



MAHA BARATHI ENGINEERING COLLEGE

NH-79, SALEM-CHENNAI HIGHWAY, A.VASUDEVANUR, CHINNASALEM (TK), KALLAKURICHI (DT) 606 201.

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

2(f) & 12(B) status of UGC, New Delhi

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MAHA BARATHI ENGINEERING COLLEGE
A.VASUDEVANUR (Po) CHINNASALEM (Tk.)
KALLAKURICHI DIST. 606 201.

ANNA UNIVERSITY, CHENNAI
ACADEMIC SCHEDULE
 for the

July 2019 – December 2019 ODD SEMESTER ACADEMIC SESSION OF THE
ACADEMIC YEAR 2019 – 2020

UG & PG (Full-Time) Degree Programmes offered at Affiliated Engineering Colleges

Sl. No	Programme	Semester	Commencement of Classes	Last working day	Commencement of Practical Examinations	Commencement of End Semester Examinations
1.	B.E. / B. Tech.(Full-Time)	III, V, VII	01.07.2019	19.10.2019**	21.10.2019	06.11.2019
2.	B.E. / B. Tech.(Part-Time)	III, V, VII				
3.	B. Arch.(Full-Time)	III, V, VII, IX				
4.	M.E. / M. Tech./ M. Arch. (FT)	III				
5.	M.C.A. (Full-Time)	III, V				
6.	M.B.A. (Full-Time)	III				
7.	M.Sc.(5 Yrs - Integrated)	III, V, VII, IX				
8.	M.B.A.(5 Yrs – Integrated)	III, V, VII				

RE-OPENING DAY FOR THE NEXT SEMESTER: 16.12.2019 (Monday)

NOTE:

1. Theory and Practical Examination schedules will be published in due course. (Practical Examinations will be conducted before the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

**** In order to ensure minimum no. of working days, the following 3 Saturdays are declared as working days.**

Sl. No.	Working Days (Saturdays)	Time Table of the Week Day to be Followed
1.	03.08.2019	Monday
2.	07.09.2019	Tuesday

Sl. No.	Working Days (Saturdays)	Time Table of the Week Day to be Followed
3.	19.10.2019	Wednesday

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ANNA UNIVERSITY, CHENNAI
ACADEMIC SCHEDULE
 for the
September 2019 – December 2019 ODD SEMESTER ACADEMIC SESSION OF THE
ACADEMIC YEAR 2019 – 2020
I SEMESTER

PG (FT) Degree Programmes offered at Affiliated Engineering Colleges

Sl. No	Programme	Semester	Commencement of Classes	Last working day	Commencement of End Semester Examinations
1.	M.B.A./ M.C.A (FT)	I	12.09.2019	14.12.2019**	16.12.2019
2.	M.E. / M. Tech. / M. Arch.(FT)	I			

RE-OPENING DAY FOR THE NEXT SEMESTER: 29.01.2020 (Wednesday)

NOTE:

1. Theory and Practical Examination schedules will be published in due course. (Practical Examinations will be conducted after the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

**** In order to ensure minimum no. of working days, the following 11 Saturdays are declared as working days.**

Sl. No.	Working Days (Saturdays)	Time Table of the Week Day to be Followed
1.	14.09.2019	Wednesday
2.	21.09.2019	Monday
3.	28.09.2019	Tuesday
4.	12.10.2019	Monday
5.	26.10.2019	Tuesday
6.	02.11.2019	Wednesday

Sl. No.	Working Days (Saturdays)	Time Table of the Week Day to be Followed
7.	16.11.2019	Thursday
8.	23.11.2019	Friday
9.	30.11.2019	Monday
10.	07.12.2019	Tuesday
11.	14.12.2019	Wednesday

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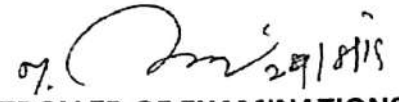
Internal Assessment Schedule for Non Autonomous Affiliated Institutions

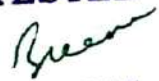
Period : Nov./ Dec. 2019 Examinations

B.E./B.Tech. UG - Programmes I semester (Full Time)

Report No	Report Period	Test Period	Report Entry Period
I	14-08-2019 -- 09-09-2019	No Test	09-09-2019 -- 14-09-2019
II	11-09-2019 -- 04-10-2019	27-09-2019 -- 04-10-2019	04-10-2019 -- 11-10-2019
III	05-10-2019 -- 29-10-2019	23-10-2019 -- 29-10-2019	29-10-2019 -- 02-11-2019
IV	30-10-2019 -- 20-11-2019	14-11-2019 -- 20-11-2019	20-11-2019 -- 21-11-2019

Saturdays may be included as working days to make good the Shortages, if any.


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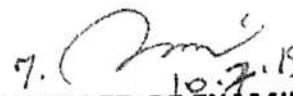
Internal Assessment Schedule for Non Autonomous Affiliated Institutions

Period : Nov./ Dec. 2019 Examinations

For all UG/PG - Programmes Except I year (Full Time)

Report No	Report Period	Test Period	Report Entry Period
I	01-07-2019 -- 25-07-2019	No Test	25-07-2019 -- 30-07-2019
II	26-07-2019 -- 22-08-2019	16-08-2019 -- 22-08-2019	22-08-2019 -- 28-08-2019
III	24-08-2019 -- 20-09-2019	14-09-2019 -- 20-09-2019	20-09-2019 -- 25-09-2019
IV	21-09-2019 -- 19-10-2019	14-10-2019 -- 19-10-2019	19-10-2019 -- 21-10-2019

Saturdays may be included as working days to make good the Shortages, if any.

7. 10.18

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MAHA BARATHI ENGINEERING COLLEGE
A.Vasudevanur, Chinnasalem TK, Kallakurichi Dt - 606 201.
ACADEMIC CALENDAR FOR U.G & P.G PROGRAMMES-2019-2020(ODD SEMESTER)

JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
DAYS	DATE	Activity	DATE	Activity	DATE	Activity	DATE	Activity	DATE	Activity	DATE	Activity	DATE	Activity	DATE	Activity	DATE
Mon	1	COMMENCEMENT OF CLASS															
Tue	2						1										
Wed	3						2	GANDHI JAYANTI									
Thu	4		1				3										
Fri	5		2				4			1							
Sat	6		3				5			2							
Sun	7	HOLIDAY	4	HOLIDAY	1	HOLIDAY	6	HOLIDAY	3	HOLIDAY							
Mon	8		5	CIAT 1-STARTS	2	GANESH CHATURTHI	7	AYUDHA POOJA	4								
Tue	9		6		3		8	SARASWATHI POOJA	5								
Wed	10		7		4		9		6	COMMENCEMENT OF END SEMESTER EXAMINATIONS							
Thu	11		8		5	TEACHERS' DAY	10		7								
Fri	12		9		6		11		8								
Sat	13		10	CIAT 1- FINISHED	7	HOLIDAY	12		9								
Sun	14	HOLIDAY	11	HOLIDAY	8	HOLIDAY	13	HOLIDAY	10								
Mon	15		12	BAKRID	9		14	MODEL EXAM - STARTS	11								
Tue	16		13		10	MUHARRAM	15		12								
Wed	17		14		11	ONAM	16										
Thu	18		15	INDEPENDENCE DAY	12		17										
Fri	19		16		13		18										
Sat	20		17		14		19	LAST WORKING DAY									
Sun	21	HOLIDAY	18	HOLIDAY	15	ENGINEER'S DAY	20	HOLIDAY									
Mon	22		19		16	CIAT 2-STARTS	21	COMMENCEMENT OF PRACTICAL EXAMINATION									
Tue	23		20		17		22										
Wed	24		21		18		23										
Thu	25		22		19		24										
Fri	26		23		20		25										
Sat	27	HOLIDAY	24	KRISHNA JAINTHI	21	CIAT 2- FINISHED	26										
Sun	28	HOLIDAY	25	HOLIDAY	22	HOLIDAY	27	HOLIDAY									
Mon	29		26		23		28										
Tue	30		27		24		29										
Wed	31		28		25		30										
Thu			29		26		31										
Fri			30		27												
Sat			31		28												
Sun					29	HOLIDAY											
Mon					30												

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A.VASUDEVANUR (PO.) CHINNASALEM (TK.)
VILLUPURAM DIST 606 201

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. CIVIL ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) :

- I. To prepare students for successful careers in Civil Engineering field that meets the needs of Indian and multinational companies.
- II. To develop the confidence and ability among students to synthesize data and technical concepts and thereby apply it in real world problems.
- III. To develop students to use modern techniques, skill and mathematical engineering tools for solving problems in Civil Engineering.
- IV. To provide students with a sound foundation in mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyse engineering problems and to prepare them for graduate studies.
- V. To promote students to work collaboratively on multi-disciplinary projects and make them engage in life-long learning process throughout their professional life.

PROGRAMME OUTCOMES (POs):

On successful completion of the programme,

1. Graduates will demonstrate knowledge of mathematics, science and engineering.
2. Graduates will demonstrate an ability to identify, formulate and solve engineering problems.
3. Graduate will demonstrate an ability to design and conduct experiments, analyze and interpret data.
4. Graduates will demonstrate an ability to design a system, component or process as per needs and specifications.
5. Graduates will demonstrate an ability to visualize and work on laboratory and multidisciplinary tasks.
6. Graduate will demonstrate skills to use modern engineering tools, software and equipment to analyze problems.
7. Graduates will demonstrate knowledge of professional and ethical responsibilities.
8. Graduate will be able to communicate effectively in both verbal and written form.
9. Graduate will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues.
10. Graduate will develop confidence for self education and ability for life-long learning.

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PEOs & POs

The B.E. Civil Engineering Program outcomes leading to the achievement of the objectives are summarized in the following Table.

Programme Educational Objectives	Programme Outcomes									
	a	b	c	d	e	f	g	h	i	j
I	X	X		X	X					
II		X	X							
III				X			X			
IV	X				X					
V						X		X	X	X

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			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
YEAR 1	SEM 1	Communicative English				✓				✓		
		Engineering Mathematics – I	✓			✓	✓	✓				
		Engineering Physics	✓	✓	✓	✓	✓	✓	✓			
		Engineering Chemistry	✓	✓	✓		✓	✓				
		Problem Solving and Python Programming	✓	✓			✓	✓	✓			
		Engineering Graphics	✓	✓	✓		✓	✓	✓		✓	✓
		Problem Solving and Python Programming Laboratory	✓	✓			✓	✓	✓			
		Physics and Chemistry Laboratory	✓	✓			✓	✓	✓			
						✓				✓		
	SEM 2	Technical English				✓						
		Engineering Mathematics – II	✓									
		Physics for Civil Engineering	✓	✓	✓	✓	✓	✓				
		Basic Electrical and Electronics Engineering										
		Environmental Science and Engineering							✓		✓	
		Engineering Mechanics	✓	✓	✓		✓	✓	✓		✓	✓
		Engineering Practices Laboratory	✓	✓				✓	✓			
		Computer Aided Building Drawing										
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
YEAR 2	SEM 3	Transforms and Partial Differential Equations										✓
		Engineering Geology		✓	✓		✓		✓			✓
		Construction Materials		✓	✓		✓		✓			✓
		Strength of Materials I	✓	✓	✓	✓	✓					✓
		Fluid Mechanics	✓	✓		✓			✓	✓	✓	✓
		Surveying		✓	✓		✓		✓			✓
		Surveying Laboratory										
		Construction Materials Laboratory										

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YEAR 3		Interpersonal Skills / Listening and Speaking										
	SEM 4	Numerical Methods										
		Construction Techniques and Practices		✓			✓		✓		✓	✓
		Strength of Materials II	✓	✓	✓	✓	✓					✓
		Applied Hydraulic Engineering	✓	✓		✓			✓	✓	✓	✓
		Concrete Technology	✓	✓		✓			✓	✓	✓	✓
		Soil Mechanics	✓	✓					✓	✓	✓	✓
		Strength of Materials Laboratory	✓	✓	✓	✓	✓				✓	✓
		Hydraulic Engineering Laboratory	✓		✓		✓	✓	✓	✓	✓	✓
		Advanced Reading and Writing										
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	SEM 5	Design of Reinforced Cement Concrete Elements	✓	✓	✓	✓	✓					✓
		Foundation Engineering		✓		✓			✓		✓	✓
		Structural Analysis I	✓	✓	✓	✓	✓				✓	✓
		Water Supply Engineering			✓	✓	✓	✓				
		Open Elective- I*										
		Professional Elective I										
		Water and Waste Water Analysis Laboratory		✓		✓			✓			✓
		Soil Mechanics Laboratory			✓		✓	✓				
		Survey Camp (2 weeks-During V Semester)			✓	✓					✓	
	SEM 6	Design of Steel Structural Elements	✓	✓	✓	✓	✓					✓
		Structural Analysis II	✓	✓	✓	✓	✓				✓	✓
		Irrigation Engineering	✓	✓		✓						
		Wastewater Engineering	✓	✓		✓						

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YEAR 4		Highway Engineering		✓	✓	✓	✓			✓		
		Professional Elective II								✓		
		Highway Engineering Laboratory										
		Irrigation and Environmental Engineering Drawing										
		Professional Communication										
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
	SEM 7	Estimation, Costing and Valuation Engineering	✓	✓				✓	✓			✓
		Railways, Airports, Docks and Harbour Engineering		✓		✓			✓		✓	✓
		Structural Design and Drawing	✓	✓	✓	✓		✓				✓
		Professional Elective III										
		Open Elective II*										
		Creative and Innovative Project (Activity Based - Subject Related)		✓		✓			✓			✓
		Industrial Training (4 weeks During VI semester-Summer)				✓			✓	✓		✓
	SEM 8	Professional Elective IV										
		Professional Elective V										
		Project Work		✓		✓			✓			✓

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B.E. CIVIL ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
I TO VIII SEMESTERS CURRICULA & SYLLABI
SEMESTER I

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	MA8151	Engineering Mathematics – I	BS	4	4	0	0	4
3.	PH8151	Engineering Physics	BS	3	3	0	0	3
4.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
5.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
6.	GE8152	Engineering Graphics	ES	6	2	0	4	4
PRACTICALS								
7.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
8.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
TOTAL				31	19	0	12	25

SEMESTER II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics – II	BS	4	4	0	0	4
3.	PH8201	Physics For Civil Engineering	BS	3	3	0	0	3
4.	BE8251	Basic Electrical and Electronics Engineering	ES	3	3	0	0	3
5.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
6.	GE8292	Engineering Mechanics	ES	5	3	2	0	4
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	CE8211	Computer Aided Building Drawing	PC	4	0	0	4	2
TOTAL				30	20	2	8	25

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SEMESTER III

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	CE8301	Strength of Materials I	PC	3	3	0	0	3
3.	CE8302	Fluid Mechanics	PC	3	3	0	0	3
4.	CE8351	Surveying	PC	3	3	0	0	3
5.	CE8391	Construction Materials	PC	3	3	0	0	3
6.	CE8392	Engineering Geology	ES	3	3	0	0	3
PRACTICALS								
7.	CE8311	Construction Materials Laboratory	PC	4	0	0	4	2
8.	CE8361	Surveying Laboratory	PC	4	0	0	4	2
9.	HS8381	Interpersonal Skills / Listening and Speaking	EEC	2	0	0	2	1
TOTAL				29	19	0	10	24

SEMESTER IV

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8491	Numerical Methods	BS	4	4	0	0	4
2.	CE8401	Construction Techniques and Practices	PC	3	3	0	0	3
3.	CE8402	Strength of Materials II	PC	3	3	0	0	3
4.	CE8403	Applied Hydraulic Engineering	PC	3	3	0	0	3
5.	CE8404	Concrete Technology	PC	3	3	0	0	3
6.	CE8491	Soil Mechanics	PC	3	3	0	0	3
PRACTICALS								
7.	CE8481	Strength of Materials Laboratory	PC	4	0	0	4	2
8.	CE8461	Hydraulic Engineering Laboratory	PC	4	0	0	4	2
9.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
TOTAL				29	19	0	10	24

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SEMESTER V

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	CE8501	Design of Reinforced Cement Concrete Elements	PC	5	3	2	0	4
2.	CE8502	Structural Analysis I	PC	3	3	0	0	3
3.	EN8491	Water Supply Engineering	PC	3	3	0	0	3
4.	CE8591	Foundation Engineering	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Open Elective I*	OE	3	3	0	0	3
PRACTICALS								
7.	CE8511	Soil Mechanics Laboratory	PC	4	0	0	4	2
8.	CE8512	Water and Waste Water Analysis Laboratory	PC	4	0	0	4	2
9.	CE8513	Survey Camp (2 weeks -During IV Semester)	EEC	0	0	0	0	2
TOTAL				28	18	2	8	25

SEMESTER VI

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	CE8601	Design of Steel Structural Elements	PC	5	3	2	0	4
2.	CE8602	Structural Analysis II	PC	3	3	0	0	3
3.	CE8603	Irrigation Engineering	PC	3	3	0	0	3
4.	CE8604	Highway Engineering	PC	3	3	0	0	3
5.	EN8592	Wastewater Engineering	PC	3	3	0	0	3
6.		Professional Elective II	PE	3	3	0	0	3
PRACTICALS								
7.	CE8611	Highway Engineering Laboratory	PC	4	0	0	4	2
8.	CE8612	Irrigation and Environmental Engineering Drawing	PC	4	0	0	4	2
9.	HS8581	Professional Communication	EEC	2	0	0	2	1
TOTAL				30	18	2	10	24

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SEMESTER VII

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	CE8701	Estimation, Costing and Valuation Engineering	PC	3	3	0	0	3
2.	CE8702	Railways, Airports, Docks and Harbour Engineering	PC	3	3	0	0	3
3.	CE8703	Structural Design and Drawing	PC	5	3	0	2	4
4.		Professional Elective III	PE	3	3	0	0	3
5.		Open Elective II*	OE	3	3	0	0	3
PRACTICALS								
6.	CE8711	Creative and Innovative Project (Activity Based - Subject Related)	EEC	4	0	0	4	2
7.	CE8712	Industrial Training (4 weeks During VI Semester – Summer)	EEC	0	0	0	0	2
TOTAL				21	15	0	6	20

SEMESTER VIII

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
PRACTICALS								
3.	CE8811	Project Work	EEC	20	0	0	20	10
TOTAL				26	6	0	20	16

TOTAL NO. OF CREDITS: 183

*Course from the curriculum of other UG Programmes.

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HUMANITIES AND SOCIAL SCIENCES (HS)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	HS8251	Technical English	HS	4	4	0	0	4
3.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3

BASIC SCIENCES (BS)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA8151	Engineering Mathematics – I	BS	4	4	0	0	4
2.	PH8151	Engineering Physics	BS	3	3	0	0	3
3.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
4.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
5.	MA8251	Engineering Mathematics – II	BS	4	4	0	0	4
6.	PH8201	Physics for Civil Engineering	BS	3	3	0	0	3
7.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
8.	MA8491	Numerical Methods	BS	4	4	0	0	4

ENGINEERING SCIENCES (ES)

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
2.	GE8152	Engineering Graphics	ES	6	2	0	4	4
3.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
4.	BE8251	Basic Electrical and Electronics Engineering	ES	3	3	0	0	3
5.	GE8292	Engineering Mechanics	ES	5	3	2	0	4
6.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
7.	CE8392	Engineering Geology	ES	3	3	0	0	3

PROFESSIONAL CORE (PC)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8211	Computer Aided Building Drawing	PC	4	0	0	4	2
2.	CE8391	Construction Materials	PC	3	3	0	0	3
3.	CE8301	Strength of Materials I	PC	3	3	0	0	3
4.	CE8302	Fluid Mechanics	PC	3	3	0	0	3
5.	CE8351	Surveying	PC	3	3	0	0	3

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6.	CE8481	Strength of Materials Laboratory	PC	4	0	0	4	2
7.	CE8361	Surveying Laboratory	PC	4	0	0	4	2
8.	CE8311	Construction Materials Laboratory	PC	4	0	0	4	2
9.	CE8401	Construction Techniques and Practices	PC	3	3	0	0	3
10.	CE8402	Strength of Materials II	PC	3	3	0	0	3
11.	CE8403	Applied Hydraulic Engineering	PC	3	3	0	0	3
12.	CE8404	Concrete Technology	PC	3	3	0	0	3
13.	CE8491	Soil Mechanics	PC	3	3	0	0	3
14.	CE8461	Hydraulic Engineering Laboratory	PC	4	0	0	4	2
15.	CE8501	Design of Reinforced Cement Concrete Elements	PC	5	3	2	0	4
16.	CE8502	Structural Analysis I	PC	3	3	0	0	3
17.	CE8511	Soil Mechanics Laboratory	PC	4	0	0	4	2
18.	CE8512	Water and Waste Water Analysis Laboratory	PC	4	0	0	4	2
19.	CE8591	Foundation Engineering	PC	3	3	0	0	3
20.	CE8601	Design of Steel Structural Elements	PC	5	3	2	0	4
21.	CE8602	Structural Analysis II	PC	3	3	0	0	3
22.	CE8603	Irrigation Engineering	PC	3	3	0	0	3
23.	CE8604	Highway Engineering	PC	3	3	0	0	3
24.	CE8611	Highway Engineering Laboratory	PC	4	0	0	4	2
25.	CE8612	Irrigation and Environmental Engineering Drawing	PC	4	0	0	4	2
26.	EN8592	Wastewater Engineering	PC	3	3	0	0	3
27.	EN8491	Water Supply Engineering	PC	3	3	0	0	3
28.	CE8701	Estimation, Costing and Valuation Engineering	PC	3	3	0	0	3
29.	CE8702	Railways, Airports, Docks and Harbour Engineering	PC	3	3	0	0	3
30.	CE8703	Structural Design and Drawing	PC	5	3	0	2	4

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EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills / Listening and Speaking	EEC	2	0	0	2	1
2.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
3.	CE8513	Survey Camp (2 weeks – During IV Semester)	EEC	0	0	0	0	2
4.	HS8581	Professional Communication	EEC	2	0	0	2	1
5.	CE8711	Creative and Innovative Project (Activity Based - Subject Related)	EEC	4	0	0	4	2
6.	CE8712	Industrial Training (4 weeks During VI Semester – Summer)	EEC	0	0	0	0	2
7.	CE8811	Project Work	EEC	20	0	0	20	10

PROFESSIONAL ELECTIVE SEMESTER V ELECTIVE - I

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GI8012	Digital Cadastre	PE	3	3	0	0	3
2.	GI8013	Advanced Surveying	PE	3	3	0	0	3
3.	GI8014	Geographic Information System	PE	3	3	0	0	3
4.	GI8015	Geoinformatics Applications for Civil Engineers	PE	3	3	0	0	3
5.	GI8491	Total Station and GPS Surveying	PE	3	3	0	0	3
6.	GE8071	Disaster Management	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3

SEMESTER VI ELECTIVE - II

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8001	Ground Improvement Techniques	PE	3	3	0	0	3
2.	CE8002	Introduction to Soil Dynamics and Machine Foundations	PE	3	3	0	0	3
3.	CE8003	Rock Engineering	PE	3	3	0	0	3
4.	CE8004	Urban Planning and Development	PE	3	3	0	0	3
5.	CE8005	Air Pollution and Control Engineering	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

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**SEMESTER VII
ELECTIVE – III**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8006	Pavement Engineering	PE	3	3	0	0	3
2.	CE8007	Traffic Engineering and Management	PE	3	3	0	0	3
3.	CE8008	Transport and Environment	PE	3	3	0	0	3
4.	CE8009	Industrial Structures	PE	3	3	0	0	3
5.	CE8010	Environmental and Social Impact Assessment	PE	3	3	0	0	3
6.	CE8011	Design of Prestressed Concrete Structures	PE	3	3	0	0	3
7.	CE8012	Construction Planning and Scheduling	PE	3	3	0	0	3
8.	EN8591	Municipal Solid Waste Management	PE	3	3	0	0	3
9.	GE8077	Total Quality Management	PE	3	3	0	0	3
10.	GE8072	Foundation Skills In Integrated Product Development	PE	3	3	0	0	3

**SEMESTER VIII
ELECTIVE – IV**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8013	Coastal Engineering	PE	3	3	0	0	3
2.	CE8014	Participatory Water Resources Management	PE	3	3	0	0	3
3.	CE8015	Integrated Water Resources Management	PE	3	3	0	0	3
4.	CE8016	Groundwater Engineering	PE	3	3	0	0	3
5.	CE8017	Water Resources Systems Engineering	PE	3	3	0	0	3
6.	CE8018	Geo-Environmental Engineering	PE	3	3	0	0	3
7.	CE8091	Hydrology and Water Resources Engineering	PE	3	3	0	0	3
8.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

**SEMESTER VIII
ELECTIVE – V**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8019	Computer Aided Design of Structures	PE	3	3	0	0	3
2.	CE8020	Maintenance, Repair and Rehabilitation of Structures	PE	3	3	0	0	3
3.	CE8021	Structural Dynamics and Earthquake Engineering	PE	3	3	0	0	3
4.	CE8022	Prefabricated Structures	PE	3	3	0	0	3
5.	CE8023	Bridge Engineering	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nanoscience	PE	3	3	0	0	3

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

2(f) & 12(B) status of UGC, New Delhi

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ODD SEMESTER(2019-20)

Department	Subject Code / Name	Sem	Regulation	L	T	P	C	Hours/Week
EEE	EC8353 ELECTRON DEVICES AND CIRCUITS	03	2017	3	0	0	3	4
Course Objective:	To understand the structure of basic electronic devices. To be exposed to active and passive circuit elements. To familiarize the operation and applications of transistor like BJT and FET. To explore the characteristics of amplifier gain and frequency response. To learn the required functionality of positive and negative feedback systems.							
Course Outcomes:	Upon successful completion of the course, the students will be able to: CO1: Explain the structure and operation of PN junction devices (diode, Zener diode, LED and Laser diode). CO2: Design clipper, clamper, half wave and full wave rectifier, regulator circuits using PN junction diodes. CO3: Analyze the structure and characteristics BJT, FET, MOSFET, JFET, Thyristor and IGBT. CO4: Analyze the performance of various configurations of BJT and MOSFET based amplifier. CO5: Explain the characteristics of MOS based cascade and differential amplifier. CO6: Explain the operation of various feedback amplifiers and oscillators							
Text Book	Title	Author	Publication	Edition				
T1	Electronic Devices and Circuits	David A. Bell	Oxford University higher education	5 th edition, 2008.				
T2	Microelectronic Circuits	Sedra and smith	Oxford University Press	7 th edition, 2017.				
Ref. Book								
R1	Electronic devices and circuits	Balbair Kumar, Shail.B.Jain	PHI learning private limited	2 nd edition 2014.				
R2	Electronic devices Conventional current version	Thomas L.Floyd	Pearson prentice hall	10th Edition, 2017.				
R3	Electronic Circuit Analysis and Design	Donald A Neamen	Tata McGraw Hill	3rd Edition, 2003.				
R4	Electronic Devices and Circuit theory	Robert L.Boylestad	Pearson prentice Hall	2013.				
R5	Analysis and Application of Analog Electronic Circuits to Biomedical Instrumentation	Robert B. Northrop	CRC Press	2 nd edition, 2012.				
Suggested Reading								
S1(T1)	Electronic Devices and Circuits	David A. Bell	Oxford University higher education	5 th edition, 2008.				

Teaching Aid (TA):

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BB Black Board
Teaching Methodology (TM):
AC Acronym
GL Guest Lecture
PD Project / Demo
Lect. Lecture

PP Power Point
AS Assignment
IV Industrial Visit
RP Roleplay

VA Visual Aids (Video / Edusat class / Animation / Audio)
BC Bridge Course
MM Mind Mapping
SR Seminar

GD Group Discussion
NM NPTEL Videos / Materials
TT Tutorials

Period	Topics of unit : 1 PN JUNCTION DEVICES	Pages Referred							TA	TM
		T1	T2	R1	R2	R3	R4	R5		
1.	PN junction diode- structure - Types of material, P-type semiconductor, N-type semiconductor, Theory of PN junction	08-17	140	32	16-19	20-22	10-12	-	PP	Lect.
2.	Operation, V-I characteristics Forward Bias , Reverse bias V-I Characteristics- Forward Bias, Reverse Bias, Effect of temperature on PN junction diode, Diode Resistance, Dynamic resistance	18-26	152 190	34-37	19-27	22-27	12-14	-	PP	Lect.
3.	Transition capacitance, Diffusion capacitance -Alloy Junction or step graded junction, Linearly graded junction, Diffusion capacitance	-	-	-	-	-	30-31	-	PP	Lect.
4.	Clipping & Clamping circuits - Introduction, types, Principle and construction.	41-43	172	82-89	50-56	62-67	76-78	-	PP	Lect.
5.	Rectifiers – Half Wave and Full Wave Rectifiers - Introduction, types, Principle and construction, Analysis of Half wave and Full wave Rectifiers, Advantages and Disadvantages	43-45	174	89 94-99	56-63	67-77	79-81	-	PP	SR
6.	Display devices- LED - Introduction, types, Construction of LED, Operation of LED, Advantages and Disadvantages	609-612	210	66	-	103-104	41-47	-	PP	Lect.
7.	Laser diodes - Construction of Laser Diode, Operation, Advantages and Disadvantages	619-620	-	-	-	-	-	-	PP	Lect.
8.	Zener diode Reverse Characteristics -Equivalent Circuit of Zener diode, Breakdown Mechanism, V-I characteristics of zenerdiode, Applications Zener as regulator - Regulation with varying input voltage, Regulation with varying load	478-485 40-49 42-49	167 168	56 57-59	114-121 122-127	47-49 80-86	38-41	-	PP	Lect.
9.	Summary and revision of this unit and previous year university question papers. Topics Beyond the syllabus: Varactor diode –Tunnel diode	--	-	-	-	-	-	-	PP	AS
	Additional Exercises: Class Test 1:									

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	1. With neat sketch compose the construction, operation and its characteristics of PN junction diode. Also list its advantages, disadvantages and its applications. 2. (i) Assess the action of a full wave rectifier using diodes and give waveforms of input and output voltages. (6) (ii) A FW diode rectifier has $V_1 = 100 \sin \omega t$, $R_L = 900 \Omega$ and $R_f = 100 \Omega$. Come up with the peak and dc load current, DC load voltage, the peak instantaneous diode current, the PIV on the diode, AC input power, output power, Rectification efficiency of the FW rectifier. (7) Class Test 2: 1. Derive ripple factor, PIV, efficiency and TUF of Bridge rectifier with circuit diagram and input/output waveforms. 2. (i) Explain the V-I characteristics of Zener diode. (6) (ii) Derive the expression of the space charge or Transition capacitance of PN diode under reverse bias with neat diagram. (7) Assignment on CIAT-1 question paper for failures.									
Period	Topics of unit : 2 TRANSISTORS and THYRISTORS	Pages Referred							TA	TM
		T1	T2	R1	R2	R3	R4	R5		
1.	BJT- Structure and Operation -Introduction, types of transistors, Construction of BJT, Operation of pnp and npn transistors, Circuit configurations-CB, CE, CC	63-72	377 378	186- 196	170- 173	288- 303	131-132	-	PP	Lect.
2.	BJT-characteristics Characteristics of CB, CE, CC configuration- Input characteristics and output characteristics	73-83	392	186- 209	174- 186	-	-	-	PP	Lect.
3.	JFET-Structure and Operation - FET-introduction, types, Construction of JFET & Operation- i) When V_{GG} is applied & $V_{DD} = 0$ ii) When V_{DD} is applied & $V_{GG} = 0$ iii) When V_{DD} & V_{GG} is applied	239, 221	-	221- 240	328- 330	179- 190	360-362	-	PP	Lect.
4.	JFET-characteristics -Transfer Characteristics, Drain Characteristics, Characteristics parameters of JFET-Mutual conductance, drain resistance, amplification factor, power dissipation and application of JFET.	223-229	-	221	330- 339	-	362-673	-	PP	Lect.
5.	MOSFET-Structure - Types of MOSFET Construction of MOSFET- i) D-MOSFET ii) E-MOSFET and Circuit symbol of i) D-MOSFET ii) E-MOSFET Operation of D-MOSFET, E-MOSFET, Characteristics of D-MOSFET & E-MOSFET,	240	236	215- 221	351- 3558	120- 130	378-398	-	PP	Lect.
6.	Thyristor-structure, Characteristics - Thyristors-types, SCR construction and operation, Characteristics of SCR- forward and reverse characteristics, Applications	553-565	-	-	537- 550		822-834	-	PP	SR
7.	UJT structure and characteristics -UJT construction, Equivalent circuit, circuit symbol, Operation, Operating Characteristics	571-574	-	-	553- 556	ATTENDED	822-834	-	PP	Lect.


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8.	IGBT structure and characteristics- IGBT construction, operation, cross sectional view symbol, V-I characteristics. Tutorial: Problems related to BJT	149	-	-	-	-	-	-	PP	Lect.
9.	Summary & revision of this unit and previous year university question papers. Topics Beyond the syllabus: Ebers Moll Model- Gummel Poon-model of BJT	-	-	-	-	-	-	-	PP	AS
Additional Exercises: Class Test 1: 1. Explain BJT Common Base configuration, with a neat diagram. Explain the common base input and output characteristics with necessary graphs. 2. (i) Illustrate Early effect with relevant expressions and diagram. (6) (ii) Demonstrate the input and output characteristics of CE configuration. (7) Class Test 2: 1. Draw and explain the construction, operation and V-I characteristics of SCR. 2. (i) What is an IGBT? Draw the structure and equivalent model of an IGBT explain in detail with switching characteristics. (7) (ii) Write in detail about the operation of TRIAC. (6) Assignment on CIAT-1 & 2 question paper for failures.										
Period	Topics of unit : 3 AMPLIFIERS	Pages Referred							TA	TM
		T1	T2	R1	R2	R3	R4	R5		
1.	BJT small signal model- Amplifiers-introduction, types-linear & non-linear	-	-	188-192	268-296	371-438	-	-	PP	Lect.
2.	Analysis of CE amplifiers- Construction, Assumption, hybrid equivalent circuit model, operation, Characteristics derivation and application	-	-	196-201	274-286	399-423	-	-	PP	Lect.
3.	Analysis of CB and CC amplifiers- Construction, Assumption, hybrid equivalent circuit model, operation, Characteristics derivation and application	-	-	205-209	287-293	435-438	-	-	PP	Lect.
4.	Gain and frequency response -Basic terminologies, effect of bypass capacitors, effect of internal capacitance and Miller effect	-	-	-	294-296	424-434	-	-	PP	Lect.
5.	MOSFET small signal model Small signal analysis of MOSFET, Steps involved in small signal analysis.	-	-	-	483-492	506-517	546-554	-	PP	Lect.
6.	Analysis of CS amplifier - Construction of CS – general circuit diagram, equivalent model, analysis, derivation and its properties	-	-	356		208	489	-	PP	SR
7.	Analysis of Source follower Gain and frequency response- Construction of Source follower-general circuit diagram, equivalent model, analysis, derivation and its properties	-	-	-	361-363	219-231 492-494 235-231	490 555-559	-	PP	Lect.

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8.	High frequency analysis-Gain and frequency response of BJT amplifier, Gain and frequency response of MOSFET amplifier	-	-	-	500-572	525-540	562-570	-	PP	Lect.
9.	Problems related to gain, frequency response of MOSFET amplifier. Summary & revision of this unit and previous year university question paper.	-	-	-	573	-	571	-	PP	Lect.
Additional Exercises: Class Test 1: 1. Illustrate the h-parameter model of a BJT-CE amplifier and derive the equations for voltage gain, current gain, input impedance and output impedance. 2. Describe about small signal MOSFET amplifiers (NMOS) and obtain the expression for the transconductance. Class Test 2: 1. (i) Inspect the high frequency response of FET and derive the expression for lower cut off frequency and upper cut off frequency. (9) (ii) The data sheet of an enhancement MOSFET gives $I_{D(min)} = 500\text{mA}$ at $V_{GS} = 10\text{V}$ and $V_{GS(th)} = 1\text{V}$. Find the drain current for $V_{GB} = 5\text{V}$. (4) 2. Explain about CC amplifier and derive the expression for h parameters of the same. Also derive the expression for gain, input impedance and output impedance of CC amplifier.										
Period	Topics of unit : 4 MULTISTAGE AMPLIFIERS AND DIFFERENTIAL AMPLIFIER	Pages Referred							TA	TM
		T1	T2	R1	R2	R3	R4	R5		
1.	BIMOS cascade amplifier- Introduction, types, related formula, BIMOS amplifier-CS and CG amplifier and relevant derivation for voltage and current gain	-	687	-	-	-	-	-	PP	Lect.
2.	Differential amplifier- Common mode signal, differential mode signal, Gain-common and differential mode, Features of differential amplifier	-	686-688	-	-	750-788	587-599	-	PP	Lect.
3.	Common mode analysis- DC analysis, AC analysis, Derivation for gain, common mode gain, CMMR, differential input impedance, output impedance	-	689-691	-	-	-	616-618	-	PP	Lect.
4.	Difference mode analysis- DC analysis, AC analysis, Derivation for gain, common mode gain, CMMR, differential input impedance, output impedance	-	691-695				616-620		PP	Lect.
5.	FET input stages-JFET differential amplifier, MOSFET differential amplifier and its relevant circuit diagram.	-	-	-	-	-	-	-	PP	Lect.
6.	Single tuned amplifiers - Tuned amplifiers and its types- Capacitance single tuned amplifier- construction and operation, Inductance coupled single tuned amplifier- construction and operation, Advantages and Drawbacks of single tuned amplifier	-	1141-1145	-	-			-	PP	Lect.

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7.	Gain and frequency response, Neutralization methods- Hazeltine neutralization, Neutrodyne neutralization, Rice neutralization, Neutralization using coil	-	-	-	-	-	-	-	PP	Lect.
8.	Power amplifiers- Need for power amplifiers, performance parameter, Classification of power amplifiers-i) class A amplifiers ii) class B amplifier iii) class c and class D	-	1229-1230	-	474	561-599	661-670	-	PP	SR
9.	Problems based on gain and frequency response. Summary & revision of this unit and previous year university question paper. Topics Beyond the syllabus: Transistor Switching Times.	-	1231-1243	-	-	-	671-695	-	PP	AS
Additional Exercises: Class Test 1: 1. Illustrate the circuit of emitter coupled BJT differential amplifier, and derive expressions for differential gain, common mode gain and CMRR. 2. i) What is Neutralization? Explain any one method in brief? (8) (ii) Tabulate the difference between voltage and power amplifier. (5) Class Test 2: 1. Develop the equation for differential mode gain and common mode gain of a differential amplifier using FET. Derive the expression for differential mode gain and common mode gain. (13) 2. The differential amplifier has the following values $R_C = 50\text{k}\Omega$, $R_E = 100\text{k}\Omega$ and $R_s = 10\text{k}\Omega$. The transistor parameters are $h_{ie} = 50\text{k}\Omega$, $h_{fe} = V_o = 2 \times 10^3$, $r_o = 400\text{k}\Omega$. Determine A_d , A_c and CMRR in dB.										
Period	Topics of unit : 5 FEEDBACK AMPLIFIERS AND OSCILLATORS	Pages Referred							TA	TM
		T1	T2	R1	R2	R3	R4	R5		
1.	Advantages of negative feedback- Introduction-concept of feedback-positive and negative feedback, advantages, disadvantages	355	-	472-476	-	849-859	730-737	-	PP	Lect.
	Types of negative feedback, voltage Shunt and series feedback- Construction, working, input and output resistance, related circuit diagram and derivation of gain & resistances.	355-368	-	477-492	-	875-881	-	-	PP	Lect.
3.	Current shunt and series feedback- Construction, working, input and output resistance, related circuit diagram and derivation of gain and resistances.	374-378	-	-	-	869-874	-	-	PP	Lect.
4.	Positive feedback- Introduction, concept of positive feedback, construction, advantages and disadvantages.	-	-	-	-	849	-	-	PP	Lect.
5.	Condition for oscillations, phase shift - Introduction, classification, condition for oscillators, Construction, operation and analysis	449-451	-	545-549	-	ATTESTED 745-748	-	-	PP	Lect.

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6.	Wien bridge oscillators- Construction ,operation and analysis, advantages and disadvantages	460-461	-	552-555	-		749-750	-	PP	Lect.
7.	Hartley oscillators- Construction, operation and analysis, advantages and disadvantages	457-459	-	562-564	-	-	-	-	PP	AS
8.	Colpitts and Crystal oscillators.- construction, operation and analysis, advantages and disadvantages	453-457	-	556	-	-	-	-	PP	Lect.
		-		-568	-	-	753-756	-		
9.	Summary & revision of this unit and previous year university question bank. Topics Beyond the syllabus: Clapp oscillator-Ring oscillators	-	-	-	-	-	-	-	PP	AS
Additional Exercises: Class Test 1: 1. With neat block diagram explain the operation of following feedback amplifiers. (i) Voltage series feedback amplifier (7) (ii) Current shunt feedback amplifier (6) 2. Demonstrate the following feedback configurations of amplifiers and obtain the feedback factor and closed loop gain. (iii) Shunt – Shunt feedback (6) (iv) Series–Series feedback (7) Class Test 2: 1. With neat diagram examine the Wein bridge oscillator and derive an expression for frequency of oscillation. (13) 2. Write the expressions for frequency of oscillation for Hartley oscillator with a neat circuit diagram by using BJT and briefly explain it. (13)										

Approval:

	Name	Designation	Signature	Date
Prepared by	Mr.D.Anandharaja	AP/EEE	<i>D. Anandharaja</i>	18.3.2020

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Date: 02.08.2019

CONTINUOUS INTERNAL ASSESMENT TEST (CIAT) - I

(FROM 05.08.2019 TO 10.08.2019)

FOR UG IV, VI and VIII SEMESTERS STUDENTS

SEATING ARRANGEMENT

(COMMON TO ALL EXAMINATIONS)

HALL NO. 101							
ROW I		ROW II		ROW III		ROW IV	
621418103001	621418104001	621418103007	621418104010	621418103013	621418104018	621417103007	621418104024
621418103002	621418104003	621418103008	621418104012	621418103014	621418104019	621417103008	621418104026
621418103003	621418104004	621418103009	621418104013	621418103301	621418104020	621417103011	621418104027
621418103004	621418104005	621418103010	621418104014	621418103302	621418104021	621417103012	621418104028
621418103005	621418104008	621418103011	621418104015	621417103002	621418104022	621417103013	621418104029
621418103006	621418104009	621418103012	621418104017	621417103004	621418104023	621417103015	621418104030

DATE	8/5/2016	8/6/2019	8/7/2019	8/8/2019	8/9/2019	8/10/2019
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Date: 02.08.2019

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FOR UG IV, VI and VIII SEMESTERS STUDENTS

SEATING ARRANGEMENT

(COMMON TO ALL EXAMINATIONS)

HALL NO. 102							
ROW I		ROW II		ROW III		ROW IV	
621417103020	621418104031	621417103028	621418104037	621417103036	621418104044	621417103048	621418104051
621417103021	621418104032	621417103029	621418104039	621417103037	621418104045	621417103052	621418104053
621417103023	621418104033	621417103030	621418104040	621417103039	621418104046	621417103054	621418104054
621417103025	621418104034	621417103031	621418104041	621417103040	621418104047	621417103055	621418104056
621417103026	621418104035	621417103033	621418104042	621417103043	621418104048	621417103056	621418104057
621417103027	621418104036	621417103035	621418104043	621417103047	621418104049	621417103060	621418104701

DATE	8/5/2016	8/6/2019	8/7/2019	8/8/2019	8/9/2019	8/10/2019
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CONTINUOUS INTERNAL ASSESMENT TEST (CIAT) – I

(FROM 05.08.2019 TO 10.08.2019)

FOR UG IV, VI and VIII SEMESTERS STUDENTS

SEATING ARRANGEMENT

(COMMON TO ALL EXAMINATIONS)

HALL NO. 103							
ROW I		ROW II		ROW III		ROW IV	
621417103061	621417104001	621417103069	621417104010	621417103078	621417104017	621417103091	621417104024
621417103062	621417104002	621417103070	621417104012	621417103079	621417104019	621417103092	621417104025
621417103063	621417104005	621417103072	621417104013	621417103085	621417104020	621417103093	621417104026
621417103066	621417104007	621417103073	621417104014	621417103087	621417104021	621417103095	621417104027
621417103067	621417104008	621417103074	621417104015	621417103089	621417104022	621417103097	621417104028
621417103068	621417104009	621417103075	621417104016	621417103090	621417104023	621417103099	621417104029

DATE	8/5/2016	8/6/2019	8/7/2019	8/8/2019	8/9/2019	8/10/2019
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Ref no: MBEC/ECE/CIAT I/2023

DATE: 27.02.2023

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CONTINUOUS INTERNAL ASSESSMENT (CIAT)-I TIME TABLE

DATE & SESSION	06.03.2023	07.03.2023	08.03.2023	09.03.2023	11.03.2023 (FN)	11.03.2023 (AN)
YEAR						
II YEAR	EC3451 Linear integrated Circuits	EC3401 Network and Security	EC3492 Digital signal Processing	EC3452 Electromagnetic Fields	GE3451 Environmental Science and Sustainability	EC3491 Communication Systems
III YEAR	EC8691 Microprocessor and Microcontroller	EC8652 Wireless Communication	EC8651 Transmission Lines and RF systems	EC8095 VLSI Design	MG8591 Principles of Management	EC8004 Wireless Networks
IV YEAR	EC8094 Satellite Communication	GE8076 Professional Ethics in Engineering				

NOTE:

Exam timing: FN - 09.30 am to 11.15 am

AN - 02.40 pm to 04.20 pm

CLASS ADVISOR

II YEAR

[Signature]

III YEAR

[Signature]
27/2/23

IV YEAR

[Signature]

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Ref No: MBEC/ECO/CIAT/2019

DATE: 05.08.2019

CIRCULAR

All the staff members are informed to complete their subject Continuous Internal Assessment Test - I (CIAT - I) test paper valuation within two days after the examination. The same should be submitted to the Principal and after that to Examination Control Office


Examination Control Officer

Copy to

1. Principal
2. All HoD with a request to circulate among staff.
3. File

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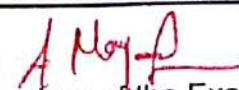
ANSWER BOOKLET

Name of the Examination	CIAT - I	CIAT - II	CIAT - III	MODEL - I	MODEL - II
Put tick mark (✓)	✓				

Reg. No.	6	2	1	4	2	1	1	0	6	0	0	5
College Name	maha barathi engineering college								College code		6214	
Degree/Branch	BE/ECE								Semester		IV	
Subject Code	EC3451								Date & Session		9.9.23 & PN	
Subject Title	Electromagnetic fields								No. of Pages used		12	
 Chief Superintendent/Principal Signature/ Facsimile								All particulars given are verified  Signature of the Hall Superintendent with date				
								 Name of the Hall Superintendent				

Instruction to the Candidates: Put a tick mark (✓) for the questions attended in the tick mark column against each question										
PART - A			PART - B & C							Grand Total (In Words)
Question No.	✓	Marks	Question No.	i	Marks	ii	Marks	iii	Marks	Total Marks
1	✓	2	11	a	✓	06	✓	00		06
2	✓	2		b						
3	✓	2	12	a	✓	07	✓	06		13
4	✓	2		b						
5	✓	2	13	a						
6	✓	2		b	✓	14				14
7	✓	2	14	a						
8	✓	2		b						
9	✓	2	15	a						
10	✓	2		b						
			16	a						
				b						
Sub Total		20								33
										Grand Total (In Figures)
										53

Declaration by the Examiner : Verified that all the questions attended by the student are valued and the total is found to be correct

11/02/23 Date	MAYEEL A Name of the Examiner	 Signature of the Examiner
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Part-A

1. Divergence theorem:

It is defined as the integral of the normal component of vector over closed surface is equal to the volume enclosed by the closed surface.

$$\oint \mathbf{D} \cdot d\mathbf{s} = \int_V (\nabla \cdot \mathbf{D}) dV$$

2. $P(5, 1, 3)$

$$x = 5, y = 1, z = 3$$

spherical coordinates (r, ϕ, θ)

$$r = \sqrt{x^2 + y^2 + z^2} = \sqrt{5^2 + 1^2 + 3^2} = \sqrt{35 + 1 + 9} = \sqrt{45} = 5.916$$

$$\phi = \tan^{-1}(y/x) = \tan^{-1}(1/5) = 11.30$$

$$\theta = \cos^{-1}(z/r) = \cos^{-1}(3/5.916) = 59.52$$

$$(r, \phi, \theta) = (5.916, 11.30, 59.52)$$

3. vector transformation Hw

cylindrical to spherical coordinates:

$$\begin{bmatrix} A_r \\ A_\phi \\ A_\theta \end{bmatrix} = \begin{bmatrix} \sin\theta & 0 & \cos\theta \\ \cos\theta & 0 & -\sin\theta \\ 0 & 1 & 0 \end{bmatrix} \begin{bmatrix} A_\rho \\ A_\phi \\ A_z \end{bmatrix}$$

spherical to cylindrical coordinates:

$$\begin{bmatrix} A_r \\ A_\phi \\ A_z \end{bmatrix} = \begin{bmatrix} \sin\theta & \cos\theta & 0 \\ 0 & 0 & 1 \\ \cos\theta & -\sin\theta & 0 \end{bmatrix} \begin{bmatrix} A_x \\ A_y \\ A_z \end{bmatrix}$$

4. source quantities of electromagnetic model:

- * electric charge
- * line charge
- * current
- * volume charge density

5. conditions:

* $\nabla \cdot \mathbf{A} = 0$ it is said to be solenoidal.

* $\nabla \times \mathbf{A} = 0$ it is said to be irrotational.

6. $\mathbf{A} = A_x \mathbf{a}_x + A_y \mathbf{a}_y + A_z \mathbf{a}_z$ $A(x=2, y=3, z=8)$

$$\mathbf{A} = A_x \mathbf{a}_x + A_y \mathbf{a}_y + A_z \mathbf{a}_z$$

$$A_x = 4, A_y = -2, A_z = -4$$

$$P = \sqrt{4^2 + 2^2} = \sqrt{20} = \sqrt{4 \cdot 5} = 2\sqrt{5} = 4.47$$

$$\phi = \tan^{-1} \frac{y}{x} = \tan^{-1} \left(\frac{3}{2} \right) = 56.30^\circ$$

$$\mathbf{A} = 4 \mathbf{a}_x - 2 \mathbf{a}_y - 4 \mathbf{a}_z$$

$$\begin{bmatrix} A_r \\ A_\phi \\ A_z \end{bmatrix} = \begin{bmatrix} \cos\theta & \sin\theta & 0 \\ 0 & 0 & 1 \\ -\sin\theta & \cos\theta & 0 \end{bmatrix} \begin{bmatrix} A_x \\ A_y \\ A_z \end{bmatrix}$$

$$\begin{bmatrix} A_r \\ A_\phi \\ A_z \end{bmatrix} = \begin{bmatrix} \cos\theta & \sin\theta & 0 \\ -\sin\theta & \cos\theta & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} A_x \\ A_y \\ A_z \end{bmatrix}$$

$$A_r = 4 \cos\theta - 2 \sin\theta$$

$$A_\phi = -4 \sin\theta - 2 \cos\theta$$

$$A_z = -4$$

$$A_r = 4 \cos(56.30^\circ) - 2 \sin(56.30^\circ)$$

$$= 2.219 - 1.663$$

$$= 0.555$$

$$A_\phi = -4 \sin(56.30^\circ) - 2 \cos(56.30^\circ)$$

$$= -3.327 - 1.1096$$

$$= -4.436$$

$$A_z = -4$$

$$\mathbf{A} = 0.555 \mathbf{a}_r - 4.436 \mathbf{a}_\phi - 4 \mathbf{a}_z$$

7. UNIT VECTORS:

The vectors have unit magnitude is called unit vector.

$$\mathbf{a}_n = \frac{\mathbf{A}}{|\mathbf{A}|}$$

8. scalar:

A quantity that has magnitude no³ direction is called scalar.

Ex: mass, temperature

vector:

A quantity that has magnitude and well known direction is called vector.

Ex: velocity, acceleration.

9.

$$\frac{\partial f}{\partial r} a_r + \frac{\partial f}{\partial \phi} a_\phi + \frac{\partial f}{\partial \theta} a_\theta$$

$$r = 5\sqrt{2} \sin \theta$$

$$= \frac{\partial}{\partial r} (5\sqrt{2} + \sin \theta) a_r + \frac{\partial}{\partial \phi} (5\sqrt{2} + \sin \theta) a_\phi + \frac{\partial}{\partial \theta} (5\sqrt{2} + \sin \theta) a_\theta$$

$$= (10\sqrt{2} + \sin \theta) a_r + \cos \theta a_\theta$$

10. Stokes theorem:

* the line integral of the normal component of the ~~vec~~ curl of vector bounded by the contour.

closed path is equal to the

$$\oint \mathbf{H} \cdot d\mathbf{l} = \oint (\nabla \times \mathbf{H}) \cdot d\mathbf{s}$$

PART-B

(12) a) (i)

A $(x \geq 2, y \geq 1, z \geq 3)$ to spherical

$$r = \sqrt{x^2 + y^2 + z^2} = \sqrt{2^2 + 1^2 + 3^2} = \sqrt{14 + 9} = \sqrt{23} = 3.74$$

34

$$\theta = \cos^{-1}(3/4)$$

$$= \cos^{-1}(3/3.74)$$

$$= 36.6^\circ$$

$$\phi = \tan^{-1}(4/1)$$

$$= \tan^{-1}(1/2)$$

$$= 26.56$$

$$(r, \theta, \phi) = (3.74, 36.6^\circ, 26.56^\circ)$$

B $(\rho = 1, \phi = 45^\circ, z = 2)$ to cartesian coordinates:

$$x = \rho \cos \phi$$

$$= (1) \cos(45^\circ)$$

$$= 0.707$$

$$y = \rho \sin \phi$$

$$= (1) \sin(45^\circ)$$

$$= 0.707$$

$$z = z$$

$$= 2$$

$$(x, y, z) = (0.707, 0.707, 2)$$

ii) A (x=2, y=3, z=-1) to spherical coordinates

$$r = \sqrt{x^2 + y^2 + z^2}$$

$$= \sqrt{2^2 + 3^2 + (-1)^2}$$

$$= \sqrt{14}$$

$$= 3.74$$

$$= 3.74$$

$$\theta = \cos^{-1}(z/r)$$

$$= \cos^{-1}\left(\frac{-1}{3.74}\right)$$

$$= 105.5^\circ$$

$$\phi = \tan^{-1}(y/x)$$

$$= \tan^{-1}(3/2)$$

$$= \tan^{-1}(1.5)$$

$$= 56.30$$

$$(r, \theta, \phi) = (3.74, 105.5, 56.30)$$

B (x=4, y=3, z=1) to cartesian coordinates

$$x = r \sin \theta \cos \phi$$

$$= (4) \sin(25) \cos(120) = -0.845$$

$$y = r \sin \theta \sin \phi$$

$$= 4 \sin 25 \sin(120)$$

$$= 1.463$$

$$z = r \cos \theta$$

$$= 4 \cos 25$$

$$= 3.625$$

$$(x, y, z) = (-0.845, 1.463, 3.625)$$

PART C

13. a) b)

$$A = 4xyz \mathbf{a}_x - 2y^2z \mathbf{a}_y + z^3 \mathbf{a}_z$$

$$x=0, y=0, z=0, x=1, y=1, z=1$$

$$\iiint_V \nabla \cdot \mathbf{A} \, dV = \iint_S \mathbf{A} \cdot d\mathbf{s}$$

LHS :

$$\nabla \cdot \mathbf{A} = \left(\frac{\partial}{\partial x} 4xz + \frac{\partial}{\partial y} (-2y^2z) + \frac{\partial}{\partial z} z^3 \right) (4xyz \mathbf{a}_x - 2y^2z \mathbf{a}_y + z^3 \mathbf{a}_z)$$

$$= \frac{\partial}{\partial x} (4xz) - \frac{\partial}{\partial y} (2y^2z) + \frac{\partial}{\partial z} (z^3)$$

$$\nabla \cdot \mathbf{A} = 4 - 4y + 3z$$

$$\iiint_V \nabla \cdot \mathbf{A} \, dV = \int_0^1 \int_0^1 \int_0^1 (4 - 4y + 3z) \, dx \, dy \, dz$$

$$= \int_0^1 \int_0^1 (4z - 4yz + 1z^2) \big|_0^1 dx dy$$

$$= \int_0^1 \int_0^1 (4 - 4y + 1) dx dy$$

$$= \int_0^1 (4y - \frac{4y^2}{2} + y) \big|_0^1 dy$$

$$= \int_0^1 (4 - \frac{2y^2}{2} + 1) dy$$

$$= \int_0^1 (5 - 2) dy$$

$$\boxed{\iiint_V \nabla \cdot \mathbf{A} \, dv = 3}$$

RHS

$$\oiint \mathbf{A} \cdot d\mathbf{s} = \int_0^1 \int_0^1 \mathbf{A} \cdot (x\mathbf{i}) dy dz + \int_0^1 \int_0^1 \mathbf{A} \cdot (x\mathbf{j}) dx dz + \int_0^1 \int_0^1 \mathbf{A} \cdot (x\mathbf{k}) dx dy$$

$$+ \int_0^1 \int_0^1 \mathbf{A} \cdot (-y\mathbf{j}) dx dz + \int_0^1 \int_0^1 \mathbf{A} \cdot (z\mathbf{k}) dx dy + \int_0^1 \int_0^1 \mathbf{A} \cdot (-z\mathbf{k}) dx dy$$

$$\int_0^1 \int_0^1 \mathbf{A} \cdot (x\mathbf{i}) dy dz = \int_0^1 \int_0^1 (4xy - 4y^2x + x^3) dx dy dz$$

$$= \int_0^1 (4x) dy dz$$

$$= 4x$$

$$\text{When } x=0 \Rightarrow 4(0) = 0$$

$$x=1, 4(1) = 4$$

$$\int_0^1 \int_0^1 \mathbf{A} \cdot (x\mathbf{i}) dx dz = \int_0^1 \int_0^1 (4xy - 4y^2x + x^3) dy dz$$

$$= \int_0^1 (-2y^2) dy$$

$$= -2y^2$$

$$\text{when } y=0 \Rightarrow -2(0)^2 = 0$$

$$y=1 \Rightarrow -2(1)^2 = -2$$

$$\int_0^1 \int_0^1 \mathbf{A} \cdot (z\mathbf{k}) dx dy = \int_0^1 \int_0^1 (4xz - 2y^2z + z^3) dz dx dy$$

$$= \int_0^1 (z^2) dx dy$$

$$= z^2$$

$$\text{when } z=1, z^2 = 1$$

$$z=0, z^2 = 0$$

$$\oiint \mathbf{A} \cdot d\mathbf{s} = 4 + 0 - 2 + 0 + 1 + 0$$

$$= 4 - 2 + 1$$

$$= 3$$

$$\boxed{\oiint \mathbf{A} \cdot d\mathbf{s} = 3}$$

$$\text{LHS} = \text{RHS}$$

the divergence theorem was proved.

Part B

7] a] (i)

Dot product:

* It is also known as scalar product.

It is defined as the product of the magnitude A

and B and cosine angle between them.

$$A \cdot B = |A||B| \cos \theta_{AB}$$

Properties:

* If two vectors are parallel

$$A \cdot B = |A||B| \cos(0)$$

* If two vectors are parallel

$$A \cdot B = |A||B| \cos(90^\circ)$$

$$= 0$$

* It obeys distributive law

$$A \cdot (B+C) = (A \cdot B) + (A \cdot C)$$

* It obeys

$$a_1 a_1 = a_2 a_2 = a_3 a_3 = 1$$

$$a_1 a_2 = a_2 a_1 = a_2 a_3 = a_3 a_2 = 0$$

Applications:

* To finding angle b/w two vectors

$$A \cdot B = |A||B| \cos \theta_{AB}$$

$$\cos \theta_{AB} = \frac{A \cdot B}{|A||B|}$$

$$\theta_{AB} = \cos^{-1} \left[\frac{A \cdot B}{|A||B|} \right]$$

Cross Product:

* It is also known as vector product. It is defined as cross product of two vectors A and B and whose magnitude of vectors and its formed by parallelogram A and B. the direction is advance right hand thumb in the vectors.

$$A \times B = |A||B| \sin \theta_{AB}$$

Properties:

* If the vectors is not commutative and associative.

$$A \times B \neq B \times A$$

$$A \times (B \times C) \neq (A \times B) \times (C \times C)$$

* It obeys distributive law

$$A \times (B+C) = (A \times B) + (A \times C)$$

Applications:

* To find angle b/w two vectors.

$$A \cdot B = |A||B| \sin \theta_{AB}$$

$$\sin \theta_{AB} = \frac{A \cdot B}{|A||B|}$$

$$\theta_{AB} = \left[\frac{A \cdot B}{|A||B|} \right] \sin^{-1}$$

Ex:

$$A = A_x a_x + A_y a_y + A_z a_z$$

$$B = B_x a_x + B_y a_y + B_z a_z$$

$$A \times B = \begin{vmatrix} a_x & a_y & a_z \\ A_x & A_y & A_z \\ B_x & B_y & B_z \end{vmatrix}$$

$$= a_x (A_y B_z - A_z B_y) - a_y (A_x B_z - A_z B_x) + a_z (A_x B_y - A_y B_x)$$

ii) $A = 2a_x - a_z, B = 2a_x - a_y + 2a_z, C = 3a_x - 3a_y + a_z$

Scalar triple Product:

$$B \cdot (A \times C)$$

$$A \times C = \begin{vmatrix} a_x & a_y & a_z \\ 2 & 0 & -1 \\ 2 & -3 & 1 \end{vmatrix}$$

$$= a_x (0 - 3) - a_y (2 + 2) + a_z (-6 + 0)$$

$$= -3a_x - 4a_y - 6a_z$$

$$B \cdot (A \times C) = (2a_x - a_y + 2a_z) \cdot (-3a_x - 4a_y - 6a_z)$$

$$= -6a_x^2 + 4a_y^2 - 12a_z^2$$

$$= -18 + 4$$

$$= -14$$

Vector triple Product:

$$B \times (A \times C)$$

$$A \times C = -3a_x - 4a_y - 6a_z$$

$$B \times (A \times C) = \begin{vmatrix} a_x & a_y & a_z \\ 2 & -1 & 2 \\ -3 & -4 & -6 \end{vmatrix}$$

$$= a_x (6 + 8) - a_y (-12 + 6) + a_z (-8 - 3)$$

$$= 14a_x + 6a_y - 11a_z$$



2019-20
ODD - I
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MAHA BARATHI ENGINEERING COLLEGE
NH-79, SALEM-CHENNAI HIGHWAY, A.VASUDEVANUR, CHINNASALEM (TK),
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2(F) & 12(B) status of UGC, New Delhi
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Internal Examination Grievance Form

Date: 9/8/2019

Register No.: 621416105049		Name of the student: SURUTHI.A			
Subject code:		Subject Name: SEM			
Semester: VII		Name of the Staff: D. ANANDHARAJA.			
Date of Exam: 9/8/2019		Depart of the Staff: EEE			
Branch: EEE					
Internal Exam : I Internal		II internal		III Internal	
Grievance: Not valued		Mark Variation		Total variation Any Other	
Not Valued / Mark variation	S.NO.	Qn. No.	Marks Allotted	Mark Yield	Marks updated
	1	02	02	0	02
Total marks correction	Marks Before Correction	39		Correction updated date	9/8/2019
	Marks After correction	41			

Suruthi.A
Signature of student

D. Anandharaja
Signature of the staff

D. Anandharaja
Signature of HOD

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Principals
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Internal Examination Grievance Form

Date: 21/9/2020

Register No.: 621417114025		Name of the student: Dinesh P			
Subject code: ME8792		Subject Name: P.P.E			
Semester: VII		Name of the Staff: M.R. Vignesh			
Date of Exam: 19/9/2020		Depart of the Staff: Mechanical			
Branch: Mechanical					
Internal Exam : I Internal II internal III Internal Model Exam					
Grievance: Not valued Mark Variation Total variation Any Other					
Not Valued / Mark variation	S.NO.	Qn. No.	Marks Allotted	Mark Yield	Marks updated
	1.	4.	2	01	2
	2.	11.b)	16	05	10
Total marks correction	Marks Before Correction	37		Correction updated date	21/9/2020
	Marks After correction	43			

Dinesh P
Signature of student

[Signature]
Signature of the staff

[Signature]
Signature of HOD

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Internal Examination Grievance Form

Date: 8/8/2019

Register No.: 621418103002	Name of the student: AKASH.J.				
Subject code: CE 830L	Subject Name: FLUID MECHANICS				
Semester: III	Name of the Staff: M. J. M. CHITRARASU				
Date of Exam: 6/8/2019	Depart of the Staff: CIVIL ENGINEERING.				
Branch: CIVIL ENGINEERING					
Internal Exam : I Internal II internal III Internal Model Exam					
Grievance:	Not valued	Mark Variation		Total variation	Any Other
Not Valued / Mark variation	S.NO.	Qn. No.	Marks Allotted	Mark Yield	Marks updated
	1.	10) a)	10	5	8
Total marks correction	Marks Before Correction	24	Correction updated date	8/8/2019.	
	Marks After correction	27			

Akash.J.
Signature of student

[Signature]
Signature of the staff

[Signature]
Signature of HOD

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Internal Examination Grievance Form

Date: 23-9-2019

Register No.: 621418106026	Name of the student: R. Vedha				
Subject code: MA8352	Subject Name: Linear Algebra & Partial Differentiation				
Semester: IV	Name of the Staff: Mr. Kalidoss				
Date of Exam: 21-9-2019	Depart of the Staff:				
Branch: ECE					
Internal Exam : I Internal If internal III Internal Model Exam					
Grievance:	Not valued	Mark Variation	Total variation	Any Other	
Not Valued / Mark variation	S,NO.	Qn. No.	Marks Allotted	Mark Yield	Marks updated
	1.	10-a)	10	5	8
Total marks correction	Marks Before Correction	45	Correction updated date		23-9-2019
	Marks After correction	48			

R. Vedha.
Signature of student

Signature of the staff

Signature of HOD

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Internal Examination Grievance Form

Date: 23.9.2019

Register No.: 621416105702		Name of the student: RAJADURAI, S			
Subject code: EE6008		Subject Name: MBSP			
Semester: V		Name of the Staff: V. Suganya			
Date of Exam: 21.9.2019		Depart of the Staff: EEE			
Branch: EEE					
Internal Exam : I Internal II Internal ☒ III Internal Model Exam					
Grievance: Not valued Mark Variation Total variation Any Other					
Not Valued / Mark variation	S.NO.	Qn. No.	Marks Allotted	Mark Yield	Marks updated
	1	6	2	0	2
Total marks correction	Marks Before Correction	44	Correction updated date		23.9.2019
	Marks After correction	46			

R. RAJADURAI
Signature of student

V. Suganya
Signature of the staff

V. Suganya
Signature of HOD

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Ref: MBEC/ECE/RA/2023

CIAT-I Result Analysis

Date: 13.03.2023

Department: Electronics and Communication Engineering

Conducted From (06.03.23 to 11.03.23)

S.No	II-Year (No.of students:42)				III-Year (No.of students:47)					IV-Year (No.of students:20)					
	Subject code/Name & Staff name		Pass		Subject code/Name & Staff name		Pass		Subject code/Name & Staff name		Pass				
			No.s	%			No.s	%			No.s	%			
1	EC3491/Communication Systems Mr.M.R.Sathish		20	47.6%	EC8691/Microprocessors and Microcontrollers Dr.K.Somu		8	17.0%	EC8094/Satellite Communication Mr.P.Saravanakumar		10	50.0%			
2	EC3492/Digital Signal Processing Ms.M.Keerthana		6	14.3%	EC8095/VLSI Design Mr.V.Suresh		4	8.5%	GE8076/Professional Ethics in Engineering Ms.M.Keerthana		4	20.0%			
3	EC3452/Electromagnetic Fields Mrs.A.Mayeel		15	35.7%	EC8652/Wireless Communication Mrs.A.Mayeel		4	8.5%							
4	EC3451/Linear Integrated Circuits Mrs.M.Meena		20	47.6%	MG8591/Principles of Management Mrs.M.Meena		5	10.6%							
5	EC3401/Networks and Security Mr.V.Suresh		6	14.3%	EC8651/Transmission Lines and RF Systems Mr.P.Saravanakumar		9	19.1%							
6	GE3451/Environmental Sciences and Sustainability Mrs.K.Nivetha		15	35.7%											
Exam	Sem clear	One arrear	Two arrear	Three arrear		Sem clear	One arrear	Two arrear	Three arrear	Above 3 year	Sem clear	One arrear	Two arrear	Three arrear	Above 3 year
CIAT-I	3	4	4	4	27	4	1	0	2	40	4	6	10	0	0
CIAT-II															
Model I															
Model II															
Previous	2	17	11	1	11	7	2	0	5	33	15	3	0	0	2
UE all clear	2	4.26%				7	14.08%				15	75%			

FACULTY ADVISOR

HOD

ATTESTED

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