

$$(ii) \quad L_s = \frac{\rho}{1-\rho} = \frac{(N+1)(\rho)^{N+1}}{1-(\rho)^{N+1}}$$

$$= 0.8108$$

$$L_q = L_s - \frac{\lambda'}{\mu} = 0.81 - \frac{2.27}{4} = 0.24$$

28.1.19

HW-2.

In a single server queuing system with poisson input and exponential service times, if the mean arrival rate is 3 calling units per hour, the expected service time is 0.25 hour and the maximum possible number of calling units in the system is 2.

Find i) Avg no. of waiting system and in the queue.

ii) Avg no. of calling units in the system and in the queue.

Solution

One server \rightarrow single channel.

This model is the $(M/M/1): (N/FIFO)$

$\lambda = 3$ units/hour

$$\frac{1}{\mu} = 0.25$$

$$\mu = \frac{1}{0.25} = 4 \text{ units / hour}$$

Capacity of the system $N=2$

$$\rho = \frac{\lambda}{\mu} = \frac{3}{4} = 0.75$$

ii) Avg no. of calling units in the system

$$L_s = \frac{\rho}{1-\rho} - \frac{(N+1)\rho^{N+1}}{1-\rho^{N+1}}$$

$$= \frac{0.75}{1-0.75} - \frac{3(0.75)^3}{1-(0.75)^3}$$

$$= \frac{0.75}{0.25} - \frac{1.2656}{1-0.4219}$$

$$= 3 - \frac{1.2656}{0.5781} = 3 - 2.1892$$

$$= 0.8108$$

Avg no. of calling units in the queue

$$L_q = L_s - \frac{\lambda}{\mu}$$

$$\lambda' = \mu(1-\rho_0) = 4(1-0.4324) = 2.27$$

$$L_q = 0.81 - \frac{2.27}{4}$$

$$(0.8108 - 0.5675) = 0.2433$$

i) Avg. no. of waiting units in the system

$$W_s = \frac{L_s}{\lambda'}$$

$$\lambda' = \mu(1-\rho_0) = 4(1-0.4324)$$

$$= 2.27.$$

$$= \frac{0.81}{2.27} = 0.3568.$$

Avg. no. of waiting units in the queue

$$W_q = \frac{L_q}{\lambda}$$

$$L_q = 0.24$$

$$\lambda = 2.27$$

11/29

$$= \frac{0.24}{2.27}$$

$$= 0.1057$$

29.1.19

A One man barber Shop has 6 chair to accommodate people waiting for a hair cut. Assume that customer who arrive when all the 6 chairs are full leave without entering a barber shop. Customers arrive at the avg. rate of 3 p.h and spend an avg. of 15 mins in the barber's chair

- What is the probability that a customer can get directly into the barber's chair upon arrival.
- What is the expected no. of customers waiting for a hair cut.
- How much time can a customer expect to spend in the barber shop
- What fraction of potential customers are turned away.

Solution.

Given $\lambda = 3$ p.h.

$\mu = 15$ mins

$$= \frac{15}{60} = \frac{60}{15} = 4$$

$k = 7$

$\lambda \neq \mu$

a). Probability that a customer can get directly into the barber's chair upon arrival.

$$p_0 = \frac{1 - \frac{\lambda}{\mu}}{1 - \left(\frac{\lambda}{\mu}\right)^{k+1}}$$

$$= \frac{1 - \frac{3}{4}}{1 - \left(\frac{3}{4}\right)^8}$$

$$= \frac{0.25}{0.9999}$$

$$= 0.2525$$

b) no. of customer waiting for hair cut

$$L_q = L_s - \frac{\lambda}{\mu}$$

$$L_s = \frac{\lambda}{\mu - \lambda} - \frac{\left(\frac{\lambda}{\mu}\right)^{k+1}}{1 - \left(\frac{\lambda}{\mu}\right)^{k+1}}$$

$$= \frac{3}{1} - (8) \left(\frac{3}{4} \right)^8$$

$$= 3 - \frac{8 (0.1001)}{0.9899}$$

$$= 3 - \frac{0.8008}{0.9899}$$

$$= 3 - 0.8089$$

$$= 2.19$$

$$= 2.19$$

$$\lambda_1 = \mu (1 - p_0) = 4 (1 - 0.2525)$$

$$= 4 (0.7475)$$

$$= 2.99$$

$$L_q = 2.19 - \frac{2.99}{4}$$

$$= 2.19 - 0.7475$$

$$= 1.4425$$

$$= 1 \text{ customer}$$

c) Customer spend in the barber shop

$$w_s = \frac{L_s}{\lambda_1} = \frac{2.19}{2.99}$$

$$= \frac{2.19}{2.99}$$

$$= 0.7324$$

d) Fraction of potential customers are
turned away = $\left(\frac{\lambda}{\mu}\right)^n p_0$

$$= \left(\frac{8}{4}\right)^7 0.2525$$

$$= (0.75)^7 0.2525$$

$$= 0.08370$$

30/11

DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM: 4

A 2-person barber shop has 5 chairs to accommodate waiting customers. Potential Customers, who arrive when all 5 chairs are full, leave without entering barber shop. Customers arrive at the average rate of 4 per hour and spend an average of 12 min in the barber's chair. Compute $P_0, P_1, P_7, E[N_q]$ and $E[W]$.

ANSWER

Given $\lambda = 4$ per hour ; $\mu = 12 \text{ min} = \frac{12}{60} = 5$ per hour

$$S = 2 \quad k = 7.$$

$$\rho = \frac{\lambda}{\mu S} = \frac{4}{5 \times 2} = \frac{4}{10} = 0.4$$

$$P_0 = \left[\sum_{n=0}^{S-1} \frac{1}{n!} \left(\frac{\lambda}{\mu} \right)^n + \frac{1}{S!} \left(\frac{\lambda}{\mu} \right)^S \cdot \sum_{n=S}^k \rho^{n-S} \right]^{-1}$$

$$= 0.4289$$

$$(b) \quad P_n = \frac{1}{n!} \left(\frac{\lambda}{\mu} \right)^n P_0 \quad n \leq S$$

$$P_1 = \frac{1}{1!} \left(\frac{4}{5} \right)^1 (0.4289) = 0.3431$$

$$(c) \quad P_n = \frac{1}{S!} \frac{1}{S^{n-S}} \left(\frac{\lambda}{\mu} \right)^n P_0 \quad S \leq n \leq k$$

$$P_7 = \frac{1}{2!} \frac{1}{2^{7-2}} (0.8)^7 \times 0.4289 = 0.0019$$

$$(d) \quad L_q = \frac{P_0}{S!} \left(\frac{\lambda}{\mu} \right)^S \left[\frac{\rho (1-\rho)^{k-S}}{(1-\rho)^2} - \frac{(k-S)\rho}{1-\rho} \right]$$

$$= 0.15 \text{ customers.}$$

$$(e) \quad L_s = L_q + \frac{\lambda'}{\mu}; \quad \lambda' = \mu \left[S - \sum_{n=0}^{S-1} (S-n) P_n \right] = 3.9955$$

$$L_s = 0.15 + \frac{3.9955}{5} = 0.95 = 1 \text{ Customer.}$$

$$W_s = \frac{L_s}{\lambda'} = 0.2375.$$

30.1.19 A two person Barber Shop has 5 chair to accommodate waiting customers. potential customer who away when all 5 chair are full leave without entering barber shop. Customer away at the avg rate of 4 p.h. and spend an avg of 12 mins on the barber chair. Compute $P_0, P_1, \dots, P_7, L_q$ and W_s

Solution:

This model is the (M/M/s): (k/FIFO)

Given $\lambda = 4$ per hour

$\mu = 12$ mins

$$\rho = \frac{\lambda}{s\mu} = \frac{4}{2 \times 12} = \frac{1}{6}$$

$$= 5 \text{ p.h.}$$

$$s = 2$$

$$k = 2 + 5 = 7$$

$$\rho = \frac{\lambda}{\mu s} = \frac{4}{5 \times 2} = 0.4$$

$$= \frac{4}{5 \times 2} = \frac{4}{10} = 0.4$$

$$P_0 = \left[\sum_{n=0}^{s-1} \frac{1}{n!} \left(\frac{\lambda}{\mu} \right)^n + \frac{1}{s!} \left(\frac{\lambda}{\mu} \right)^s \sum_{n=s}^{\infty} \rho^{n-s} \right]^{-1}$$

$$= \left[\sum_{n=0}^7 \frac{1}{n!} \left(\frac{4}{5} \right)^n + \frac{1}{2!} \left(\frac{4}{5} \right)^2 \sum_{n=2}^{\infty} (0.4)^{n-2} \right]^{-1}$$

$$= \left[1 + 0.8 + \frac{1}{2} (0.64) \times [1 + 0.4 + (0.4)^2 + (0.4)^3 + (0.4)^4 + (0.4)^5] \right]^{-1}$$

$$= \left[1 + 0.8 + 0.32 [1 + 0.4 + 0.16 + 0.064 + 0.0256 + 0.01024] \right]^{-1}$$

$$= [1 + 0.8 + 0.5311]^{-1} = (2.3311)^{-1}$$

$$= 0.4289$$

$$P_n = \frac{1}{n!} \left(\frac{\lambda}{\mu} \right)^n P_0 \quad n \leq s$$

$$P_1 = \frac{1}{1!} \left(\frac{4}{5} \right)^1 \times 0.4289$$

$$= \frac{4}{5} \times 0.4289 = 0.8 \times 0.4289$$

$$= 0.3431$$

$$e_c) P_n = \frac{1}{s!} \frac{1}{s^{n-s}} \left(\frac{\lambda}{\mu} \right)^n P_0 \quad s \leq n < \infty$$

$$P_7 = \frac{1}{2!} \frac{1}{2^{7-2}} (0.8)^7 \times 0.4289$$

$$= \frac{1}{64} \times 0.0899.$$

$$= 1.4053 \times 10^{-3}$$

$$= 0.0014$$

$$d) L_q = \sum_{s=0}^{\infty} \frac{P_0}{s!} \left(\frac{\lambda}{\mu}\right)^s \left[\frac{\rho(1-\rho^{k-s})}{(1-\rho)^2} - \right.$$

$$\left. + \frac{s(1-\rho) + (1-\rho) + 1}{2} \times (1-\rho) \frac{1}{2} + (8.0) + 1 \right] \frac{(k-s)\rho^{k-s+1}}{1-\rho} \Bigg]$$

$$= \frac{0.4289}{2} (0.64) \left[0.4 \frac{(1-0.0102)}{(0.6)^2} - \frac{(5)0.4^6}{0.6} \right]$$

$$= 0.21445 (0.64) \left[0.4 \frac{(0.9898)}{0.36} - \frac{0.0040 \times 5}{0.6} \right]$$

$$= 0.1372 \left[0.4 (2.7494) - \frac{0.02}{0.6} \right]$$

$$= 0.1372 [1.0998 - 0.033]$$

$$= 0.1372 (1.0668)$$

$$= 0.1463$$

$$= 0.15 \text{ customer}$$

$$e) L_s = L_q + \frac{\lambda'}{\mu}$$

$$\lambda' = \mu \left[s - \sum_{n=0}^{s-1} (s-n) P_n \right]$$

$$= 5 \left[2 - \sum_{n=0}^1 (2-n) P_n \right]$$

$$= 5 [2 - 2P_0 + P_1]$$

$$= 5 [2 - 2 \times 0.4289 + 0.3431]$$

$$= 5 [2 - 0.8578 + 0.3431]$$

$$= 5 [0.7991]$$

$$= 3.9955$$

$$L_s = 0.15 + \frac{3.9955}{5} = 0.15 + 0.7991$$

$$= 0.9491$$

$$= 0.95$$

$[= 1]$ customer

$$W_s = \frac{L_s}{\lambda'}$$

$$= \frac{0.9491}{3.9955}$$

$$= 0.2375 \text{ hrs}$$

DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM: 5

If a random variable X has the moment generating function $M_X(t) = \frac{2}{2-t}$ obtain the variance of X

ANSWER

$$M_X(t) = \frac{2}{2-t} = \left(1 - \frac{t}{2}\right)^{-1}$$

$$= 1 + \frac{t}{1!} \left(\frac{1}{2}\right) + \frac{t^2}{2!} \left(\frac{3}{4}\right)$$

$$E[X] = \text{Coeff. } \frac{t}{1!} = \frac{1}{2}$$

$$E[X^2] = \text{Coeff. } \frac{t^2}{2!} = \frac{3}{4}$$

$$\text{Var}(X) = E[X^2] - E[X]^2 = \frac{3}{4} - \frac{1}{4} = \frac{1}{2}$$

25.2.19.

29)

If a random variable X has the MGF

$$M_X(t) = \frac{2}{2-t} \quad \text{Obtain the var}(X)$$

Solution

$$\begin{aligned} \text{Given } M_X(t) &= \frac{2}{2-t} = \frac{2}{2(1-\frac{t}{2})} \\ &= (1-\frac{t}{2})^{-1} \end{aligned}$$

$$\begin{aligned} \left[(1-x)^{-1} &= 1+x+x^2+\dots \right] \\ &= 1 + \left(\frac{t}{2}\right) + \left(\frac{t}{2}\right)^2 + \dots \\ &= 1 + \frac{t}{1!} \frac{1}{2} + \frac{t^2}{2!} \frac{2}{4} + \dots \end{aligned}$$

$$E[X] = \text{coefficient of } \frac{t}{1!} = \frac{1}{2}$$

$$E[X^2] = \text{coefficient of } \frac{t^2}{2} = \frac{2}{4}$$

$$\text{variance}(X) = E[X^2] - [E(X)]^2$$

$$= \frac{2}{4} - \left(\frac{1}{2}\right)^2$$

$$= \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

25/2



DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM: 6

A machine manufacturing screws is known to produce 5% defective. In a random sample of 15 screws, what is a probability that there are (i) Exactly 3 defective (ii) not more than 3 defectives

ANSWER

Given $P = \frac{5}{100} = \frac{1}{20}$

$$P + q = 1$$

$$\frac{1}{20} + q = 1$$

$$q = \frac{19}{20}$$

Binomial distribution $P(X=x) = {}^nC_x P^x q^{n-x}$

$$= {}^{15}C_x \left(\frac{1}{20}\right)^x \left(\frac{19}{20}\right)^{15-x}$$

$$(i) P(X=3) = {}^{15}C_3 \left(\frac{1}{20}\right)^3 \left(\frac{19}{20}\right)^{12} = 0.0295$$

$$(ii) P(\text{not more than 3 defectives}) = P(X \leq 3)$$

$$= P(X=0) + P(X=1) + P(X=2) + P(X=3)$$

$$= 0.4633 + 0.3658 + 0.1347 + 0.0295 = 0.9933.$$

(32) A machine manufacturing screws is known to produce 5% defective. In a random sample of 15 screws, what is a prob. that there are i) Exactly 3 defective
ii) not more than 3 defectives

25.2.19

Given $p = \frac{1}{20} = \frac{1}{20}$

$p + q = 1$

$\frac{1}{20} + q = 1$

$q = 1 - \frac{1}{20} = \frac{19}{20}$

$n = 15$

The binomial distribution is

$P(X=x) = {}^n C_x p^x q^{n-x}$

$= {}^{15} C_x \left(\frac{1}{20}\right)^x \left(\frac{19}{20}\right)^{15-x}$

i) $P(X=3) = {}^{15} C_3 \left(\frac{1}{20}\right)^3 \left(\frac{19}{20}\right)^{12}$

$= 455 \times 0.00012 \times 0.5403$

$= 0.0295$

ii) $P(\text{not more than 3 defectives})$

$= P(X=0) + P(X=1) + P(X=2) + P(X=3)$

$= {}^{15} C_0 \left(\frac{1}{20}\right)^0 \left(\frac{19}{20}\right)^{15} + {}^{15} C_1 \left(\frac{1}{20}\right)^1 \left(\frac{19}{20}\right)^{14}$

$+ {}^{15} C_2 \left(\frac{1}{20}\right)^2 \left(\frac{19}{20}\right)^{13} + 0.0295$

$= 0.4633 + \left(\frac{3}{20}\right) 0.4877 + \frac{21}{400} 0.533$

$+ 0.0295$

$= 0.4633 + 0.3658 + 0.1347 + 0.0295$

$= 0.9933$



DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM: 7

If 3% of the electric bulbs manufacture by a company defective, find the probability that in a sample of 100 bulbs exactly 5% defective

ANSWER

$$P = \frac{3}{100} = 0.03$$

Poisson distribution is

$$P(X=x) = P(x) = \frac{e^{-\lambda} \lambda^x}{x!}$$

$$\lambda = np = 0.03 \times 100 = 3$$

$$P(X=x) = \frac{e^{-3} 3^x}{x!}$$

$$P(X=5) = \frac{e^{-3} 3^5}{5!} = 0.10084$$

26.2.19. If 3% of the electric bulbs manufactured by a company are defective find the prob. that in a sample of 100 bulbs exactly 5% bulbs are defective.

$$p = \frac{3}{100} = 0.03$$

The Poisson distribution is

$$P(X=x) = P(x) = \frac{e^{-\lambda} \lambda^x}{x!}$$

$$\lambda = np$$

$$= 0.03 \times 100$$

$$= 3$$

$$P(X=x) = \frac{e^{-3} (3)^x}{x!}$$

$$P(X=5) = \frac{e^{-3} (3)^5}{5!}$$

$$= \frac{0.0498 \times 243}{120}$$

$$= \frac{12.1014}{120}$$

$$= 0.10084$$

DEPARTMENT OF MATHEMATICS
TUTORIAL SHEETS

CLASS: II CSE

SUBJECT: PROBABILITY AND QUEUING THEORY

TUTORIAL PROBLEM: 8

The joint PDF of a two dimensional random variable (X,Y) is given by
 $f(x,y) = xy^2 + \frac{x^2}{8}, 0 \leq x \leq 2, 0 \leq y \leq 1$. Compute (i) $P(x > 1/y < \frac{1}{2})$ (ii) $P(y < \frac{1}{2}/x > 1)$ (iii) $P(x < y)$ and (iv) $P(x+y \leq 1)$

ANSWERS

Given $f(x,y) = xy^2 + \frac{x^2}{8}$

$$P(Y < \frac{1}{2}) = \int_0^{\frac{1}{2}} \left(\frac{x^2 y^2}{2} + \frac{x^3}{24} \right) \Big|_0^2 dy = \frac{1}{4}$$

$$P(Y < \frac{1}{2}) = \frac{1}{4}$$

$$P(X > 1) = \frac{19}{24} \quad (i) \quad P(X > 1 / Y < \frac{1}{2}) = \frac{5}{6}$$

$$(ii) \quad P(Y < \frac{1}{2} / X > 1) = \frac{5}{6} \quad (iii) \quad P(Y < \frac{1}{2} / X > 1) = \frac{5}{19}$$

$$(iv) \quad P(X < Y) = \int_0^1 \int_0^y \left(xy^2 + \frac{x^2}{8} \right) dx dy = \frac{53}{480}$$

$$(v) \quad P(X+Y \leq 1) = \int_0^1 \int_0^{1-y} \left(xy^2 + \frac{x^2}{8} \right) dx dy$$

$$= \frac{1}{60} + \frac{1}{96} = \frac{13}{480}$$

4/3/19

2) The joint pdf of 2 dimensional random variable x, y given by.

$$f(x, y) = xy^2 + \frac{x^2}{8}, \quad 0 \leq x \leq 2, \quad 0 \leq y \leq 1$$

Find i) $P(x > 1 \mid x < \frac{1}{2})$

ii) $P(Y < \frac{1}{2} \mid x > 1)$ iii) $P(x < y)$

iv) $P(x + y \leq 1)$

$$= \int_0^{1/2} \left(\frac{x^2 y^2}{2} + \frac{x^3}{24} \right) dy \Rightarrow \int_0^{1/2} \left[\frac{4y^2}{2} + \frac{8}{24} - 0 \right] dy$$

$$= \int_0^{1/2} \left(2y^2 + \frac{1}{3} \right) dy$$

$$= \left(\frac{2y^3}{3} + \frac{y}{3} \right) \Big|_0^{1/2} \Rightarrow \left[\frac{2}{3} \left(\frac{1}{8} \right) + \frac{1}{3} \left(\frac{1}{2} \right) \right]$$

$$= \left(\frac{2}{24} + \frac{1}{6} \right) \Rightarrow \frac{2+4}{24} = \frac{6}{24} = \frac{1}{4}$$

$$P(Y < \frac{1}{2}) = \frac{1}{4}$$

$$P(x > 1) = \int_1^2 \int_0^1 \left(xy^2 + \frac{x^2}{8} \right) dx dy$$

$$= \int_0^1 \left(\frac{x^2 y^2}{2} + \frac{x^3}{24} \right) dx dy$$

$$= \int_0^1 \left[\left(\frac{4y^2}{2} + \frac{8}{24} \right) - \left(\frac{y^2}{2} + \frac{1}{24} \right) \right] dy$$

$$= \int_0^1 \left[2y^2 + \frac{1}{3} - \frac{1}{2} y^2 - \frac{1}{24} \right] dy$$

$$= \int_0^1 \left(\frac{3y^2}{2} + \frac{7}{24} \right) dy = \left[\frac{3}{2} \frac{y^3}{3} + \frac{7y}{24} \right]_0^1$$

$$= \frac{1}{2} + \frac{7}{24} = \frac{19}{24}$$

$$i) P(X > 1 / Y < \frac{1}{2}) = P(X > 1, Y < \frac{1}{2}) / P(Y < \frac{1}{2})$$

$$= \frac{5/24 \times 4}{5/6} = 5/6$$

$$ii) P(Y < \frac{1}{2} / X > 1) = \frac{P(X > 1, Y < \frac{1}{2})}{P(X > 1)}$$

$$= \frac{5/24 \times 4}{5/6} = 5/6$$

$$iii) P(Y < \frac{1}{2} / X > 1) = \frac{P(X > 1, Y < \frac{1}{2})}{P(X > 1)}$$

$$= \frac{5/24 \times 21/19}{5/19} = 5/19$$

$$iv) P(X < Y) = \int_0^1 \int_0^y (xy^2 + \frac{x^2}{8}) dx dy$$

$$= \int_0^1 \left(\frac{x^2 y^2}{2} + \frac{x^3}{24} \right) \Big|_0^y dy$$

$$= \int_0^1 \left[\frac{y^2 y^2}{2} + \frac{y^3}{24} \right] dy = \int_0^1 \left(\frac{y^4}{2} + \frac{y^3}{24} \right) dy$$

$$= \left(\frac{y^5}{10} + \frac{y^4}{96} \right) \Big|_0^1 = \left(\frac{1}{10} + \frac{1}{96} \right)$$

$$= \frac{96 + 10}{960} = \frac{106}{960} = \frac{53}{480}$$

$$v) P(X + Y \leq 1) = \int_0^1 \int_0^{1-y} (xy^2 + \frac{x^2}{8}) dx dy$$

$$= \int_0^1 \left(\frac{(1-y)^2 y^2}{2} + \frac{(1-y)^3}{24} \right) dy$$

$$= \int_0^1 \left[\frac{(1+y^2-2y)y^2}{2} + \frac{(1-y)^3}{24} \right] dy$$

$$= \int_0^1 \left[\frac{1}{2} (y^2 + y^4 - 2y^3) + \frac{1}{24} (1-y)^3 \right] dy$$

$$= \frac{1}{2} \left(\frac{1}{3} + \frac{1}{5} - \frac{1}{2} \right) + \frac{1}{24 \times 4}$$

$$= \frac{1}{2} \left(\frac{10 + 6 - 15}{30} \right) + \frac{1}{96}$$

$$= \frac{1}{60} + \frac{1}{96}$$

$$= \frac{96 + 60}{5760} = \frac{156}{5760} = \frac{13}{480}$$