National Institute of Technology, Tiruchirappalli - 620 015, Tamil Nadu, India

Temporary faculty selection- shortlisted candidates for written test and

Interview Schedule

Instructions to the candidates

The shortlisted candidates for the written test for Temporary Faculty position is put up in the NITT website **www.nitt.edu**

The written test for the shortlisted candidates is scheduled on 29-**06-2015(Monday).** The duration of the test will be for **one hour from 09.30 a.m. to 10.30 a.m. on Monday 29th June, 2015** at **IT Centre (Computer Science Building), NIT, Tiruchirappalli.** The candidates are requested to be present in the test venue half-an-hour before written test i.e.by **09.00 a.m.** on **29-06-2015(Monday).** The candidates are requested to produce a valid Photo ID proof and also requested to submit one set of photo copies of consolidated mark sheets (both UG and PG), GATE score card/SLET/NET(if any) , community certificate and filled copy of **data sheet(given in the page no 33)** at the time of written test. The syllabus for the written test of the concerned department is available from page no **25 - 32**.

After the written test, the candidates will be shortlisted and then they will be called for interview. All the shortlisted candidates for the interview have to appear before a selection committee and also have to give a presentation on any topic of their interest (no power point presentation) to test their communication skills. The shortlisted candidates for oral presentation and interview will be displayed in test venue itself, department wise, by **12.00 noon on 29.06.2015.** The shortlisted candidates for oral presentation and interview will be also put up in the NIT website www.nitt.edu

The interview will be held at **Oom Room (next to Director's Office), Administrative building NIT, Tiruchirappalli, Tamilnadu.** The oral presentation and interview will be held as per the following schedule.

S.NO	DEPARTMENT	DATE	TIME
1.	PRODUCTION ENGINEERING	29.06.2015	01:00 p.m. to 06:00 p.m.
2.	ELECTRICAL AND ELECTRONICS ENGINEERING	30.06.2015	09:00 a.m. to 06:00 p.m.
3.	HUMANITIES – ECONOMICS	01.07.2015	09:00 a.m. to 10:30 a.m.
4.	HUMANITIES – ENGLISH	01.07.2015	10:30 a.m. to 01:00 p.m.
5.	PHYSICS	01.07.2015	02:00 p.m. to 06:00 p.m.
6.	METALLURGICAL AND MATERIALS ENGINEERING	02.07.2015	09:00 a.m. to 10:30 a.m.
7.	COMPUTER SCIENCE AND ENGINEERING	02.07.2015	10:30 a.m. to 06:00 p.m.
8.	ELECTRONICS AND COMMUNICATION ENGINEERING	03.07.2015	09:00 a.m. to 06:00 p.m.
9.	INSTRUMENTATION AND CONTROL ENGINEERING	04.07.2015	09:00 a.m. to 01:00 p.m.
10.	CHEMICAL ENGINEERING	04.07.2015	02:00 a.m. to 06:00 p.m.
11.	ENERGY AND ENVIRONMENT	05.07.2015	09:00 a.m. to 11.30 p.m.
12.	MATHEMATICS	05.07.2015	11:30 a.m. to 06:00 p.m.
13.	CHEMISTRY	06.07.2015	09:00 a.m. to 01:00 p.m.
14.	COMPUTER APPLICATIONS	06.07.2015	02:00 p.m. to 06:00 p.m.
15.	MANAGEMENT STUDIES	07.07.2015	09:00 a.m. to 01:00 p.m.
16.	CIVIL ENGINEERING	07.07.2015	02:00 p.m. to 04:30 p.m.
17.	ARCHITECTURE	07.07.2015	04:30 p.m. to 06:00 p.m.
18.	MECHANICAL ENGINEERING	08.07.2015	09:00 a.m. to 06:00 p.m.

Additional information for the candidates:-

1. Kindly refer the application number in the list of short listed candidates (given beside your name in the website) to know your seating arrangements for written test.
2. Report to the venue of written test/interview half an hour before the scheduled time.
3. Bring one set of attested copies of relevant documents such as educational qualification, experience certificates, community certificate, etc. You are also required to bring all the original documents for verification purpose.
4. Bring at least one of the following documents as proof of identity
   i. Valid passport
   ii. Voter identify card
   iii. PAN Card
   iv. Driving License
   v. Govt. or PSU undertaking issued valid photo identity cards.
   vi. Aadhar card
   vii. Any other valid Identity card
5. Venue for the interview:---

Oom ROOM (NEXT TO DIRECTOR'S OFFICE),
ADMINISTRATIVE BUILDING
NIT, TIRUCHIRAPPALLI, TAMILNADU-620015.

Please note the following:

1. No TA/DA will be paid for attending the written test and interview.
2. The request for change of date and time will not be entertained.
3. The invitation is a mere request to appear for written test/interview and does not assure that he/she will be recommended or selected.
4. The decision of the selection committee of the institute is final.

Encl: 1. Instructions : Page No-01
2. List of candidates called for written test : Page No-02 to 24
3. Syllabus for written test for concern Department: Page No- 25 to 32
4. Data sheet : Page No-33

NATIONAL INSTITUTE OF TECHNOLOGY: TIRUCHIRAPPALLI – 620 015
DEAN (FACULTY WELFARE)
List of Candidates Short Listed For written test

DEPARTMENT OF ARCHITECTURE		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/ 2015/ ARC/ 001	Aamirah salam
2	TF/ 2015/ ARC/ 003	P.Parvathy Kartha
3	TF/ 2015/ ARC/ 004	A.Karthick
4	TF/ 2015/ ARC/ 005	P.Pritish sam jebaraj

DEPARTMENT OF COMPUTER APPLICATIONS		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/ 2015/ CA/ 001	K.Thinakaran
2	TF/ 2015/ CA/ 002	S.Aarthee
3	TF/ 2015/ CA/ 003	T.Sumathy
4	TF/ 2015/ CA/ 004	S.Vijay Anand
5	TF/ 2015/ CA/ 005	Pinki Kumar Sharma
6	TF/ 2015/ CA/ 006	V.Glory
7	TF/ 2015/ CA/ 007	B.Pushpalatha
8	TF/ 2015/ CA/ 008	L.Rakesh
9	TF/ 2015/ CA/ 009	M.Kowsigan
10	TF/ 2015/ CA/ 010	R.Visalatchi
11	TF/ 2015/ CA/ 012	M.Sathiyamoorthy
12	TF/ 2015/ CA/ 013	T.K Ramesh Babu
13	TF/ 2015/ CA/ 014	M.P Anuradha
14	TF/ 2015/ CA/ 015	S.Muthukumar
15	TF/ 2015/ CA/ 016	Chettepu Vasista Reddy
16	TF/ 2015/ CA/ 017	I.Gunavathi
17	TF/ 2015/ CA/ 018	J.Mercy Geraldine
18	TF/ 2015/ CA/ 019	T.Ravi chandran
19	TF/ 2015/ CA/ 020	S.Suresh
20	TF/ 2015/ CA/ 021	X.Jenie Arock

21	TF/ 2015/ CA/ 022	T.Geetha
22	TF/ 2015/ CA/ 023	P.Sathya
23	TF/ 2015/ CA/ 024	R.Gobi
24	TF/ 2015/ CA/ 025	T.Bavithra devi
25	TF/ 2015/ CA/ 026	A.J.Arun pari
26	TF/ 2015/ CA/ 027	J.Sivasangari
27	TF/ 2015/ CA/ 028	A.B Karthick Anand Babu
28	TF/ 2015/ CA/ 029	Anusha Rajendiran
29	TF/ 2015/ CA/ 031	G.Dinesh kumar
30	TF/ 2015/ CA/ 032	P.Suguna
31	TF/ 2015/ CA/ 033	S.Beski Prabaharan
32	TF/ 2015/ CA/ 034	R.Senthilkumar
33	TF/ 2015/ CA/ 035	R.Ushadevi
34	TF/ 2015/ CA/ 036	Swarna Kuchibhotla
35	TF/ 2015/ CA/ 037	J.Arun Pandian
36	TF/ 2015/ CA/ 038	K.Kanchanadevi
37	TF/ 2015/ CA/ 039	P.Kuppusamy
38	TF/ 2015/ CA/ 040	T.Eswari
39	TF/ 2015/ CA/ 041	T.Veni
40	TF/ 2015/ CA/ 042	V.Gayathri
41	TF/ 2015/ CA/ 043	B.Manjanna
42	TF/ 2015/ CA/ 044	K.Suresh
43	TF/ 2015/ CA/ 045	S.Srimathi
44	TF/ 2015/ CA/ 046	A.Anantha
45	TF/ 2015/ CA/ 047	R.Siva Shankar

DEPARTMENT OF CHEMICAL ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ CHL/001	A. Srinath
2	TF/2015/ CHL/002	George John
3	TF/2015/ CHL/003	Anand Babu Desamala
4	TF/2015/ CHL/004	Prashant Kumar

5	TF/2015/ CHL/005	Arijit Mondal
6	TF/2015/ CHL/006	Sanjib Barma
7	TF/2015/ CHL/007	Srinivas Tadepalli
8	TF/2015/ CHL/008	Santhi Raju Pilli
9	TF/2015/ CHL/009	V.S. Balasubrahmanyam
10	TF/2015/ CHL/011	A. Subathira
11	TF/2015/ CHL/012	P. Asaithambi
12	TF/2015/ CHL/014	Anjireddy Bhavanam
13	TF/2015/ CHL/017	S. Jeyan
14	TF/2015/ CHL/018	Sankar Chakma
15	TF/2015/ CHL/019	R. Anandha Krishnan
16	TF/2015/ CHL/020	Kartick Mondal
17	TF/2015/ CHL/021	Chinta Sankar Rao
18	TF/2015/ CHL/023	S. Saravanan
19	TF/2015/ CHL/024	MD. Malik Nawaz Khan
20	TF/2015/ CHL/025	Kamal Kumar Bhatluri
21	TF/2015/ CHL/026	A. Janet
22	TF/2015/ CHL/027	B. Krishna Srihari
23	TF/2015/ CHL/028	Mahendra Chinthala
24	TF/2015/ CHL/029	Vikranth Volli
25	TF/2015/ CHL/030	Venu Babu Borugadda
26	TF/2015/ CHL/031	M. Bhuvanesh

DEPARTMENT OF CHEMISTRY		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/ 2015/ CHY/ 001	T.Anand
2	TF/ 2015/ CHY/ 002	V.Kannan
3	TF/ 2015/ CHY/ 003	K.Nagaraj
4	TF/ 2015/ CHY/ 004	N.Haridharan
5	TF/ 2015/ CHY/ 005	Raghunath Das
6	TF/ 2015/ CHY/ 006	P.Uma maheswari
7	TF/ 2015/ CHY/ 007	I.Arockiaraj

8	TF/ 2015/ CHY/ 008	Seenuvasan Vedachalam
9	TF/ 2015/ CHY/ 009	K.S.Thushara
10	TF/ 2015/ CHY/ 010	S.Nagarajan
11	TF/ 2015/ CHY/ 011	T.Gurunathan
12	TF/ 2015/ CHY/ 012	S.Sakthivel
13	TF/ 2015/ CHY/ 013	G.Rajkumar
14	TF/ 2015/ CHY/ 014	K.Sugumar
15	TF/ 2015/ CHY/ 015	V.Lakshmi Narayanan
16	TF/ 2015/ CHY/ 016	J.Amala Infant Joice
17	TF/ 2015/ CHY/ 017	Thirumoorthi Ramalingam
18	TF/ 2015/ CHY/ 018	J.Kamalraja
19	TF/ 2015/ CHY/ 019	Senthilnathan
20	TF/ 2015/ CHY/ 020	R.Nagarajaprakash
21	TF/ 2015/ CHY/ 022	G.Banu Karthi
22	TF/ 2015/ CHY/ 023	T.Rajkumar
23	TF/ 2015/ CHY/ 024	B.Nizar Ahamed
24	TF/ 2015/ CHY/ 025	S.Periyaraja
25	TF/ 2015/ CHY/ 026	K.Vasantham
26	TF/ 2015/ CHY/ 027	V.L Reena
27	TF/ 2015/ CHY/ 028	N.Pugazhenthiran
28	TF/ 2015/ CHY/ 029	S.Suresh
29	TF/ 2015/ CHY/ 030	S.Veeralakshmi
30	TF/ 2015/ CHY/ 031	Kandula Koteshwara Reddy
31	TF/ 2015/ CHY/ 032	S.Vaideeswaran
32	TF/ 2015/ CHY/ 033	P.Lilly Florence
33	TF/ 2015/ CHY/ 034	Soma Saha
34	TF/ 2015/ CHY/ 035	R.Kannan
35	TF/ 2015/ CHY/ 036	V.Vimala
36	TF/ 2015/ CHY/ 037	A.Padmesh
37	TF/ 2015/ CHY/ 038	C. Bharkavi
38	TF/ 2015/ CHY/ 039	M.Sivaraman
39	TF/ 2015/ CHY/ 040	Syed Mohammed ali hussaini

DEPARTMENT OF CIVIL ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/CIVIL/001	M.Mathangi
2	TF/2015/CIVIL/002	M.Anand
3	TF/2015/CIVIL/003	N.Madhavi
4	TF/2015/CIVIL/005	M.Chellapandian
5	TF/2015/CIVIL/006	N.Mohanraj
6	TF/2015/CIVIL/008	A.Jesumi
7	TF/2015/CIVIL/009	M.Bala Murugan
8	TF/2015/CIVIL/010	M.Thayapraba
9	TF/2015/CIVIL/012	D.Saranya Devi
10	TF/2015/CIVIL/013	S.Sruthy
11	TF/2015/CIVIL/017	S.R.Shamili
12	TF/2015/CIVIL/018	Shara Siby
13	TF/2015/CIVIL/019	Chithira Venu
14	TF/2015/CIVIL/020	S. Kanchi Durai
15	TF/2015/CIVIL/021	R. Ramya Priya
16	TF/2015/CIVIL/023	Archana P Abraham
17	TF/2015/CIVIL/025	Rosalin Sahoo
18	TF/2015/CIVIL/027	B. Kavitha

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (CSE)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ CSE/001	S. Senthil
2	TF/2015/ CSE/002	K. Senthil Nathan
3	TF/2015/ CSE/003	J. Devasundarraj
4	TF/2015/ CSE/004	M. Prameela
5	TF/2015/ CSE/005	S. Abinayaa
6	TF/2015/ CSE/007	T. Sugirtha
7	TF/2015/ CSE/008	A. Abinaya
8	TF/2015/ CSE/009	Sumanta Pyne
9	TF/2015/ CSE/010	A. Menaka Pushpa

10	TF/2015/ CSE/012	S. Asha
11	TF/2015/ CSE/013	G. Dhanasekaran
12	TF/2015/ CSE/014	Shimil Shijo
13	TF/2015/ CSE/015	D. Prabhu
14	TF/2015/ CSE/016	Vijay Bhaskar Semwal
15	TF/2015/ CSE/017	G. Menaga
16	TF/2015/ CSE/020	A. Habiba
17	TF/2015/ CSE/021	A. Preethi
18	TF/2015/ CSE/022	L. Priya
19	TF/2015/ CSE/023	S.P. Pamila
20	TF/2015/ CSE/024	E. Renuga
21	TF/2015/ CSE/025	M. Buvaneswari
22	TF/2015/ CSE/026	Varsha Jain
23	TF/2015/ CSE/027	R. Lavanya
24	TF/2015/ CSE/028	M. Sindu
25	TF/2015/ CSE/029	R. Kirubakaran
26	TF/2015/ CSE/030	M. Kowsigan
27	TF/2015/ CSE/031	P. Subhashree
28	TF/2015/ CSE/032	M. Bharath
29	TF/2015/ CSE/034	L. Linty
30	TF/2015/ CSE/035	N. Sindubharathi
31	TF/2015/ CSE/036	S. Ezhilarasi
32	TF/2015/ CSE/037	M. Sathiyamoorthy
33	TF/2015/ CSE/038	T.K. Ramesh Babu
34	TF/2015/ CSE/039	P. Shanthi
35	TF/2015/ CSE/040	S. Karthiga
36	TF/2015/ CSE/041	C.S. Haree Keerthanah
37	TF/2015/ CSE/043	M. Ranganathan
38	TF/2015/ CSE/044	S. Shanmuganathan
39	TF/2015/ CSE/045	K. Vedhanayaki
40	TF/2015/ CSE/046	C. Chinnumol Shivic
41	TF/2015/ CSE/047	S. Prem Kumar

42	TF/2015/ CSE/048	E. Elakkiya
43	TF/2015/ CSE/049	K. Nandhini
44	TF/2015/ CSE/051	R. Shathanaa
45	TF/2015/ CSE/052	M. Anitha
46	TF/2015/ CSE/053	A.J. Arun Pari
47	TF/2015/ CSE/054	M. Bharathi
48	TF/2015/ CSE/055	T. Avudaiappan
49	TF/2015/ CSE/056	G. Madhumitha
50	TF/2015/ CSE/057	A. Neela Madheswari
51	TF/2015/ CSE/059	S. Jothika
52	TF/2015/ CSE/060	P. Suguna
53	TF/2015/ CSE/061	H. Jesindha Danithara
54	TF/2015/ CSE/062	K. Dakshina
55	TF/2015/ CSE/063	P. Sakthi
56	TF/2015/ CSE/064	J. Ramya
57	TF/2015/ CSE/065	P. Parthasarathi
58	TF/2015/ CSE/066	K. Kanchanadevi
59	TF/2015/ CSE/067	D. Uma Maheswari
60	TF/2015/ CSE/068	S. Vedhapriya
61	TF/2015/ CSE/069	S. Gayathri
62	TF/2015/ CSE/071	T. Eswari
63	TF/2015/ CSE/072	J. Arun Pandian
64	TF/2015/ CSE/073	K.A. Apoorva
65	TF/2015/ CSE/075	S. Anuja
66	TF/2015/ CSE/077	A.R. Vasudevan
67	TF/2015/ CSE/079	S. Vinoth Raj
68	TF/2015/ CSE/080	T. Veni
69	TF/2015/ CSE/081	S. Saroja Devi
70	TF/2015/ CSE/082	P. Kuppusamy
71	TF/2015/ CSE/083	B. Manjanna
72	TF/2015/ CSE/084	S. Anusha Seles
73	TF/2015/ CSE/085	K. Keerthiga

74	TF/2015/ CSE/086	S. Srimathi
75	TF/2015/ CSE/087	R. Bhavani
76	TF/2015/ CSE/088	K. Kayalvizhi
77	TF/2015/ CSE/090	V. Venkat Ramani

DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING(ECE)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/ 2015/ ECE/ 001	S.Seemabharani
2	TF/ 2015/ ECE/ 002	C.G.Akalya
3	TF/ 2015/ ECE/ 003	M.Jaikumar
4	TF/ 2015/ ECE/ 004	D.Raja Godwin
5	TF/ 2015/ ECE/ 005	M.Vijayalakshmi
6	TF/ 2015/ ECE/ 006	A.Balasupramani
7	TF/ 2015/ ECE/ 007	Nallamothu Nitin Paul
8	TF/ 2015/ ECE/ 008	B.Monisha Pradeeba
9	TF/ 2015/ ECE/ 009	V.Rekha
10	TF/ 2015/ ECE/ 010	T.Mahalakshmi
11	TF/ 2015/ ECE/ 011	Sujit Kumar Chakravarty
12	TF/ 2015/ ECE/ 012	C.Balaji
13	TF/ 2015/ ECE/ 013	Z.Sumaiya Saliha
14	TF/ 2015/ ECE/ 014	R.Jaya Nandhini
15	TF/ 2015/ ECE/ 015	G.Venkatakrishnan
16	TF/ 2015/ ECE/ 016	A.Karthik
17	TF/ 2015/ ECE/ 017	Manu Thomas
18	TF/ 2015/ ECE/ 018	R.Krishnakumari
19	TF/ 2015/ ECE/ 019	A.Catherine
20	TF/ 2015/ ECE/ 020	V.Ramniwas
21	TF/ 2015/ ECE/ 021	N.T. Velusudha
22	TF/ 2015/ ECE/ 022	P.Ananthan
23	TF/ 2015/ ECE/ 024	E.Udayakumar
24	TF/ 2015/ ECE/ 025	M.Anitha
25	TF/ 2015/ ECE/ 026	M.Abinaya

26	TF/ 2015/ ECE/ 027	V.Nandhini
27	TF/ 2015/ ECE/ 028	S.Anusuya
28	TF/ 2015/ ECE/ 029	M.Nithiya
29	TF/ 2015/ ECE/ 030	L.Rakesh
30	TF/ 2015/ ECE/ 031	R.Gnanaprakasam
31	TF/ 2015/ ECE/ 032	P.G. Punitha
32	TF/ 2015/ ECE/ 033	A.Parthiban
33	TF/ 2015/ ECE/ 034	S.Sivasankari
34	TF/ 2015/ ECE/ 036	Joni kumar
35	TF/ 2015/ ECE/ 037	M.Mohamed Asan Basiri
36	TF/ 2015/ ECE/ 038	Shara Mathew
37	TF/ 2015/ ECE/ 039	S.Preethi
38	TF/ 2015/ ECE/ 040	M.Alarmel Mangai
39	TF/ 2015/ ECE/ 041	R.Meenakshi
40	TF/ 2015/ ECE/ 043	V.B Sundarabalan
41	TF/ 2015/ ECE/ 044	R.Vaishnavi
42	TF/ 2015/ ECE/ 045	G.Sowmiya
43	TF/ 2015/ ECE/ 046	P.Geetha
44	TF/ 2015/ ECE/ 047	J.Jeyarani
45	TF/ 2015/ ECE/ 048	T.Thenmozhi
46	TF/ 2015/ ECE/ 049	Munofur Rifaya
47	TF/ 2015/ ECE/ 050	S.Venkatesh
48	TF/ 2015/ ECE/ 051	Hanumantha Rao Gottam
49	TF/ 2015/ ECE/ 053	P.Varalakshmi
50	TF/ 2015/ ECE/ 054	M.Karthik
51	TF/ 2015/ ECE/ 055	Divya Mohan
52	TF/ 2015/ ECE/ 056	Hariharan
53	TF/ 2015/ ECE/ 057	G.Shanmugasundaram
54	TF/ 2015/ ECE/ 058	M.K.Kanagavalli
55	TF/ 2015/ ECE/ 060	Marada Ganesh Kumar
56	TF/ 2015/ ECE/ 061	K.Gobinath
57	TF/ 2015/ ECE/ 062	J.Sofiya Jenifer

58	TF/ 2015/ ECE/ 063	S.Stephe
59	TF/ 2015/ ECE/ 064	Medam Ravindra
60	TF/ 2015/ ECE/ 065	R.Prabhu (pudukkottai)
61	TF/ 2015/ ECE/ 066	R.M.Senthilkumar
62	TF/ 2015/ ECE/ 067	C.Hepzibah
63	TF/ 2015/ ECE/ 068	R.Anima
64	TF/ 2015/ ECE/ 069	R.Ramya
65	TF/ 2015/ ECE/ 070	S.Radhakrishnan
66	TF/ 2015/ ECE/ 071	G.Yovan Mariya Stephen
67	TF/ 2015/ ECE/ 072	S.A.Jenifar Nisha
68	TF/ 2015/ ECE/ 074	N.Vasanthbabu
69	TF/ 2015/ ECE/ 075	M.Shanmugapriya
70	TF/ 2015/ ECE/ 076	Dasari Arun Kumar
71	TF/ 2015/ ECE/ 077	A.Josephine Pushpa Arasi
72	TF/ 2015/ ECE/ 078	M B Anitha
73	TF/ 2015/ ECE/ 079	S.Sankar Ganesh
74	TF/ 2015/ ECE/ 080	K.Selvaraj
75	TF/ 2015/ ECE/ 081	S.Vaishnavi
76	TF/ 2015/ ECE/ 082	A.Annalakshmi
77	TF/ 2015/ ECE/ 083	S.Vasanthmohan
78	TF/ 2015/ ECE/ 084	K.Akilandeswari
79	TF/ 2015/ ECE/ 085	G.Shyni
80	TF/ 2015/ ECE/ 086	N.Arumugam
81	TF/ 2015/ ECE/ 088	N.Deepan
82	TF/ 2015/ ECE/ 089	Kunkunuru Srikanth Babu
83	TF/ 2015/ ECE/ 090	Shwetank
84	TF/ 2015/ ECE/ 091	P.Abisha Selva Jeni
85	TF/ 2015/ ECE/ 092	N.Latha
86	TF/ 2015/ ECE/ 093	G.Senthilkumar
87	TF/ 2015/ ECE/ 094	R.Prabhu(theni)
88	TF/ 2015/ ECE/ 095	T.Bhuvaneswari
89	TF/ 2015/ ECE/ 096	T.V.Niveda

90	TF/ 2015/ ECE/ 097	D.Abidha
91	TF/ 2015/ ECE/ 098	T.Manokaran
92	TF/ 2015/ ECE/ 099	M.R.Gowtham

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING(EEE)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ EEE/003	K.V. Induji
2	TF/2015/ EEE/004	R. Manjula
3	TF/2015/ EEE/005	M.P. Anjana
4	TF/2015/ EEE/006	Athira Raju
5	TF/2015/ EEE/007	S. Arun
6	TF/2015/ EEE/008	E.P. Lanstein Joe
7	TF/2015/ EEE/009	M.M. Rajan Singaravel
8	TF/2015/ EEE/010	C. Patturaja
9	TF/2015/ EEE/011	A. Mariyammal
10	TF/2015/ EEE/012	D. Muralisankar
11	TF/2015/ EEE/013	R. Ravi
12	TF/2015/ EEE/014	N. Kalyana Madhavan
13	TF/2015/ EEE/017	V. Vetriselvi
14	TF/2015/ EEE/018	R. Saravanakumar
15	TF/2015/ EEE/019	Bandaru Venkateswarlu
16	TF/2015/ EEE/020	S.B. Suphaseni
17	TF/2015/ EEE/021	R. Agasthiya
18	TF/2015/ EEE/022	S. Naveen
19	TF/2015/ EEE/023	P. Anitha
20	TF/2015/ EEE/024	M. Vijayasarathy
21	TF/2015/ EEE/025	D. Glory Rebekah Selvamani
22	TF/2015/ EEE/026	M. Abirami
23	TF/2015/ EEE/027	L. Gomathy
24	TF/2015/ EEE/029	Felix Paulson
25	TF/2015/ EEE/030	Ramachandrarao Pydi
26	TF/2015/ EEE/031	B. Annaselvaraj

27	TF/2015/ EEE/033	G. Jayalashmi
28	TF/2015/ EEE/035	M.S. Suhanya
29	TF/2015/ EEE/036	G. Devanathan
30	TF/2015/ EEE/038	M. Jayachandran
31	TF/2015/ EEE/039	A. Annie Steffy Beula
32	TF/2015/ EEE/040	V. Nithish Kumar
33	TF/2015/ EEE/041	K. Sekar
34	TF/2015/ EEE/042	S. Grace Sadhana
35	TF/2015/ EEE/043	A. Dinakaran
36	TF/2015/ EEE/044	Kalaivani Thangamani
37	TF/2015/ EEE/045	S. Kavin Kumar
38	TF/2015/ EEE/046	N. Ramkumar
39	TF/2015/ EEE/047	S. Raghavendran
40	TF/2015/ EEE/048	R. Saravanan
41	TF/2015/ EEE/049	N. Ranganathan
42	TF/2015/ EEE/050	S. Jeny Sophia
43	TF/2015/ EEE/051	T. Paavendhan
44	TF/2015/ EEE/052	M.R. Roosevelt
45	TF/2015/ EEE/053	T.S. Jayamohan
46	TF/2015/ EEE/054	M. Vadivel
47	TF/2015/ EEE/055	P.M. Arumugapandi
48	TF/2015/ EEE/056	C. Gomathi
49	TF/2015/ EEE/057	S. Gopala Krishna
50	TF/2015/ EEE/059	N. Sridevi
51	TF/2015/ EEE/060	Jada Venu
52	TF/2015/ EEE/061	D. Sinduja
53	TF/2015/ EEE/062	R. Sivakami
54	TF/2015/ EEE/063	Karri. Nagaraju
55	TF/2015/ EEE/064	P. Abarnaa
56	TF/2015/ EEE/065	S. Christabel Dorothy Kezia
57	TF/2015/ EEE/066	R. Arun Prakash
58	TF/2015/ EEE/067	K. Karthik

59	TF/2015/ EEE/068	L. Maheswari
60	TF/2015/ EEE/069	S. Ram Vignesh
61	TF/2015/ EEE/070	Ayush Kumar Laad
62	TF/2015/ EEE/071	K. Narayanan
63	TF/2015/ EEE/072	K.N. Bharadwaj Tirumala
64	TF/2015/ EEE/073	B. Dheepika
65	TF/2015/ EEE/074	Vijaya Vardhan Reddy Pichapati
66	TF/2015/ EEE/075	S. Elam Cheren
67	TF/2015/ EEE/076	C.P. Kandasamy
68	TF/2015/ EEE/078	S. Kalai Vani
69	TF/2015/ EEE/079	S. Sivaraman
70	TF/2015/ EEE/080	S. Srinivasan
71	TF/2015/ EEE/081	S. Sathish Kumar
72	TF/2015/ EEE/082	Milind Dattatraya Bagewadi
73	TF/2015/ EEE/083	I. Aruna Devi
74	TF/2015/ EEE/085	J. Helina Angel
75	TF/2015/ EEE/086	M. Gopinath Murali
76	TF/2015/ EEE/087	D.S. Priya
77	TF/2015/ EEE/088	R. Victor Mano

DEPARTMENT OF ENERGY & ENVIRONMENTAL ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/EE/001	M.Mathangi
2	TF/2015/EE/003	Haritha Meruvu
3	TF/2015/EE/004	K.M.Karthik
4	TF/2015/EE/005	M.Karthikkaruppu
5	TF/2015/EE/006	G.Shanthi
6	TF/2015/EE/008	S.Dinesh Kumar
7	TF/2015/EE/009	Sourav Kumar Bagchi
8	TF/2015/EE/011	Vivek Prakash Pankaj
9	TF/2015/EE/013	M.R.Roosevelt
10	TF/2015/EE/014	Anuradha Kumari

11	TF/2015/EE/015	R.Agnesgranabh
12	TF/2015/EE/018	Manikandan
13	TF/2015/EE/019	P.Sobana Pirya
14	TF/2015/EE/020	S.Senthil Kumar
15	TF/2015/EE/021	Srinivasa Rao Ganta
16	TF/2015/EE/022	K.Preeth Kumar
17	TF/2015/EE/023	P.A. Anjana
18	TF/2015/EE/024	Gayathri S Mohan
19	TF/2015/EE/027	S.Devaanandan
20	TF/2015/EE/028	Ayush Kumar Laad
21	TF/2015/EE/029	R.Shree Vidhya
22	TF/2015/EE/030	R.Suganya
23	TF/2015/EE/032	L.Sravanthi
24	TF/2015/EE/033	M.Subramaniyan
25	TF/2015/EE/034	M.Nandhakumar
26	TF/2015/EE/035	K.P.Bindhya
27	TF/2015/EE/037	Snigdhendubala Pradhan
28	TF/2015/EE/040	K.K.Vasumathi
29	TF/2015/EE/041	S.Saravanan

DEPARTMENT OF HUMANITIES (ECONOMICS)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ECO/001	B.Jegajothi
2	TF/2015/ECO/002	Navin Kumar Rajpal
3	TF/2015/ECO/003	A.Alexander
4	TF/2015/ECO/004	S.Vigneswaran
5	TF/2015/ECO/005	S.Yoga
6	TF/2015/ECO/006	D.Anbalagan
7	TF/2015/ECO/007	P.Muthukumar
8	TF/2015/ECO/008	R.Gayathri
9	TF/2015/ECO/009	S.Thamarai Selvi
10	TF/2015/ECO/011	M.Balasubramani

11	TF/2015/ECO/012	P.Rajasimman
12	TF/2015/ECO/013	B.Murugesan
13	TF/2015/ECO/014	K.Kirubagaran
14	TF/2015/ECO/015	A.Antonyraj
15	TF/2015/ECO/016	A.Selvakumar

DEPARTMENT OF HUMANITIES (ENGLISH)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ENG/001	L.Krishnaraj
2	TF/2015/ENG/002	D.R.Rahul
3	TF/2015/ENG/004	K.Gokulnath
4	TF/2015/ENG/005	R.Indumathy
5	TF/2015/ENG/006	K.Vijayakumar
6	TF/2015/ENG/007	Niranjan Uppoor
7	TF/2015/ENG/009	A.Ukkirapandian
8	TF/2015/ENG/010	S.Ramalakshmi
9	TF/2015/ENG/011	J.Muthulekha
10	TF/2015/ENG/012	G.Sankar
11	TF/2015/ENG/013	M.P.Shabitha
12	TF/2015/ENG/014	Navneet Istari Utlawar
13	TF/2015/ENG/015	Arunna Balachandran
14	TF/2015/ENG/016	R.Karthick Babu
15	TF/2015/ENG/017	P.Suria Thilagam
16	TF/2015/ENG/018	M.Venkateshwari
17	TF/2015/ENG/019	P.Ramakrishnan
18	TF/2015/ENG/020	P.Hiltrud Dave Eve
19	TF/2015/ENG/021	U.Gopika Sankar
20	TF/2015/ENG/022	S.P.Vanjulavalli
21	TF/2015/ENG/023	T.G.Akila
22	TF/2015/ENG/024	G.Vijayalakshmi
23	TF/2015/ENG/025	J.Priya
24	TF/2015/ENG/026	V.B.Sowmiya

25	TF/2015/ENG/027	K.Manjula Bashini
26	TF/2015/ENG/028	Livingston George
27	TF/2015/ENG/029	S.Shinoj Kumar
28	TF/2015/ENG/030	P.Priya
29	TF/2015/ENG/031	R. Jeyadevi

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ICE/001	E.Kalaiselvan
2	TF/2015/ICE/002	Mila Mary Job
3	TF/2015/ICE/003	S.Karthick
4	TF/2015/ICE/004	N.D.Dayal
5	TF/2015/ICE/005	P.Shyam Sundar
6	TF/2015/ICE/006	V.Indhuja
7	TF/2015/ICE/007	D.Mercy
8	TF/2015/ICE/008	Kush Mudgal
9	TF/2015/ICE/009	R.Ravi
10	TF/2015/ICE/010	Srinivasa Subbarao Naga
11	TF/2015/ICE/011	Rona Joseph
12	TF/2015/ICE/012	R.Saravanakumar
13	TF/2015/ICE/013	Elizabath Rajan
14	TF/2015/ICE/014	D.Mary Magdaline Zeena
15	TF/2015/ICE/015	D.Josephine Selvarani Ruth
16	TF/2015/ICE/016	V.A.Vengatkumar
17	TF/2015/ICE/017	M.Vijayasarathy
18	TF/2015/ICE/018	C.Barath Kanna
19	TF/2015/ICE/019	V.Raminiwas
20	TF/2015/ICE/020	S.Murugesan
21	TF/2015/ICE/021	J.Sivaraman
22	TF/2015/ICE/022	P.Annapoorani
23	TF/2015/ICE/023	G.Gopalakrishnan
24	TF/2015/ICE/024	S.Revathi

25	TF/2015/ICE/025	R.Shiva Kumar
26	TF/2015/ICE/026	M.Lavanya
27	TF/2015/ICE/027	Kalaivani Thangamani
28	TF/2015/ICE/028	D.Sengeni
29	TF/2015/ICE/029	B.Girirajan
30	TF/2015/ICE/030	M.Sudha
31	TF/2015/ICE/031	K.Rajkumar
32	TF/2015/ICE/032	Abhinav Srivastava
33	TF/2015/ICE/033	L. Maheswari
34	TF/2015/ICE/034	M. Suganya
35	TF/2015/ICE/035	V. Madhumathi
36	TF/2015/ICE/036	S.Vaishnavi

DEPARTMENT OF MATHEMATICS		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/ 2015/ MATHS/ 001	T.Senthilkumar
2	TF/ 2015/ MATHS/ 002	N.Eswar
3	TF/ 2015/ MATHS/ 003	A.Purusothaman
4	TF/ 2015/ MATHS/ 004	U.Vadivelan
5	TF/ 2015/ MATHS/ 005	R.Anbuvithya
6	TF/ 2015/ MATHS/ 006	S.Ramya
7	TF/ 2015/ MATHS/ 007	V.Vijaya Bharathi
8	TF/ 2015/ MATHS/ 008	K.Manickam
9	TF/ 2015/ MATHS/ 009	K.Sakthi Devi
10	TF/ 2015/ MATHS/ 010	K.Saravanan
11	TF/ 2015/ MATHS/ 011	V.Balakumar
12	TF/ 2015/ MATHS/ 012	A.Balu
13	TF/ 2015/ MATHS/ 013	S.R.Prathiba
14	TF/ 2015/ MATHS/ 014	D.Murugan
15	TF/ 2015/ MATHS/ 016	R.Sathya
16	TF/ 2015/ MATHS/ 017	A.Karthika
17	TF/ 2015/ MATHS/ 018	J.Sabaskar

18	TF/ 2015/ MATHS/ 019	P.Umamaheswari
19	TF/ 2015/ MATHS/ 020	J.Rajakumar
20	TF/ 2015/ MATHS/ 021	R.Prem kumar
21	TF/ 2015/ MATHS/ 022	R.Pandiya Raj
22	TF/ 2015/ MATHS/ 023	J.Jayabharathiraj
23	TF/ 2015/ MATHS/ 024	K.Premkumar
24	TF/ 2015/ MATHS/ 025	P.Joyal Roy
25	TF/ 2015/ MATHS/ 026	C.Sivapoornapriya
26	TF/ 2015/ MATHS/ 027	V.Amreetha
27	TF/ 2015/ MATHS/ 028	T.Prabha
28	TF/ 2015/ MATHS/ 029	K.Thennarasu
29	TF/ 2015/ MATHS/ 030	Surender Ontela
30	TF/ 2015/ MATHS/ 031	K.Shri Akiladevi
31	TF/ 2015/ MATHS/ 032	B.S.Kalpana
32	TF/ 2015/ MATHS/ 033	K.Lal Gipson
33	TF/ 2015/ MATHS/ 034	K.Jeyabal
34	TF/ 2015/ MATHS/ 035	G.Rajasekaran
35	TF/ 2015/ MATHS/ 036	Sreenivasulu Ballem
36	TF/ 2015/ MATHS/ 037	Srinivas Jangili
37	TF/ 2015/ MATHS/ 038	N.Sakthivel
38	TF/ 2015/ MATHS/ 040	R.Aruldoss

DEPARTMENT OF MANAGEMENT STUDIES		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/MBA/001	M.Rupesh Kumar
2	TF/2015/MBA/003	B.Malar Mannan
3	TF/2015/MBA/004	R.Krishnakumari
4	TF/2015/MBA/005	L.Philo Daisy Rani
5	TF/2015/MBA/006	P.Murugan
6	TF/2015/MBA/007	Pradeep Kumar Behera
7	TF/2015/MBA/008	M.Nithya
8	TF/2015/MBA/009	K.Nirmala

9	TF/2015/MBA/010	Tirthala Naga Sai Kumar
10	TF/2015/MBA/011	Samir Kumar Jha
11	TF/2015/MBA/012	K.Rajasekar
12	TF/2015/MBA/013	R.Gayathri
13	TF/2015/MBA/014	R.Yamini
14	TF/2015/MBA/015	A.Eronimus
15	TF/2015/MBA/016	B.Manikanden
16	TF/2015/MBA/017	K.K.Ravichandran
17	TF/2015/MBA/018	M.Pachayappan
18	TF/2015/MBA/019	V.Abdul Salahudeen
19	TF/2015/MBA/020	M.Pravin Kumar
20	TF/2015/MBA/021	T.Dhanabalan
21	TF/2015/MBA/022	B.John Wilson
22	TF/2015/MBA/023	S.M.Soundria
23	TF/2015/MBA/024	K.Rahmath Nisha
24	TF/2015/MBA/025	R.Venkatesan
25	TF/2015/MBA/026	J.Rajesh
26	TF/2015/MBA/027	A.Antonyraj
27	TF/2015/MBA/028	K.Mohamed Jasim
28	TF/2015/MBA/029	K.Nigama
29	TF/2015/MBA/030	G.V.Sobha
30	TF/2015/MBA/031	C.Gangatharan

DEPARTMENT OF MECHANICAL ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ MECH/001	K. Venkateswara Sarma
2	TF/2015/ MECH/002	J. Sivakumar
3	TF/2015/ MECH/003	K. Saran Kumar
4	TF/2015/ MECH/004	S. Kathiravan
5	TF/2015/ MECH/005	V. Dhinakaran
6	TF/2015/ MECH/006	Gunti Amarnath
7	TF/2015/ MECH/007	M. Ayyappa Raja

8	TF/2015/ MECH/008	D. Prabu
9	TF/2015/ MECH/009	S. Duraisamy
10	TF/2015/ MECH/010	R. Suryanarayanan
11	TF/2015/ MECH/011	G. Pari
12	TF/2015/ MECH/012	S. Tamilselvan
13	TF/2015/ MECH/013	S. Ramkumar
14	TF/2015/ MECH/014	Arun Nair
15	TF/2015/ MECH/015	D. Vivekanandhan
16	TF/2015/ MECH/016	M. Vishukumar
17	TF/2015/ MECH/017	J. Anandh
18	TF/2015/ MECH/018	M. ArulPrakasaJothi
19	TF/2015/ MECH/019	N. Pravin Kumar
20	TF/2015/ MECH/020	Raviarun Arumugaraj
21	TF/2015/ MECH/021	K.K. Ajith Kumar
22	TF/2015/ MECH/022	K. Panneer Selvam
23	TF/2015/ MECH/023	J.S. Bibin
24	TF/2015/ MECH/024	K. Parthiban
25	TF/2015/ MECH/025	K. Jesuraj
26	TF/2015/ MECH/026	K. Preeth Kumar
27	TF/2015/ MECH/027	B. Muralidharan
28	TF/2015/ MECH/028	R. Manickam
29	TF/2015/ MECH/029	S. Sathish Kumar
30	TF/2015/ MECH/030	S. Parthiban
31	TF/2015/ MECH/031	S. Ramasamy
32	TF/2015/ MECH/032	T. Ponnusamy
33	TF/2015/ MECH/033	S. Manikandan
34	TF/2015/ MECH/034	T. Anantharaj
35	TF/2015/ MECH/035	S. Baskaran

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING (MME)		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ MME/001	C. Anand Chairman
2	TF/2015/ MME/003	P. Dinesh
3	TF/2015/ MME/004	S. Ramakrishnan
4	TF/2015/ MME/005	R. John Felix Kumar
5	TF/2015/ MME/008	U. Harsha
6	TF/2015/ MME/009	J. Maya
7	TF/2015/ MME/010	T. Shanmugasundaram
8	TF/2015/ MME/011	Gurrala Arun Kumar
9	TF/2015/ MME/012	S. Manivannan
10	TF/2015/ MME/013	G. Gauthamprakash

DEPARTMENT OF PHYSICS		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/PHY/002	M.Prabu
2	TF/2015/PHY/003	K.S.Nivedhitha
3	TF/2015/PHY/004	M.Nirosha
4	TF/2015/PHY/005	Srinivasa Subbarao Naga
5	TF/2015/PHY/006	D.Silambarasan
6	TF/2015/PHY/007	R.Senthil
7	TF/2015/PHY/008	T.Prabhakaran
8	TF/2015/PHY/009	B.Srimathy
9	TF/2015/PHY/010	K.Prakash
10	TF/2015/PHY/011	R.Gunaseelan
11	TF/2015/PHY/012	K.Ramachandran
12	TF/2015/PHY/013	S.Boomadevi
13	TF/2015/PHY/014	L.Saravanan
14	TF/2015/PHY/015	P.Michael Sahaya Lucy Shanthi
15	TF/2015/PHY/016	S.Wilfred Prasanna
16	TF/2015/PHY/017	N.Imthiyas Ahamed
17	TF/2015/PHY/018	Bandaru Purna Chandra Rao

18	TF/2015/PHY/019	Kumaragurubaran
19	TF/2015/PHY/020	L.R. Shobin
20	TF/2015/PHY/021	Pachava Vengal Rao
21	TF/2015/PHY/022	S.Supriya
22	TF/2015/PHY/023	T.K.Abilasha Ramadhas
23	TF/2015/PHY/024	K.R.Vijayaraghavan
24	TF/2015/PHY/025	Snigdhatanu Acharya
25	TF/2015/PHY/026	K.Prabakaran
26	TF/2015/PHY/027	M.Anusha
27	TF/2015/PHY/028	P.S.A.Mahiban Rufus
28	TF/2015/PHY/029	T.Arun
29	TF/2015/PHY/030	M.Muneeswaran
30	TF/2015/PHY/031	S.Ramachandran
31	TF/2015/PHY/032	S.Chandra Kishore

DEPARTMENT OF PRODUCTION ENGINEERING		
S.NO	**APPLICATION NO.**	**NAME**
1	TF/2015/ PROD/001	K. Ganesa Balamurugan
2	TF/2015/ PROD/002	S. Sudhakaran
3	TF/2015/ PROD/003	R. Vignesh
4	TF/2015/ PROD/004	A. Dhinakar
5	TF/2015/ PROD/005	R. Dinesh Kumar
6	TF/2015/ PROD/006	R. Parthiban
7	TF/2015/ PROD/007	S. Mohan
8	TF/2015/ PROD/008	V. Satheeshkumar
9	TF/2015/ PROD/009	S. Ramkumar
10	TF/2015/ PROD/010	I. Arungandhi
11	TF/2015/ PROD/011	Ramakrishnan Ramachandran
12	TF/2015/ PROD/012	K.M. Maneesh
13	TF/2015/ PROD/013	G. Suresh
14	TF/2015/ PROD/014	J. Anandh
15	TF/2015/ PROD/015	M. Vishnukumar

16	TF/2015/ PROD/016	N. Pravin Kumar
17	TF/2015/ PROD/017	Raviarun Arumugaraj
18	TF/2015/ PROD/018	R. Varthini
19	TF/2015/ PROD/019	K. Rajesh Kumar
20	TF/2015/ PROD/020	R. Venkatesh
21	TF/2015/ PROD/021	B. Anbarasan
22	TF/2015/ PROD/022	S. Baskaran
23	TF/2015/ PROD/023	B. Radhul
24	TF/2015/ PROD/024	B. Muralidharan
25	TF/2015/ PROD/025	N.M. Vijay Aravindhan
26	TF/2015/ PROD/026	T. Anantharaj
27	TF/2015/ PROD/027	M. Sriranganathan
28	TF/2015/ PROD/028	S. Thiyagarajan
29	TF/2015/ PROD/029	F. Leo Princely
30	TF/2015/ PROD/030	G. Jaykrishnan
31	TF/2015/ PROD/031	S. Sujith
32	TF/2015/ PROD/032	T. Ponnusamy
33	TF/2015/ PROD/033	S. Karthikeyan
34	TF/2015/ PROD/034	Thayumanavan Eraniyan

SYLLABUS FOR WRITTEN TEST FOR SELECTION OF TEMPORARY FACULTY – JUNE -2015

DEPARTMENT OF ARCHITECTURE

Building Construction and Materials
Building Services (Water supply and Drainage, Lighting, Air-conditioning, Fire, Electrical and Mechanical Services)
History/ Contemporary Architecture
Energy Efficient/ Green Buildings
Urban Planning/ urban Design
Landscape Architecture
Professional Practice, Bye-laws and Construction Management

DEPARTMENT OF ENERGY & ENVIRONMENTAL ENGINEERING

1. Heat Transfer.
2. Mass Transfer
3. Fluid Mechanics.
4. Thermal Engineering.
5. Wind Energy
6. Solar energy.
7. Air Pollution.
8. Water Pollution.
9. Basics of Mechanics
10. Basics of Electrical Engineering and Biotechnology.

DEPARTMENT OF CHEMICAL ENGINEERING

ENGINEERING MATHEMATICS

Linear Algebra: Matrix algebra, Systems of linear equations, Eigen values and eigenvectors.

Calculus*:* Functions of single variable, Limit, continuity and differentiability, Mean value theorems, Evaluation of definite and improper integrals, Partial derivatives, Total derivative, Maxima and minima, Gradient, Divergence and Curl, Vector identities, Directional derivatives, Line, Surface and Volume integrals, Stokes, Gauss and Green's theorems.

Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Cauchy's and Euler's equations, Initial and boundary value problems, Laplace transforms, Solutions of one dimensional heat and wave equations and Laplace equation.

Complex variables: Analytic functions, Cauchy's integral theorem, Taylor and Laurent series, Residue theorem.

Probability and Statistics: Definitions of probability and sampling theorems, Conditional probability, Mean, median, mode and standard deviation, Random variables, Poisson, Normal and Binomial distributions.

Numerical Methods: Numerical solutions of linear and non-linear algebraic equations Integration by trapezoidal and Simpson's rule, single and multi-step methods for differential equations.

CHEMICAL ENGINEERING

Process Calculations and Thermodynamics: Laws of conservation of mass and energy; use of tie components; recycle, bypass and purge calculations; degree of freedom analysis. First and Second laws of thermodynamics. First law application to close and open systems. Second law and Entropy. Thermodynamic properties of pure substances: equation of state and departure function, properties of mixtures: partial molar properties, fugacity, excess properties and activity coefficients; phase equilibria: predicting VLE of systems; chemical reaction equilibria.

Fluid Mechanics and Mechanical Operations: Fluid statics, Newtonian and non-Newtonian fluids, Bernoulli equation, Macroscopic friction factors, energy balance, dimensional analysis, shell balances, flow through pipeline systems, flow meters, pumps and compressors, packed and fluidized beds, elementary boundary layer theory, size reduction and size separation; free and hindered settling; centrifuge and cyclones; thickening and classification, filtration, mixing and agitation; conveying of solids.

Heat Transfer: Conduction, convection and radiation, heat transfer coefficients, steady and unsteady heat conduction, boiling, condensation and evaporation; types of heat exchangers and evaporators and their design.

Mass Transfer: Fick's laws, molecular diffusion in fluids, mass transfer coefficients, film, penetration and surface renewal theories; momentum, heat and mass transfer analogies; stagewise and continuous contacting and stage efficiencies; HTU & NTU concepts design and operation of equipment for distillation, absorption, leaching, liquid-liquid extraction, drying, humidification, dehumidification and adsorption.

Chemical Reaction Engineering: Theories of reaction rates; kinetics of homogeneous reactions, interpretation of kinetic data, single and multiple reactions in ideal reactors, non-ideal reactors; residence time distribution, single parameter model; non-isothermal reactors; kinetics of heterogeneous catalytic reactions; diffusion effects in catalysis.

Instrumentation and Process Control: Measurement of process variables; sensors, transducers and their dynamics, transfer functions and dynamic responses of simple systems, process reaction curve, controller modes (P, PI, and PID); control valves; analysis of closed loop systems including stability, frequency response and controller tuning, cascade, feed forward control.

Plant Design and Economics: Process design and sizing of chemical engineering equipment such as compressors, heat exchangers, multistage contactors; principles of process economics and cost estimation including total annualized cost, cost indexes, rate of return, payback period, discounted cash flow, optimization in design.

Chemical Technology: Inorganic chemical industries; sulfuric acid, NaOH, fertilizers (Ammonia, Urea, SSP and TSP); natural products industries (Pulp and Paper, Sugar, Oil, and Fats); petroleum refining and petrochemicals; polymerization industries; polyethylene, polypropylene, PVC and polyester synthetic fibers.

DEPARTMENT OF CHEMISTRY

Organic Chemistry

Reaction mechanism: Definition of reaction mechanism, transition state theory, kinetics, qualitative picture. Substituent effects, linear free energy relationships, Hammett equation and related modifications. Basic mechanistic concepts like kinetic *vs* thermodynamic control, Hammond postulate, Curtin-Hammett principle, isotope effects, general and specific acid-base catalysis, and nucleophilic catalysis.

Nucleophilic substitution: Reactivity, structural and solvent effects, substitution in S_N1, S_N2, S_Ni. Neighbouring group participation - Norbornyl and bridgehead systems, substitution at allylic and vinylic carbons, substitution by ambident nucleophiles, aromatic nucleophilic substitution, S_NAr, benzyne, S_N1. Aromatic nucleophilic substitution of activated halides

Addition to carbon-carbon multiple bonds: Electrophilic, nucleophilic and free radical addition. Stereochemistry and orientation of the addition.Hydrogenation, halogenation, hydroxylation, hydroboration. Addition to carbonyl compounds - 1,2 and 1,4-addition, benzoin, Knoevenegal, Stobbe and Darzenglycidic ester reactions.

Elimination reactions: E1, E2, E1CB- mechanism, stereochemistry, orientation of double bonds - Hoffmann, Zaitsev, Bredts rule - pyrolytic elimination, Chugaev reaction. Oxidation and reduction: Reduction using hydride reagents, $LiAlH_4$, $NABH_4$ and other organoboranes: chemo- and stereoselectivity, catalytic hydrogenation (homogenous and heterogeneous catalysts), Swern and Dess-Martin oxidations, Corey-Kim oxidation, PCC, $KMnO_4$ oxidations.

Theories of aromaticity: Aromaticity, antiaromaticity, Huckel's rule, annulences and heteroannulenes, fullerenes (C60). Other conjugated systems, Chichibabin reaction. Aromatic electrophilic substitution: Orientation, reactivity, and mechanisms. Substitution in thiophene and pyridine. Reactive intermediates - carbenes, nitrenes, radicals, Ylides - Formation, stability and their applications.

Fundamentals of photochemistry: Qualitative introduction about different transitions, cis-trans isomerization, Paterno-Buchi reaction, Norrish type I and II reactions, photo reduction of ketones, photochemistry of arenes, di-pi-methane and Hoffmann-Loeffler-Freytag rearrangements.

Pericyclic reactions: Classification, electrocyclic, sigmatropic, cycloaddition and ene reactions, Woodward-Hoffmann rules, and FMO theory, Claisen, Cope, Sommelet-Hauser, and Diels-Alder reactions in synthesis, stereochemical aspects.

Optical activity and chirality: absolute and relative configuration - R-S notation system, molecules with more than one asymmetric center. Enantiotopic and diastereotopic atoms, groups and faces.Stereo specific and stereo selective synthesis, optical isomerism of biphenyls, allenes and spiranes.Compounds containing chiral nitrogen and sulfur.Geometrical isomerism, E, Z- nomenclature of olefins, cumulenes and oximes.

Conformational analysis: Fischer projection, inter-conversion of Sawhorse, Newman and Fischer projections, conformational analysis of ethane and disubstituted ethane derivatives, cycloalkanes and substituted cyclohexane. Conformation and stereochemistry of cis and transdecalin and 9-methyldecalin. Anomeric effect in cyclic compounds.

Rearrangementreactions: involving electron deficient, carbon, nitrogen, oxygen centers, emphasis on synthetic utility of these rearrangements. Baker–Venkataraman, benzilic acid, [1,2]-Meisenheimer, [2,3]-Meisenheimer, Wagner-Meerwein, Pinacol, Demyanov, Dienone-Phenol, Favorskii, Wolff, Hofmann, Curtius, Lossen, Schmidt, Beckmann, Benzidine, Hofmann-Loffler rearrangements.

Introduction to retrosynthesis: Synthon, synthetic equivalent, target molecule, functional group interconversion, disconnection approach, importance of the order of events in organic synthesis. Chemoselectivity, one group C-C and C-X disconnection (disconnection of alcohols, alkenes, and carbonyl compounds).

Two group C-C & C-X disconnections: 1,3 and 1,5 difunctionalised compounds, α,β-unsaturated carbonyl compounds, control in carbonyl condensation, synthesis of 3,4,5 and 6 membered rings in organic synthesis. Diels- Alder reaction, connection in retro synthesis.

Protecting groups: Protection of hydroxyl, carboxyl, carbonyl, amino groups.Umpolung reagents, definition of umpolung, acyl anion equivalent, protection of carbon-carbon multiple bonds.Illustration of protection and deprotection in synthesis.

Reagents in organic synthesis: Functional group transformation, complex metal hydrides, Gilman's reagent, lithium diisoproplyamide (LDA), dicyclohexylcarbodimide, timethylsilyl iodide, Woodward and Provost hydroxylation, osmium tetraoxide, DDQ, SeO_2, lead tetraacetate, H_2O_2,phase transfer catalyst, crown ethers and Merrifield resin, Wilkinson's catalyst, Baker yeast.

Name reactions in organic synthesis: Peterson olefination, McMurry, Shapiro reaction, Wittig and its modifications, palladium based reactions - Suzuki, Heck, Sonagashira, Hiyama, Stille, Glazer-Eglington coupling, Sharplessepoxidation, Henry reaction, Michael addition, aldol, Claisen, Dieckman condensations, Barton, Baylis Hillman reaction, Stork enamine reaction and selective mono and di alkylation *via*enamines.

Inorganic Chemistry

Theories of coordination compounds - VB theory - CFT - splitting of d orbitals in ligand fields and different symmetries - CFSE - factors affecting the magnitude of 10 Dq - evidence for crystal field stabilization - spectrochemical series - site selection in spinels - tetragonal distortion from octahedral symmetry - Jahn-Teller distortion - Nephelauxetic effect - MO theory - octahedral - tetrahedral and square planar complexes - p-bonding and molecular orbital theory - experimental evidence for p-bonding.

Reactions: Substitution reactions in square planar complexes - the rate law for nucleophilic substitution in a square planar complex - the trans effect - theories of trans effect - mechanism of nucleophilic substitution in square planar complexes - kinetics of octahedral substitution - ligand field effects and reaction rates - mechanism of substitution in octahedral complexes - reaction rates influenced by acid and bases - racemization and isomerization - mechanisms of redox reactions - outer sphere mechanisms - excited state outer sphere electron transfer reactions - inner sphere mechanisms - mixed valent complexes.

Electronic spectra and magnetism: Microstates, terms and energy levels for $d^1 - d^9$ ions in cubic and square fields - selection rules - band intensities and band widths - Orgel and Tanabe-Sugano diagrams - evaluation of 10 Dq and β for octahedral complexes of cobalt and nickel - charge transfer spectra - magnetic properties of coordination compounds - change in magnetic properties of complexes in terms of spin orbit coupling - temperature independent paramagnetism - spin cross over phenomena.

IR and Raman spectroscopy: Structural elucidation of simple molecules like N_2O, ClF_3, NO_3^-, ClO_4^- - effect of coordination on ligand vibrations - uses of group vibrations in the structural elucidation of metal complexes of urea, thiourea, cyanide, thiocyanate, nitrate, sulphate and DMSO - effect of isotopic substitution on the vibrational spectra of molecules - applications of Raman spectroscopy

Structure: Structure of coordination compounds with reference to the existence of various coordination numbers (2, 3, 4, 5 & 6) - site preferences - isomerism - trigonal prism - absolute configuration of complexes - stereo selectivity and conformation of chelate rings - coordination number seven and eight. Spectral and magnetic properties of lanthanide and actinide complexes.

Structure and bonding in organometallics: 18/16-electron rule - metal carbonyls – bonding – spectra – nitrosyls - dinitrogen complexes – phosphines - metal alkyls, aryls, hydrides and dihydrogen complexes - π-bonding ligands – metallocenes - electronic structure and bonding in ferrocene - synthesis, physical and spectroscopic properties of metallocenes - fluxional molecules.

Reaction mechanism and catalysis: Ligand substitution - oxidative addition and reductive elimination - 1,1 and 1,2-insertion - addition and elimination reactions - alkene isomerization- hydroboration - hydrocyanation - hydrogenation of olefins - Wilkinson's catalyst - hydroformylation of olefins - Wacker-Smidt synthesis - Monsanto acetic acid process -Eastman Halcon process - Fischer-Tropsch process - hydrosilylation.

Carbenes: Fischer and Schrock carbenes - bonding & reactivity - Grubbs catalyst - carbynes structure, synthesis and reactions- alkene metathesis – mechanism - RCM-ROMP, SHOP and ADMET - C-H and C-C activation - agostic bonds - Ziegler-Natta polymerization of olefins - Heck reaction - The PausonKhand reaction - Ene reaction.

Transport of metal ions: Uptake, transport and storage of metal ions by organisms - structure and functions of biological membranes - the generation of concentration gradients (the Na^+-K^+ pump) - mechanisms of ion-transport across cell membranes – bleomycin - siderophores (e.g. enterobactin and desferrioxamine) - transport of iron by transferring - storage of iron by ferritin - bio chemistry of calcium as hormonal messenger.

Metalloporphyrins/Metalloenzymes: Dioxygen transport and storage - hemoglobin and myoglobin: electronic and spatial structures - hemeythrin and hemocyanine - synthetic oxygen carriers, model systems - blue copper proteins (Cu) - iron-sulfur proteins (Fe)-cytrochromes electron transport chain - carbon monoxide poisoning - iron enzymes - peroxidase, catalase and cytochrome P-450, copper enzymes - superoxide dismutase, vitamin B12 and B12 coenzymes, photosynthesis - photosystem-I & II, nitrogen fixation, cisplatin.

Fundamentals: Types of solids - close packing of atoms and ions - bcc , fcc and hep voids - Goldschmidt radius ratio - derivation - its influence on structures - structures of rock salt - cesium chloride - wurtzite - zinc blende - rutile - fluroite - antifluorite - diamond and graphite - spinel - normal and inverse spinels and perovskite - lattice energy of ionic crystals - Madelung constant - Born-Haber cycle and its applications.

Theories: Band theory of solids. Free electron Theory, zone theory, MO theory of solids -dislocation in solids: Schottky and Frenkel defects. Line defects and plane defects – non -stoichiometric compounds. Electrical properties: Energy bands, insulators, semiconductors and conductors - super conductors - dielectric properties, piezo-electricity, ferro electricity -conductivity in pure metals. Superconductivity: Occurrence, BCS theory, high temperature super conductors - introduction to nanoparticles - metal nanoparticles - particle size determination.

X- Ray diffraction: Theory- the crystal systems and Bravais lattices - Miller indices and labelling of planes - symmetry properties - crystallographic point groups and space groups - X-ray diffraction - powder and rotating crystal methods - systematic absences and determination of lattice types - analysis of X-ray data for cubic system - structure factor and Fourier synthesis - Fundamentals of electron and neutron diffraction.

Nuclear structure: Mass and charge, nuclear moments, binding energy, mass defect, packing fraction, stability, magic numbers. Modes of radioactive decay and rate of radioactive decay - half-life, average life, radioactive equilibrium: Transient and secular - nuclear reactions: Energetics and types - nuclear fission- liquid drop model - nuclear fusion - essential features of nuclear reactors - tracer techniques, neutron activation analysis - carbon and rock dating - application of tracers in chemical analysis, reaction mechanisms, medicine and industry.

Inorganic rings and polymers: Catenation, heterocatenation, intercalation chemistry, one dimensional conductor, polymeric sulfur nitride - Preparation, properties - isopoly anions - heteropoly anions - borazines - phosphazenes - phosphazene polymers - ring compounds of sulphur and nitrogen. Interhalogen compounds - oxoacids of selenium and tellurium. Noble gas chemistry and their halides and pseudohalides.

Physical Chemistry

Quantum chemistry: The failures of classical physics – Black body radiation - photoelectric effect - Bhor's quantum theory, Wave particle duality - Uncertainty principle, Quantum mechanical postulates, Schrodinger equation and its solution to the problem of a particle in one and three dimensional boxes. Quantum mechanical results for a rigid rotator and simple harmonic oscillator, Schrodinger equation for hydrogen atom and its solution - Derivation of Eigen function and Eigen value for hydrogen atom. Term symbols for electronic state in atoms – LS and JJ coupling. The origin of electronic quantum numbers and physical significance - radial probability density - significance of magnetic quantum number with respect to angular momentum.Hydrogen molecule ion and hydrogen molecule - Pauli's exclusion principle.Born Oppenheimer approximation, Mulliken designation of molecular orbitals.MO theory of bonding, MO treatment of H-bonded systems, ethylene, butadiene and benzene. Approximation methods: Perturbation and variation method, wave functions for many electron atoms – Hartree-Fock SCF method, Slater orbitals.

Group theory: Elements of group theory, definition, group multiplication tables, conjugate classes, conjugate and normal subgroups, symmetry elements and operations, point groups, assignment of point groups to molecules, Matrix representation of geometric transformation and point group, reducible and irreducible representations, construction of character tables, bases for irreducible representation, direct product, symmetry adapted linear combinations, projection operators. Orthogonality theorem - its consequences. Symmetry aspects of molecular orbital theory, planar π-systems, symmetry factoring of Huckel determinants, solving it for energy and MOs for ethylene and 1,4-butadiene, sigma bonding in AX_n molecules, hybridization, tetrahedral, octahedral, square planner, trigonal planar, linear, trigonalbipyramidal systems, hybrid orbitals as linear combination of AOs, electronic spectra, selection rule, polarization electron dipole transition, electronic transitions in formaldehyde, butadiene, configuration interaction, vibrational spectra, symmetry types of normal molecules, symmetry coordinates, selection rules for fundamental vibrational transition, IR and Raman activity of fundamentals in CO_2, H_2O, N_2F_2, the rule of mutual exclusion and Fermi resonance.
Thermodynamics: Laws of thermodynamics, Nernst heat theorem and other forms of stating the third law. Thermodynamic quantities at absolute zero, apparent exceptions to the third law - thermodynamics of systems of variable composition, partial molar properties, chemical potential, relationship between partial molar quantities, Gibbs Duhem equation and its applications (the experimental determination of partial molar properties not included) - thermodynamic properties of real gases, fugacity concept, calculation of fugacity of real gas, activity and activity coefficient, concept, definition, standard states and experimental determinations of activity and activity coefficient of electrolytes.

Phase rule, colloids and micelles: Three component systems, representation by triangular diagrams, systems of three liquids, formation of one pair of partially miscible liquids, formation of two pairs of partially miscible liquids, solid, liquid phases, eutectic systems - colloids: Distinction between suspension, colloidal solutions and true solutions, lyophilc and lyophobic colloids, Tyndall effect, stability of colloids, coagulation, emulsions, various types. Micelles: Surfactant (amphipathic molecule), micellisation, critical micelle concentration, size of micelle, aggregation number, thermodynamics of micellization, solubilisation behavior of micelles, reverse micelles.

Electrochemistry: Ion transport in solution - migration, convention and diffusion -Fick's laws of diffusion conduction - influence of ionic atmosphere on the conductivity of electrolytes - The Debye Huckel-Onsager equation for the equivalent conductivity of electrolytes - experimental verification of the equation - conductivity at high field and at high frequency - conductivity of non aqueous solutions - effect of ion association on conductivity. The electrode-electrolyte interface - electrical double layer - electro capillary phenomena -Lippmann equation - the Helmholz - Perrin - Guoy - Chapmann and Stern models, electrokinetic phenomena Tiseiius method of separation of protons of proteins - membrane potential. Elecrodics - mechanism of electrode reactions - polarization and over potential - the Butler volmer equation for one step and multistep electron transfer reaction - significance of equilibrium exchange current density and symmetry factor -significance of transfer coefficient - mechanism of the hydrogen evolution reaction and oxygen evolution reactions. Some electrochemical reactions of technological interest - corrosion and passivity of metals - construction and use of Pourbaix and Evans diagrams - methods of protection of metals from corrosion, fuel cells - electro deposition.

Chemical kinetics: Simultaneous reactions - opposing, parallel and consecutive reactions, the steady state approximation - theories of reaction rates - transition state theory and collision theory a comparison - enthalpy, entropy and free energy of activation, potential energy surfaces, reaction coordinates, kinetic isotope effects, factors determining reaction rates in solution, solvent dielectric constant and ionic strength. Chain reactions - linear reactions, branching chains - explosion limits; Rice–Herzfeld scheme; kinetics of free radical polymerization reactions. Enzyme catalysis - rates of enzyme catalysed reactions - effect of substrate concentration, pH and temperature - determination of Michael's parameters.

Statistical thermodynamics: Maxwel's law of distribution of molecular speeds, graphical representation, experimental verification - derivation of expressions for average, most probable and root mean square velocity. Concept of velocity space and phase space - perturbution and combination - laws of probability - microstates for distinguishable and indistinguishable particles. Derivation of Maxwell Boltzmann distribution law - partition functions and their calculation. Expressions for thermodynamic quantities in terms of partition functions - translational, rotational, vibrational and electronic contributions to the thermodynamic properties of perfect gases, Intermolecular forces in imperfect gases. Statistical interpretation of laws of thermodynamics, third law of thermodynamics and

apparent expression to it. Quantum statistics: Limitation of classical statistics - quantum statistics and classical statistics, comparison - heat capacities of gases in general and hydrogen in particular - heat capacities of solids. Einstein and Debye models - Bose Einstein statistics and Fermi Dirac statistics and corresponding distribution functions - applications of quantum statistics to liquid helium, electrons in metal and Planck's radiation law.

Photochemistry: Absorption and emission of radiation, Franck Condon principle decay of electronically excited states, radiative and non-radiative processes, fluorescence and phosphorescence, spin-forbidden radiative transitions, inter conversion and intersystem crossing. Theory of energy transfer - resonance and exchange mechanism, triplet-triplet annihilation, photosensitization and quenching.Spontaneous and induced emissions.Einstein transition probability - inversion of population - laser and masers. Flash photolysis: Chemi and thermoluminescence.

Surface chemistry: Surface Phenomena, Gibbs adsorption isotherm, types of adsorption isotherms, solid-liquid interfaces, contact angle and wetting, solid-gas interface, physisorption and chemisorption, Freundlich, derivation of Langmuir and BET isotherms, surface area determination. Kinetics of surface reactions involving adsorbed species, Langmuir-Hinshelwood mechanism, Langmuir-Rideal mechanism, Rideal-Eley mechanism. Surface Films, Langmuir-Blodgett films, self assembled mono layers, collapse pressure, surface area and mechanism of heterogeneous catalysis, phase transfer catalysis. Chemical analysis of surfaces: Surface preparations - spectroscopic surface characterization methods, electron spectroscopy, ion scattering spectrometry, secondary ion scattering microscopy (SIMS) - Auger electron spectroscopy - instrumentation and application. Electron stimulated micro analysis, scanning probe microscopes.

DEPARTMENT OF CIVIL ENGINEERING

STRUCTURAL ENGINEERING

Mechanics: Bending moment and shear force in statically determinate beams. Simple stress and strain relationship: Stress and strain in two dimensions, principal stresses, stress transformation, Mohr's circle. Simple bending theory, unsymmetrical bending, flexural and shear stresses, unsymmetrical bending, shear centre. Thin and thick cylinders, uniform torsion, buckling of column, combined and direct bending stresses.

Structural Analysis: Analysis of statically determinate and indeterminate structures, influence lines for determinate and indeterminate structures. Basic concepts of matrix methods of structural analysis.

Concrete Structures: Concrete Technology- properties of concrete, basics of mix design. Concrete design- basic working stress and limit state design concepts, analysis and design of members subjected to flexure, shear, compression and torsion by limit state methods. Basic elements of prestressed concrete, analysis of beam sections at transfer and service loads.

Steel Structures: Analysis and design of tension and compression members, beams and beam-columns, column bases. Connections-simple and eccentric, beam–column connections, plate girders and trusses. Plastic analysis of beams and frames.

Building materials and construction, construction management – principles and applications

ENVIRONMENTAL ENGINEERING

Water requirements: Quality standards, basic unit processes and operations for water treatment. Drinking water standards, water requirements, Water quality and tests, bacteriology of water – tests, basic unit operations and unit processes for surface water treatment, distribution of water.Sewage and sewerage treatment, quantity and characteristics of wastewater. Primary, secondary and tertiary treatment of wastewater, sludge disposal, effluent discharge standards. Domestic wastewater treatment, quantity of characteristics of domestic wastewater, primary and secondary treatment Unit operations and unit processes of domestic wastewater, sludge disposal.

Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits.

Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes, engineered systems for solid waste management (reuse / recycle, energy recovery, treatment and disposal).

EIA: Evolution of EIA – Concepts – Methodologies – Screening – Scoping – Mitigation – Public participation - Environmental Audit – Life cycle assessment – EMS

TRANSPORTATION ENGINEERING

Highway Engineering: Highway development and planning - Highway alignment - Geometric design - Pavement materials - Pavement Design

Traffic Engineering: Characteristics of traffic elements – Highway capacity – Traffic studies and surveys - Road accidents - Traffic regulation and control

Railway Engineering: Location surveys and alignment - Permanent way - Geometric design - Track Junctions - Points and crossings - Railway stations and yards - Signaling and interlocking

Airport Engineering: Aircraft characteristics - Airport obstructions and zoning - Runway -Taxiways and aprons - Terminal area planning

Docks and Harbours: Types of harbour - Layout and planning principles - breakwaters – docks - wharves and quays - Transit sheds – warehouses - navigation aids

GEOTECHNICAL ENGINEERING

Soil Mechanics: Origin of soils, soil classification, three-phase system, fundamental definitions, relationship and interrelationships, permeability &seepage, effective stress principle, consolidation, compaction, shear strength.

Foundation Engineering: Sub-surface investigations- scope, drilling bore holes, sampling, penetration tests, plate load test. Earth pressure theories, effect of water table, layered soils. Stability of slopes - infinite slopes, finite slopes. Foundation types-foundation

design requirements. Shallow foundations-bearing capacity, effect of shape, water table and other factors, stress distribution, settlement analysis in sands & clays. Deep foundations–pile types, dynamic &static formulae, load capacity of piles in sands &clays, negative skin friction.

WATER RESOURCES ENGINEERING

Fluid Mechanics and Hydraulics: Properties of fluids, principle of conservation of mass, momentum, energy and corresponding equations, potential flow, applications of momentum and Bernoulli's equation, laminar and turbulent flow, flow in pipes, pipe networks. Concept of boundary layer and its growth. Uniform flow, critical flow and gradually varied flow in open channels, specific energy concept, hydraulic jump. flow measurements in channels, pipes. Dimensional analysis and similitude. Velocity triangles and specific speed of pumps and turbines.

Hydrology: Rainfall, evaporation & infiltration, unit hydrographs, flood estimation, reservoir capacity, Ground water, Well hydraulics.

Irrigation: Duty, delta, estimation of evapotranspiration. Crop water requirements. Hydraulic structures, gravity dams and spillways, earthen dams. Weirs on permeable foundation, cross drainage works. Types of irrigation system, irrigation methods. Water logging and drainage.

SURVEYING

Importance of surveying, principles and classifications, mapping concepts, coordinate system, map projections, measurements of distance and directions, leveling, theodolite traversing, plane table surveying, errors and adjustments, curves, remote sensing and GIS

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

1. Data Structures and Algorithms
Development of Algorithms - Notations, Concepts - Arrays - Linked lists - Stacks and queues Trees - Tree Traversing - Operations on Binary Trees – Sorting and Searching techniques - Graphs - BFS, DFS - Shortest path problems.

2. Operating Systems
Basic OS Concepts - Thread and process scheduling - Synchronization - Semaphores - Critical regions - Deadlock prevention and recovery - Memory Management - File Management - I/O Management – Case Studies on Windows and Linux OS.

3. Computer Organization and Architecture
Basic structure of Computers - Arithmetic - Addition & subtraction of signed numbers - Multiplication - Integer division - Floating point operations - Pipelining - Multiple bus organization - Micro programmed control – Hazards - Memory System - Semiconductor RAM memory - Cache memory - Virtual memory - Secondary storage - I/O Organization - Interrupts - DMA - Buses - Interface circuits - Serial communication links.

4. C Programming
C programming – Memory Concepts – Arithmetic Operations - Control Statements – Functions - Pointers – Structures – User Defined Data types - File handling.

5. Microprocessors
8085 processor - Architecture - Bus organization - Registers - ALU - Instruction set of 8085 - Instruction format - Addressing modes - System design using controllers - Microprocessor Interfacing Techniques - Segmented memory concepts - Bus concepts.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MIC, MICROSTRIP and STRIPLINE fundamentals, S Parameters, ABCD parameters, smith chart basics, Different Lengths of Transmission lines. Basics of antennas, High frequency antennas, Metamaterial antennas. Basics of fiber optic communication, fiber amplifiers, applications. Microprocessors, Microcontrollers, Embedded systems, DSP Processors. Analog Integrated Circuits, Digital Systems, Basics of VLSI, Verilog, ASIC, DSP for VLSI, Communication Theory . Computer Networks. Wireless Communication, Electromagnetic Theory Signals & Systems, DSP, Statistical theory of Communication.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)

Mathematics for electrical engineers;
Electric circuits, signals and systems and field theory;
DC machines, transformers and ac machines;
Transmission & distribution systems, power systems - analysis, operation & control;
Control systems;
Electrical and electronics measurements;
Power electronics and drives;
Analog and digital electronics – integrated circuits;
Microprocessors and basics of computers;

DEPARTMENT OF HUMANITIES (ECONOMICS)

Definition of Economics - National Income - Definition - Computation of National Income - Portfolio Investment - Business Cycle - Phillips Curve - Unemployment - Inflation - Aggregate Demand and Supply - Classical Vs Keynesian - Budget - Multiplier - Accelerator - Debt management - Federal Reserve System - Quantity theory of Money - Balance of Payments - Exchange Rates - IM and IS - Demand and Supply - Utility theories - Consumer Surplus - Producers Surplus - Cost Analysis – BEP

DEPARTMENT OF HUMANITIES (ENGLISH)

linguistics:

1. Language and linguistics – Language acquisition and learning – Behaviourist and Cognitivist schools.
2. Grammar, lexis – Phonology and morphology – Internalization – Grammatical competence – Generative grammar.
3. L 2 Acquisition and learning – Theories of SLA and SLL – Bilingualism— Bilingual communities – needs and reasons.
4. Contrastive analysis – Contrastive linguistics – Contrastive grammar –Semantics- Restriction in meaning.
5. Relevance of linguistics to teaching – Class room methods – Selection of materials - Managing learner difficulties.

English language teaching:

1. Theories of language teaching – Audio-lingual, grammar translation, total Immersion – Communicative language teaching – computer aided teaching
2. English for specific purposes – English for occupational purposes – English for Academic purposes – English for Science & Technology.
3. Importance of the four language skills – Role of materials, tasks in learning – Methodology and its role in the learning process.
4. Evaluation methods and testing techniques – testing as a teaching procedure – Designing tasks and tests – Evaluating testing methods.
5. Teacher orientation and training – Class room interaction – Motivating and Managing learners – Responding to diversity – School, curriculum and society – Teacher, a professional.

Computer Aided Language Learning

1. Computer – Scope in language teaching - Integration of CALL – the Natural languages –Synthesis – Universal Grammar.
2. Background of CALL – Constructivist theory of learning – Self learning and testing -- Interactive learning practice.
3. Individual styles and motivation – Student tracking—Affective impact of computer learning – Problems and possibilities.
4. Material production – Online communication – Reaching the disadvantaged lean – varied leaning pace – Creative element in CALL
5. Competence of English teachers in computer use – Interactive software and CD ROMs – Future trends

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING

Linear Algebra: Matrix Algebra, Systems of linear equations, Eigen values and eigen vectors.

Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series. Vector identities, Directional derivatives, Line, Surface and Volume integrals, Stokes, Gauss and Green's theorems.

Differential equations: First order equation (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's and Euler's equations, Initial and boundary value problems, Partial Differential Equations and variable separable method.

Complex variables: Analytic functions, Cauchy's integral theorem and integral formula, Taylor's and Laurent' series, Residue theorem, solution integrals.

Probability and Statistics: Sampling theorems, Conditional probability, Mean, median, mode and standard deviation, Random variables, Discrete and continuous distributions, Poisson, Normal and Binomial distribution, Correlation and regression analysis.

Numerical Methods: Solutions of non-linear algebraic equations, single and multi-step methods for differential equations.

Transform Theory: Fourier transform, Laplace transform, Z-transform.

Basics of Circuits and Measurement Systems: Kirchoff's laws, mesh and nodal Analysis. Circuit theorems. One-port and two-port Network Functions. Static and dynamic characteristics of Measurement Systems.Error and uncertainty analysis.Statistical analysis of data and curve fitting.

Transducers, Mechanical Measurement and Industrial Instrumentation: Resistive, Capacitive, Inductive and piezoelectric transducers and their signal conditioning. Measurement of displacement, velocity and acceleration (translational and rotational), force, torque, vibration and shock.Measurement of pressure, flow, temperature and liquid level.Measurement of pH, conductivity, viscosity and humidity.

Analog Electronics: Characteristics of diode, BJT, JFET and MOSFET. Diode circuits.Transistors at low and high frequencies, Amplifiers, single and multi-stage.Feedback amplifiers.Operational amplifiers, characteristics and circuit configurations.Instrumentation amplifier.Precision rectifier.V-to-I and I-to-V converter. Op-Amp based active filters. Oscillators and signal generators.

Digital Electronics: Combinational logic circuits, minimization of Boolean functions. IC families, TTL, MOS and CMOS.Arithmetic circuits. Comparators, Schmitt trigger, timers and mono-stable multi-vibrator. Sequential circuits, flip-flops, counters, shift registers. Multiplexer, S/H circuit.Analog-to-Digital and Digital-to-Analog converters.Basics of number system.Microprocessor applications, memory and input-output interfacing.Microcontrollers.

Signals, Systems and Communications: Periodic and aperiodic signals. Impulse response, transfer function and frequency response of first- and second order systems. Convolution, correlation and characteristics of linear time invariant systems.Discrete time system, impulse and frequency response. Pulse transfer function. IIR and FIR filters. Amplitude and frequency modulation and demodulation.Sampling theorem, pulse code modulation.Frequency and time division multiplexing. Amplitude shift keying, frequency shift keying and pulse shift keying for digital modulation.

Electrical and Electronic Measurements: Bridges and potentiometers, measurement of R,L and C. Measurements of voltage, current, power, power factor and energy. A.C & D.C current probes. Extension of instrument ranges. Q-meter and waveform analyzer.Digital voltmeter and multi-meter.Time, phase and frequency measurements.Cathode ray oscilloscope.Serial and parallel communication.Shielding and grounding.

Control Systems and Process Control: Feedback principles. Signal flow graphs. Transient Response, steady-state-errors.Routh and Nyquist criteria. Bode plot, root loci. Time delay systems.Phase and gain margin.State space representation of systems.Mechanical,

hydraulic and pneumatic system components.Synchro pair, servo and step motors. On-off, cascade, P, P-I, P-I-D, feed forward and derivative controller, Fuzzy controllers.

Analytical, Optical and Biomedical Instrumentation: Mass spectrometry. UV, visible and IR spectrometry.X-ray and nuclear radiation measurements.Optical sources and detectors, LED, laser, Photo-diode, photo-resistor and their characteristics.Interferometers, applications in metrology.Basics of fiber optics. Biomedical instruments, EEG, ECG and EMG. Clinical measurements.Ultrasonic transducers and Ultrasonography. Principles of Computer Assisted Tomography.

DEPARTMENT OF MANAGEMENT STUDIES

1. Marketing Management
2. Principles of management
3. Fundamentals of principal accounting
4. Financial management
5. Information Management
6. Corporate IS Strategy and Management
7. Intro to BAITC
8. System Analysis and Design
9. Software Project Management
10. Organizational behaviour
11. Human Resource Management
12. Operation Research
13. Production and operations research
14. Quantitative techniques

DEPARTMENT OF MATHEMATICS

Algebra, Matrix, Calculus, Differential Equations, Partial Differential Equations, Real Analysis, Complex Analysis, Complex Integration, Integral Transforms, Numerical Methods, Fourier Series, Probability and Statistics.

DEPARTMENT OF COMPUTER APPLICATIONS

1. Computer Organization and Architecture
2. Data Base Management Systems
3. Operating Systems
4. Computer Networks
5. Programming Languages
6. Data Structures and Algorithms
7. Software Engineering

DEPARTMENT OF MECHANICAL ENGINEERING

Engineering Mechanics, Industrial safety, Mechatronics, Enginering Graphics, CAD/CAM, Automobile engineering, Thermal Engineering, Machine Design, Turbo machines, Power Plant Engineering, Refrigeration & Air-conditioning, Mechanics of Machines, Thermodynamics, Heat Transfer, GD & T, Machine drawing

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

"The question paper for written test in dept Metallurgical and materials engineering , for temporary faculty year 2015, will be at the general competency level of a degree holder in B.Tech. Metallurgical and Materials Engineering. Question will cover various areas of metallurgy and materials."

DEPARTMENT OF PHYSICS

Mathematical Physics: Determinants and matrices – Vector analysis – Complex analysis – Ordinary differential equations – Fourier analysis.

Classical Mechanics: Lagrangian formulation – Central force problem – Hamiltonian formulation – Rigid body motion – Special theory of relativity.

Quantum Mechanics: Schrodinger Equation – Operators and eigenfunctions – solvable problems – angular momentum and spin – approximation methods – scattering theory.

Electronics: Network analysis – semiconductor devices – amplifiers and oscillators – operational amplifiers – digital circuits.

Electromagnetic Theory: Electrostatics – Magnetostatics – Maxwell equations – Electromagnetic waves and propagation.

Statistical Mechanics: Thermodynamics – Ensemble theory – Maxwell-Boltzmann statistics – Bose-Einstein statistics – Fermi-Dirac statistics.

Solid State Physics: Crystal structure – Lattice vibrations and thermal properties – conductors – semiconductors – dielectrics – magnetic materials.

Atomic and Molecular Physics: Atomic spectra – resonance spectroscopy – IR and microwave spectroscopy – electronic spectroscopy.

Nuclear Physics: Nuclear forces – nuclear models – radioactivity – nuclear reactions – elementary particles

DEPARTMENT OF PRODUCTION ENGINEERING

ENGINEERING MATHEMATICS: Linear Algebra Calculus Differential equations: Complex variables: Probability and Statistics: Numerical Methods:

GENERAL ENGINEERING: Engineering Materials: Applied Mechanics: Theory of Machines and Design: Thermal Engineering:

PRODUCTION ENGINEERING: Metal Casting: Metal Forming: Metal Joining Processes: Machining and Machine Tool Operations: Tool Engineering: Metrology and Inspection: Powder Metallurgy: Polymers and Composites: Manufacturing Analysis: Computer Integrated Manufacturing

INDUSTRIAL ENGINEERING: Product Design and Development: Engineering Economy and Costing: Work System Design: Facility Design: Production Planning and Inventory Control: Operation Research: Quality Management: Reliability and Maintenance: Management Information System. Intellectual Property System:

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620 015
OFFICE OF DEAN (FW)

DATA SHEET FOR TEMPORARY FACULTY-JUNE 2015

Post applied for : Temporary Faculty in Department of _____

<table>
<tr><th colspan="8">Details of Applicant</th><th>Remarks</th></tr>
<tr><td>1.</td><td colspan="3">Name and Address (with Email and Mobile No.)</td><td colspan="4"></td><td></td></tr>
<tr><td>2.</td><td colspan="3">Age/Date of Birth*</td><td colspan="4"></td><td></td></tr>
<tr><td>3.</td><td colspan="3">Category*: (SC/ST/OBC/PwD/UR)</td><td colspan="4"></td><td></td></tr>
<tr><td>4.</td><td colspan="3">Educational Qualifications:</td><td colspan="4"></td><td></td></tr>
<tr><td rowspan="4"></td><td>Degree</td><td>Specialization</td><td>University</td><td>% of marks* /CGPA *</td><td>Class*</td><td>Year</td><td></td></tr>
<tr><td>UG</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PG</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Ph.D.</td><td></td><td></td><td colspan="2">Awarded/Pursuing/Not registered</td><td></td><td></td></tr>
<tr><td>5.</td><td colspan="3">GATE Score *</td><td colspan="4"></td><td></td></tr>
<tr><td>6.</td><td colspan="3">Have you cleared NET / SLET*</td><td colspan="4"></td><td></td></tr>
<tr><td>7.</td><td colspan="3">Place:
Date:</td><td colspan="5">Signature of the Applicant</td></tr>
</table>

***Attach Proof**