Sir M.Visvesvaraya Institute of Technology

Bengaluru - 562157

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Department of Information Science and Engineering

Course File

Name of the Faculty : Pradeep Kumar Name of the Subject with code : BEE304

Academic Year : 2023-24 Semester and year : III rd

Name of the faculty : Transformers & Generators

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12.	Lab Course Plan with CO/PO/PSO Mapping for Lab(IPCC) CO PO mapping print out sheet for Lab CO-PO Justification for the correlation given 1,2,3 for Lab CO-PO Attainment sheet for Lab CO-PO Attainment sheet of the previous year for the same lab course Continuous Improvement Evaluation (CIE) in Lab sheet.	-
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Signature of Staff

Signature of HOD

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Vision of EEE Department

To be a pioneer in imparting quality technical education of high standards to produce skilled manpower with trained intelligence and emotional balance.

Mission of EEE Department

To nurture an integrated growth of talented youngsters and enrich their knowledge in modern branches of electrical sciences and develop them into competent technocrats and disciplined humans beneficial to global society.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PROGRAM SPECIFIC OUTCOMES (PSOs)

Engineering Graduates will be able to:

PSO1: Comprehend the breadth and depth of electrical and electronics engineering and apply their knowledge in the fields of power system, power electronics and drives.

PSO2: Enhance their career by adapting contemporary tools and techniques to augment electrical and electronic systems.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINNERING

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of Mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and Modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Program Educational Objectives (PEOs)

PEO1: Graduates of the program will have a successful career with sound base in domain specific engineering skills.

PEO2: Graduates of the program will be capable of succeeding in diverse engineering fields providing innovative solutions with ethical and social responsibility.

PEO3: Graduates of the program will continue to pursue professional development and engage in life-long learning.

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SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY
BANGALORE-562157
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGG
Subject allotment List: AY:2023-2024(ODD Semester)

SL No.	Name of the Faculty Members	I Sem	III Sem	V Sem	VII	Signature of Faculty
1	Dr. H L Suresh			CS(A)		
2	Dr. Mahesh K	BEE 1 & 2		RM&IPR (A&B)		
3	Dr. C.V. Mohan	IDT,BEE 1	SCR(A&B)			
4	Mrs. D Beula		AEC(A)		PAS-II(A)	
5	Dr. R Sivapriyan				PSP(A)	
6	Dr. Parthasarathy V		ECA(A&B)			
7	Mrs. P. Sumalatha			PSA-I(A)	PSA-II(B)	
	Mrs Rekha Radhakrishnan		DLC	CS(B)		
8	Mr. Kumaraswamy R		AEC(B)	PE(A)		
9	Mrs. Bindiya Tyagi			PE(B)	PSP(B)	
10	Mr. Bhaskar C			T&D(A)	S&WE(A)	
11	Mr. Siddappaji M R			T&D(A)	S&WE(B)	
12	Mr. Pradeep Kumar		T&G(A&B)			
13	Mr. V Rajesh Kumar	BEE 1				
14	Mrs. P.Kezia Joy Kumari	BEE 2				
15	Mrs. Priyanka Nayak			PSA-I(B)	UEP(A)	
16	Mrs VijayaLakshmi		MEAS		UEP(B)	
17	Mrs Harshithananda B	BEE			IDA	

HOD EEE

PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevanagar, Hunasamaranahalli
(Via, Tataguni, Bengaluru - 562 157

Sir M Visvesvaraya Institute of Technology
Department of Electrical & Electronics Engineering
Academic Year 2023-2024 (Odd Sem)
SUBJECT ALLOTMENT ORDER

Name of the Faculty	**Mr. Pradeep Kumar**
Designation	**Asst. Professor**

A. THEORY SUBJECT

Sl. No	Name of the Subject and Sub.code	Type of subject (core/professional/ open elective)	Semester	Section
1	Transformer and Generators	Core	III	A
2	Transformer and Generators	Core	III	B

Instruction:
(i)Prepare lesson plan and session plan based on the college calendar.
(ii)Prepare notes for all modules well in advance along with PPTs if necessary.
(iii)Collect necessary videos if required, NPTEL notes etc.

B. LABORATORY

Sl. No	Name of the Lab	Batch Number	Semester	Section
1	Electric Hardware Lab	A1	III	A
2	Relay and HV Lab	B1,B2,B3	VII	B
3	Transformer and Generators Lab	A1 & B1	III	A & B

Instruction:
(i) Practice all experiments well in advance.
(ii) Make sure that all equipments/components are available and in working condition before starting lab session.
(iii)Evaluate the observation on the day of experiment conduction and record in the subsequent lab session.

Head of Department

DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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COURSE INFORMATION SHEET

Course Name / Code	Transformer & Generators /BEE304		
Degree / Branch	B.E / Electrical and Electronics Engineering		
Course Credit	3		
Course Category	***Core Subject***		
Course Teacher Contact Details	**Course Teacher Name**	**Contact Details**	
		Mobile	**E-mail**
	Mr.Pradeep Kumar	9740024557	pradeepkumar_eee@sirmvit.edu
Head of the Department	Dr. H.L. Suresh		

Sir M. Visvesvaraya Institute of Technology, Bengaluru - 562 157

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Academic Year: 2023-24 (ODD SEM) Staff Time Table

STAFF NAME: Mr.Pradeep Kumar

Time → Day ↓	9.00 am to 9.55 am	9.55 am to 10.50 am	10.50 am to 11.00 am	11.00 am to 11.55 am	11.55 am to 12.50 pm	12.50 pm to 1.35 pm	1.35 pm to 2.30 pm	2.30 pm to 3.25 pm	3.25 pm to 4.20 pm
Monday	EHL LAB(MK,PK) (A1)		TEA BREAK		TG (3B)	LUNCH BREAK	TG (TUT) (3B)	TG LAB (PK,VRK) (A1)	
Tuesday	RELAY & HV LAB(BC,PK) (B1)				TG (3A)				
Wednesday	RELAY & HV LAB(CVM,PK) (B3)								
Thursday	TG (3B)		TEA BREAK	TG (3A)				TG LAB (PK,VRK) (B1)	
Friday	TG (3A)				TG (3B)		RELAY & HV LAB(BC,PK) (B2)		
Saturday									

Head of the Department

Dr.Suresh H L PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya nagar, Hunasamaranahalli
(Via) Yelahanka, Bangalore - 562 157

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Sir M. Visvesvaraya Institute of Technology, Bengaluru - 562 157

Academic Year: 2023-24 Time Table –3rd Semester with effect from 15/11/2023

Sem / Sec: III / A	BRANCH: EEE					ROOM No.: E-210			
Time → / Day ↓	9.00 am to 9.55am	9.55 am to 10.50 am	10.50 am to 11.00 am	11.00 am to 11.55 am	11.55 am to 12.50 pm	12.50 pm to 1.35 pm	1.35 pm to 2.30 pm	2.30 pm to 3.25 pm	3.25 pm to 4.20 pm
Monday	TG LAB (A2) [BC, VRK] EHL LAB (A1) [MK, PK]		TEA BREAK	AEC	SCR	LUNCH BREAK	DLC	TG LAB (A1) [PK, VRK] EHL LAB (A2) [MK, MRS]	
Tuesday	EM-3	ECA		SCR	TG		ECA LAB (A3) [HLS, MRS] AEC LAB (A1) [DB, PN]		LG
Wednesday	DLC	ECA		ECA LAB (A2) [PS, HB] AEC LAB (A3) [DB, PN]			Forum / Club Activities		
Thursday	AEC	EM-3		TG	DLC		ECA(TUT)	ECA LAB (A1) [PS, HB] AEC LAB (A2) [DB, PN]	
Friday	TG	ECA		AEC	EM-3		LG	LG	LG
Saturday	NSS/Physical Education Director/ Yoga			NSS/Physical Education Director/ Yoga			NSS/Physical Education Director/ Yoga		

Sl. No.	Course	Course code	Course Title	Faculty Names (Initials)
1	PCC	BEE301	Engineering Mathematics for EEE (EM-3)	Mrs.Shuba R.N (SRN)
2	IPCC	BEE302	Electric Circuit Analysis (ECA)	Dr. Suresh H L(HLS)
3	IPCC	BEE302	Electric Circuit Analysis Lab (ECA-Lab) [E-103]	Dr. Suresh H L(HLS) / Mrs.P.Sumalatha (PS) / Mr.Siddappaji.M.R (MRS) / Mrs.Harshithananda B (HB)
4	IPCC	BEE303	Analog Electronic Circuits (AEC)	Mrs. D.Beula (DB)
5	IPCC	BEE303	Analog Electronic Circuits Lab (AEC- Lab) [E-101]	Mrs.D.Beula (DB) / Mrs.Priyanka Nayak (PN)
6	PCC	BEE304	Transformers & Generator (TG)	Mr. Pradeep Kumar (PK)
7	PCCL	BEEL305	Transformers & Generator Lab (TG-Lab) [E-002]	Mr.Bhaskar C (BC) / Mr. Pradeep Kumar (PK) / Mr. V. Rajesh Kumar K (VRK)
8	ESC	BEE306A	Digital Logic Circuits (DLC)	Mrs.Rekha Radhakirshnan (RRK)
9	UHV	BSCK307	Social Connect & Responsibility (SCR)	Dr.C.V.Mohan (CVM)
10	AEC	BEEL358D	Electrical hardware Lab (EHL- Lab) [E-104]	Dr.Mahesh K (MK) / Mr. Pradeep Kumar (PK) / Mr.Siddappaji. M.R
11	MC	BNSK/BPEK/BYOK359	NSS/Physical Education Director/ Yoga	New Faculty

Class Advisor: Mrs. Kumarswamy.R

Local Guardian(s)(LG):A1/A2/A3:-

Time Table officer(s) – TTO		Head of the Department	Chief Time Table Officer	Principal
Name	Mr. Siddappaji M R Mr. Pradeep Kumar	Dr. Suresh H L	Prof. S. B. Halesh	Prof. S. G. Rakesh
Signature				

r M. Visvesvaraya Institute of Technology, I galuru - 562 157

Academic Year: 2023-24 **Time Table –3rd Semester with effect from 15/11/2023**

Sem / Sec: III / B	BRANCH: EEE				ROOM No.: E-211			
Time → Day ↓	9.00 am to 9.55am	9.55 am to 10.50 am	10.50 am to 11.00 am	11.00 am to 11.55 am	11.55 am to 12.50 pm	12.50 pm to 1.35 pm	1.35 pm to 2.30 pm	2.30 pm to 3.25 pm	3.25 pm to 4.20 pm
Monday	EM-3	SCR	TEA BREAK	EMI	TG	LUNCH BREAK	TG (TUT)	ECA LAB (B2) [PS, HB] AEC LAB (B1) [KSR, VK]	
Tuesday	AEC	SCR		ECA LAB (B1) [HLS, MRS] AEC LAB (B3) [KSR, VK]			EMI	EM-3	LG
Wednesday	ECA	AEC		TG LAB (B2) [BC, VRK] EHL LAB (B1) [MK, NF]			Forum / Club Activities		
Thursday	TG	AEC (TUT)		ECA	EMI		ECA (TUT)	TG LAB (B1) [PK, VRK] EHL LAB (B2) [MK, BC]	
Friday	AEC	ECA		EM-3	TG		EMI (TUT)	ECA LAB (B3) [HLS, MRS] AEC LAB (B2) [KSR, VK]	
Saturday	NSS/Physical Education Director/ Yoga			NSS/Physical Education Director/ Yoga			NSS/Physical Education Director/ Yoga		

Sl. No.	Course	Course code	Course Title	Faculty Names (Initials)
1	PCC	BEE301	Engineering Mathematics for EEE (EM-3)	Ms. Vasudha D.K (VDK)
2	IPCC	BEE302	Electric Circuit Analysis (ECA)	New Faculty
3	IPCC	BEE302	Electric Circuit Analysis Lab (ECA-Lab) [E-103]	Dr. Suresh H L(HLS) / Mrs.P.Sumalatha (PS) / Mr.Siddappaji.M.R (MRS) / Mrs. Harshithanada B (HB)
4	IPCC	BEE303	Analog Electronic Circuits (AEC)	Mrs. Kumarswamy.R (KSR)
5	IPCC	BEE303	Analog Electronic Circuits Lab (AEC- Lab) [E-101]	Mrs. Kumarswamy.R (KSR) / Mrs. Vijayalakashmi (VK)
6	PCC	BEE304	Transformers & Generator (TG)	Mr. Pradeep Kumar (PK)
7	PCCL	BEEL305	Transformers & Generator Lab (TG-Lab) [E-002]	Mr.Bhaskar C (BC) / Mr. Pradeep Kumar (PK) / Mr. V. Rajesh Kumar K (VRK)
8	ESC	BEE306B	Electrical Measurements and Instrumentation (EMI)	Mrs. Vijayalakashmi (VK)
9	UHV	BSCK307	Social Connect & Responsibility (SCR)	Dr.C.V.Mohan (CVM)
10	AEC	BEEL358D	Electrical hardware Lab (EHL- Lab) [E-104]	Dr.Mahesh K (MK) / Mr.Bhaskar C (BC) / New Faculty (NF)
	MC	BNSK/BPEK/BYOK359	NSS/Physical Education Director/ Yoga	New Faculty
Class Advisor: Mrs. Vijayalakashmi				
Local Guardian(s)(LG):B1/B2/B3:-				

Time Table officer(s) – TTO	Head of the Department	Chief Time Table Officer	Principal
Name: Mr. Siddappaji M R, Mr. Pradeep Kumar	Dr. Suresh H L	Prof. S. B. Halesh	Prof. S. G. Rakesh

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SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU- 562 157
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
LIST OF STUDENTS FOR THE ACADEMIC YEAR 2023-2024

STRENGTH:94	ROOM NO.: E-210/E-211

III SEMESTER B E SECTION " A&B "(ODD SEM)

Sl. No.	SECTION	USN	Name of the Students
1	A	1MV22EE003	ASHWINI
2	A	1MV22EE005	BASAVARAJ
3	A	1MV22EE004	ATHISH KUMAR
4	A	1MV22EE008	DAYANANDA HIREMATH
5	A	1MV22EE009	DEEKSHITHA R
6	A	1MV22EE011	DIKSHITHA N
7	A	1MV22EE017	KANAKAMBARI ANNASAHEB HIRAVE
8	A	1MV22EE019	KESHAVA PRASAD D
9	A	1MV22EE020	LOKESH GOWDA P N
10	A	1MV22EE021	MAHESH D
11	A	1MV22EE023	MANUKUMAR R
12	A	1MV22EE024	NANDAKUMARA
13	A	1MV22EE025	NIKHITA N LAMANI
14	A	1MV23EE400	AKASH B K
15	A	1MV23EE401	ASHRAY H S
16	A	1MV23EE402	ASHWINI M
17	A	1MV23EE403	B G HEMANTH
18	A	1MV23EE404	BHAGYASHRI
19	A	1MV23EE405	BHARATH G
20	A	1MV23EE406	BHUMIKA
21	A	1MV23EE407	CHANDANA M P
22	A	1MV23EE408	CHARAN S
23	A	1MV23EE409	CHINNURAGOUDA GM
24	A	1MV23EE410	DARSHAN H E
25	A	1MV23EE411	DARSHAN J
26	A	1MV23EE412	DARSHAN K M
27	A	1MV23EE413	DEEKSHITH G R
28	A	1MV23EE414	DEEKSHITH N
29	A	1MV23EE415	DHANARAJ U P
30	A	1MV23EE416	DHANUSH K J
31	A	1MV23EE417	DHANUSH M
32	A	1MV23EE418	DODDABASAVANAGOUDA K
33	A	1MV23EE419	GAGAN D

34	A	1MV23EE420	GAGANDEEP B M
35	A	1MV23EE422	GANGADHARA K T
36	A	1MV23EE423	GIREESH R U
37	A	1MV23EE424	GIRISHA T A
38	A	1MV23EE425	GURURAJ H R
39	A	1MV23EE426	HARSHITHA BAI
40	A	1MV23EE427	JAYARAJ K
41	A	1MV23EE428	JEENESH G M
42	A	1MV23EE429	K M JAYADEVA
43	A	1MV23EE430	KEERTHIVARDHAN N
44	A	1MV23EE431	KIRAN T G
45	A	1MV23EE432	KRUTHIK K
46	A	1MV23EE434	LIKITH B C
47	A	1MV23EE435	M RAGHAVENDRA
48	A	1MV23EE436	MAHESH V
49	A	1MV23EE437	MALLIKARJUN
50	A	1MV23EE438	MANJUNATHA S G
51	A	1MV23EE439	MANJUNATHA T S
52	A	1MV23EE440	MANOJ C
53	B	1MV22EE026	NIRANJAN D A
54	B	1MV22EE027	NIZAM UDDIN
55	B	1MV22EE029	PRATHIK D GOWDA
56	B	1MV22EE032	RAMESH
57	B	1MV22EE033	RUSHDA FIRDOSE
58	B	1MV22EE036	SANDEEP
59	B	1MV22EE037	SANKETH MASKI
60	B	1MV22EE041	SNEHA
61	B	1MV22EE042	SNEHA BARGALE
62	B	1MV22EE044	SUDEEP N
63	B	1MV22EE046	UDITA SHANKAR
64	B	1MV22EE052	VIKAS D
65	B	1MV22EE057	ZAINAB ISMAIL
66	B	1MV22EE058	VARUN KUMAR S M
67	B	1MV23EE441	MOHAMMADSOHAIL MOHAMMADELIYAS GOVE
68	B	1MV23EE442	NAGENDRA B M
69	B	1MV23EE443	NARESH P
70	B	1MV23EE444	NIKHIL S P
71	B	1MV23EE445	NIRANJAN BASAVARAJ YARAGATTI
72	B	1MV23EE446	NITHIN N
73	B	1MV23EE447	OMKARESHWARI
74	B	1MV23EE448	P SATYA SAI MOHAN
75	B	1MV23EE449	PRAJWAL H C
76	B	1MV23EE450	PRASHANTH T V
77	B	1MV23EE451	PRASHANTHA
78	B	1MV23EE452	PRATHVI RAVI NAIK
79	B	1MV23EE453	PREMARASHI G P
80	B	1MV23EE454	PRUTHVI RAJ A
81	B	1MV23EE455	PUNEETH B Y
82	B	1MV23EE456	RIYAZ DAVALASAB KOTABAL
83	B	1MV23EE457	SAGAR ANJANEYA HARIJAN
84	B	1MV23EE458	SANDEEP H N
85	B	1MV23EE459	SANGAMESH

86	B	1MV23EE460	SANGAMESH ARJUN MURANAL
87	B	1MV23EE461	SANGAMESH SHANKARAPPA SULLIKERI
88	B	1MV23EE462	SANJAY A K
89	B	1MV23EE463	SHESHADHRI
90	B	1MV23EE464	SHRIRAM SARAVANAN
91	B	1MV23EE465	SHRIVATSA T Y
92	B	1MV23EE466	SOWMYA G
93	B	1MV23EE467	SUHAS SH
94	B	1MV23EE468	SUMANTH KUMAR B V
95	B	1MV23EE469	SWAPNA T S
96	B	1MV23EE470	SWATHI C
97	B	1MV23EE471	THIPPESWAMY C
98	B	1MV23EE472	VAMSHI S
99	B	1MV23EE473	VANDANA S
100	B	1MV23EE474	VIDYA HANAMANT KUNDARGI
101	B	1MV23EE475	VISHMITHA J M
102	B	1MV23EE476	YASHWANTH SJ

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14.08.2023

Transformers and Generators			
Course Code	BEE304	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3:0:0:0	SEE Marks	50
Total Hours of Pedagogy	40	Total Marks	100
Credits	03	Exam Hours	03
Examination nature (SEE)	Theory		

Course objectives:

- To understand the construction, working and various tests of single phase Transformer.
- To understand the construction, working and parallel operation of three phase Transformer.
- To understand the construction, working and analysis of Synchronous Generator.
- To understand the construction, working of solar and wind power generators.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) needs not to be only traditional lecture method, but alternative effective teaching methods could be adopted to attain the outcomes.
2. Use of Video/Animation to explain functioning of various concepts.
3. Encourage collaborative (Group Learning) Learning in the class.
4. Ask at least three HOT (Higher order Thinking) questions in the class, which promotes critical thinking.
5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develop design thinking skills such as the ability to design, evaluate, generalize, and analyze information rather than simply recall it.
6. Introduce Topics in manifold representations.
7. Show the different ways to solve the same problem with different circuits/logic and encourage the students to come up with their own creative ways to solve them.
8. Discuss how every concept can be applied to the real world-and when that's possible, it helps improve the students' understanding.

Module-1

Single phase Transformers:
Necessity of transformer, principle of operation, Types and construction, EMF equation, equivalent circuit, Operation of practical transformer under no-load and on-load with phasor diagrams. Losses and methods of reducing losses, efficiency and condition for maximum efficiency. Polarity test, Sumpner's test.
Open circuit and Short circuit tests, calculation of equivalent circuit parameters. Predetermination of efficiency, voltage regulation and its significance. Numerical.

Module-2

Three-phase Transformers: Introduction, Constructional features of three-phase transformers. Transformer connection for three phase operation– star/star, delta/delta and star/delta, comparative features. Labelling of three-phase transformer terminals.
Parallel Operation of Transformers: Necessity of Parallel operation, conditions for parallel operation– Single phase and three phase. Load sharing in case of similar and dissimilar transformers. Numerical.
Auto transformers and Tap changing transformers: Introduction to autotransformer-copper economy, equivalent circuit, no load and on load tap changing transformers. Numerical.

Module-3

Synchronous Generators: Construction, working, Armature windings, winding factors, EMF equation. Harmonics–causes, reduction and elimination. Armature reaction, Synchronous reactance, Equivalent circuit.
Synchronous Generators Analysis: Open circuit and short circuit characteristics, Assessment of reactance-short circuit ratio, Alternator on load. Voltage regulation. Voltage regulation by EMF and MMF methods. Excitation control for constant terminal voltage. Numerical.

Module-4
Synchronous Generators (Salient Pole): Effects of saliency, two-reaction theory, Parallel operation of generators and load sharing. Methods of Synchronization, Synchronizing power. **Performance of Synchronous Generators:** Power angle characteristic (salient and non salient pole), power angle diagram, reluctance power, Capability curve for large turbo generators. Hunting and damper windings. Numerical.
Module-5
Wind power Generator –Basic components of wind energy conversion system, types of wind generators- Horizontal and vertical axis. Advantages and disadvantages of WECS. **Solar power generator** - principle of solar cell, Basic Solar Photo voltaic, system for power generation, Advantages and disadvantages.
Course outcome (Course Skill Set) At the end of the course, the student will be able to : 1. Explain the construction, working and various tests of single phase Transformer. 2. Explain the construction, working and parallel operation of three phase Transformer. 3. Explain the construction, working and analysis of Synchronous Generator. 4. Explain the construction, working of solar and wind power generators.
Assessment Details (both CIE and SEE) The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. **Continuous Internal Evaluation:** • For the Assignment component of the CIE, there are 25 marks and for the Internal Assessment Test component, there are 25 marks. • The first test will be administered after 40-50% of the syllabus has been covered, and the second test will be administered after 85-90% of the syllabus has been covered • Any two assignment methods mentioned in the 22OB2.4, if an assignment is project-based then only one assignment for the course shall be planned. The teacher should not conduct two assignments at the end of the semester if two assignments are planned. • For the course, CIE marks will be based on a scaled-down sum of two tests and other methods of assessment. **Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.** **Semester-End Examination:** Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the course (**duration 03 hours**). 1. The question paper will have ten questions. Each question is set for 20 marks. 2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module. 3. The students have to answer 5 full questions, selecting one full question from each module. 4. Marks scored sha ll be proportionally reduced to 50 marks
Suggested Learning Resources: **Textbooks** 1. Electric Machines, D. P. Kothari, et al, 4th Edition, 2011. 2. Electric Machines, Ashfaq Hussain, Dhanpat Rai & Co, 2nd Edition, 2013. 3. Non conventional Energy sources by G D Rai

Reference Books

1. Electric Machines, Mulukuntla S. Sarma, at el, Cengage, 1st Edition, 2009.
2. Electrical Machines, Drives and Power systems, Theodore Wildi, Pearson, 6th Edition, 2014.
3. Principals of Electrical Machines, V.K Mehta, Rohit Mehta, S Chand, 2nd edition, 2009

Web links and Video Lectures (e-Resources):

- www.nptel.ac.in

	SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE	RECORD FORMATS (ISO 9001:2000)
	R/PP04/04	LESSON PLAN

BEE304 –TRANSFORMER AND GENERATOR (Core Course) III- SEMESTER

WEEK	DATE FROM	DATE TO	TOPICS PLANNED
1	15-11-2023	18-11-2023	**Introduction to OBE,CO,PO &PSO** **MODULE 1** **Single phase Transformers:** 1 Salient features of ideal transformer, operation of practical transformer under no -load and on - load with phasor diagrams. 2.Equivalent circuit 3 All day efficiency (04)
2	20-11-2023	25-11-2023	4 Voltage regulation and its significance problems **Three-phase Transformers:** 5 Open circuit and Short circuit tests, calculation of equivalent circuit parameters 6 Introduction, Constructional features of three-phase transformers. Choice between single unit three-phase transformer and a bank of three single-phase transformers. 7 Transformer connection for three phase operation – star/star,delta/delta, star/delta, zigzag/star and V/V, choice of connection
3	27-11-2023	02-12-2023	**01-11-2021 Kannada Rajyosthava** **03-11-2021 Naraka Chaturdashi** **05-11-2021 Balipadyami** 8 Phase conversion – Scott connection for three-phase to two-phase conversion.
4	04-12-2023	09-12-2023	9 Labeling of three-phase transformer Terminals, vector groups. 10 Equivalent circuit of three phase transformers. **Module-2**

Prepared by : Pradeep Kumar	Approved by: Dr. H.L. SURESH
Designation : Asst.Professor	Designation : Professor & Head
Signature	Signature

	SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE	RECORD FORMATS (ISO 9001:2000)
	R/PP04/04	LESSON PLAN

BEE304 –TRANSFORMER AND GENERATOR (Core Course) III- SEMESTER

WEEK	DATE		TOPICS PLANNED
	FROM	TO	
			Parallel Operation of Transformers: 11polarity test& 12 sumpner's test
5	11-12-2023	16-12-2023	13 Necessity of Parallel operation, conditions for parallel operation – Single phase and three phase. 14. Load sharing of similar and dissimilar **Auto transformers and Tap changing transformers:** 15 Introduction to auto transformer -copper economy, 16 equivalent circuit of Auto transformers,
6	18-12-2023	23-12-2023	**I- Test**
7	25-12-2023	30-12-2023	17. numericals 18 .equivalent circuit of tap changing Auto transformers 20 Numerical
8	01-01-2024	06-01-2024	**Module-3** **Tertiary winding Transformers:** 21Necessity of tertiary winding, equivalent circuit and voltage regulation, 22.tertiary winding in star/star transformers, rating of tertiary winding 23 problems on above topics (4)

Prepared by : Pradeep Kumar

Designation : Asst.Professor

Signature

Approved by: Dr. H.L. SURESH

Designation : Professor & Head

Signature

	SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE	RECORD FORMATS (ISO 9001:2000)
	R/PP04/04	LESSON PLAN

BEE304 –TRANSFORMER AND GENERATOR (Core Course) III- SEMESTER

WEEK	DATE		TOPICS PLANNED
	FROM	TO	
9	08-01-2024	13-01-2024	**Direct current Generator –** 24.Armature reaction, 25. Commutation and 26 associated problems **Synchronous generators** 27 Armature windings, winding factors, emf equation
10	15-01-2024	20-01-2024	28 Harmonics – causes, reduction and elimination. 29 Armature reaction, Synchronous reactance, Equivalent circuit **Synchronous generators (continuation):** 30 Generator load characteristic. Voltage regulation, excitation control for constant terminal voltage. 31 Generator input and output.
11	22-01-2024	27-01-2024	32 Parallel operation of generators and load sharing 33. Synchronous generator on infinite bus-bars 34. General load diagram, Electrical load diagram, mechanical load diagram, 35. V – curves. ,
12	29-01-2024	03-02-2024	36 Open circuit and short circuit characteristics, 37.Assessment of reactance- short circuit ratio, synchronous reactance, 38 Voltage regulation by EMF, 39 Voltage regulation by MMF
13	05-02-2024	10-02-2024	40. Voltage regulation ZPF 41 Numericals methods - power series and partial expansion, **Module-5**

Prepared by : Pradeep Kumar

Designation : Asst.Professor

Signature

Approved by: Dr. H.L. SURESH

Designation : Professor & Head

Signature

	SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE	RECORD FORMATS (ISO 9001:2000)
	R/PP04/04	LESSON PLAN

BEE304 –TRANSFORMER AND GENERATOR (Core Course) III- SEMESTER

WEEK	DATE		TOPICS PLANNED
	FROM	TO	
			Synchronous generators (salient pole): 42 Effects of saliency, two-reaction theory, Direct and Quadrature reactance, **14-01-2022 Shankrati**
14	12-02-2024	17-02-2024	43 Adjusted synchronous reactance and Potier Reactance. 44 Starting, synchronizing and control, 45 Determination of X_d & X_q – slip test, numericals **Performance of synchronous generators:** 46 power angle diagram, reluctance power
15	19-02-2024	24-02-2024	47 Power angle characteristic and synchronizing Power 48 Capability curve for large turbo generators and salient pole generators. 49 Hunting and dampers
16	26-02-2024	02-03-2024	50 Wind power Generator –Basic components of wind energy conversion system, 51 types of wind generators- Horizontal and vertical axis. Advantages and disadvantages of WECS.
17	04-03-2024	09-03-2024	52 Solar power generator - principle of solar cell, Basic Solar Photo voltaic, system for power generation, Advantages and disadvantages 53 Revision 54 Revision

Prepared by : Pradeep Kumar

Designation : Asst.Professor

Signature

Approved by: Dr. H.L. SURESH

Designation : Professor & Head

Signature

	SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE	RECORD FORMATS (ISO 9001:2000)
	R/PP04/04	LESSON PLAN

BEE304 –TRANSFORMER AND GENERATOR (Core Course) III- SEMESTER

WEEK	DATE		TOPICS PLANNED
	FROM	TO	
18	11-03-2024	16-03-2024	III- Test
19			

Prepared by : Pradeep Kumar

Designation : Asst.Professor

Signature

Approved by: Dr. H.L. SURESH

Designation : Professor & Head

Signature

EVALUATION PATTERN

COURSE NAME/CODE: TRANSFORMER&GENERATORS /BEE304 **SEMESTER: III**

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

- For the Assignment component of the CIE, there are 25 marks and for the Internal Assessment Test component, there are 25 marks.
- The first test will be administered after 40-50% of the syllabus has been covered, and the second test will be administered after 85-90% of the syllabus has been covered
- Any two assignment methods mentioned in the 22OB2.4, if an assignment is project-based then only one assignment for the course shall be planned. The teacher should not conduct two assignments at the end of the semester if two assignments are planned.
- For the course, CIE marks will be based on a scaled-down sum of two tests and other methods of assessment.

Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester-End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the course **(duration 03 hours).**

1. The question paper will have ten questions. Each question is set for 20 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.

Subject Code: BEE304
Subject Name: Transformer and Generators

Course Learning Objectives (CLOs)

To enable the Students to

CLO 1: Impart in-depth knowledge about the concepts of single phase, three phase transformers, Synchronous generators, solar and wind energy.

CLO 2: Understanding the different characteristics of DC generators and Synchronous generators for different applications.

CLO 3: Applying selection skill to identify the type of test on transformers and generators for different operations. Evaluating variation in the excitation, load, load PF also its impact on the performance of transformers and generators.

CLO 4: Analyze the importance of Autotransformers, tertiary winding transformer, different types of connections in three phase transformers. Parallel operations in generators and the effects of Armature reaction, commutations, Harmonics

Course Outcome (COs)

Students will able to

CO 1: Using fundamental knowledge of maths and science engineering to describe the construction of solar, wind energy, 3 phase transformers , auto transformer , territory transformer and operation of single phase transformer under different load conditions and also the armature reaction, commutation.

CO 2: Analyze and calculate equivalent circuit parameters and pre determination of efficiency, voltage regulation by interpretation of data by conducting test on transformer and synchronous generator also able to analyze different transformer connections.

CO 3: Develop necessary condition for parallel operation of transformer and synchronous generators.

CO 4: Able to describe capability curves for synchronous generator starting, controlling and hunting, effects saliency with reasoning.

Date 24 10 2024 Subject Code BEE304

USN 1 M V

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO : 1 COURSE/ BRANCH : BE / EEE Sem: III (A & B) MAX. MARKS : 25 DURATION : 60 Min

SUBJECT : Transformer and Generators Faculty Name Pradeep Kumar Vijayalakshmi A K AY: 2024-25

Instructions: Answer any one Question from each PART

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator

Q.No	Question	Marks	CO	BL	PO	PI
	PART A					
1	a. Analyze the full load phasor diagram of 1-Φ transformer for UPF & lagging & leading power factor.	6	CO1	L2	PO1 PO2	2.1.3
	b. A 20 KVA, 25000/500V, single phase transformer has the following parameters: HV winding: r1= 8 Ω and x1= 17 Ω LV winding: r2=0.3 Ω and x2= 0.7 Ω Find the voltage regulation and the secondary terminal voltage at full load for a p.f of 0.8 lagging and 0.8 leading. The primary voltage is held constant at 2500V.	7	CO1	L3	PO1 PO2	2.2.1
	OR					
2	a. Draw and explain equivalent circuit of single phase transformer.	6	CO1	L2	PO1 PO2	2.1.3
	b. The following readings are obtained from O.C and S.C tests on 8 KVA, 400/120V, 50Hz, 1-Φ transformer. **O.C test:** 120 V, 4 A, 75 W (LV side) **S.C test:** 9.5 V, 20 A, 110W (HV side) Calculate: - i. Equivalent circuit constants ii. Voltage regulation and efficiency for 0.8 lagging transformer full load iii. The efficiency at half load at 0.8 p f load	7	CO1	L3	PO1 PO2	2.2.1
	PART B					
3	a. With the connection & phasor diagram, describe the different ways of connecting 3-Φ transformer.	6	CO2	L2	PO1 PO2	2.1.3
	b. Two 1-phase transformer A & B rated at 250KVA each are operated in parallel on both sides, Percentage of impedance A &B are (1+j6) & (1.2+j4.8) respectively. Compute the load shared by each when total load is 500KVA at 0.8 pf lagging.	6	CO2	L3	PO1 PO2	2.1.3
	OR					
4	a. Write a brief note on parallel operation of two-single phase transformers with equal voltage ratio. Derive the necessary relation.	6	CO2	L2	PO1 PO2	2.1.3
	b. A 3-Φ step down transformer is connected to 6600 volts' mains, it takes 10 A & turns ratio per phase is 12. Calculate the secondary line voltage, line current and output for the following connections i) Star-Star ii) Star-Delta iii) Delta-Star	6	CO2	L3	PO1 PO2	2.1.3

CO1: Apply the engineering fundamental to study the construction and working and various test of single phase transformer
CO2: Learn about, parallel operation, tap-changing of three phase transformers

Verified by
QPSC Member
14.10.24

Approved By 14/10/2024
HOD

13

Date 12 01 2024 Subject Code BEE304

USN 1 M V

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO : I SEM : III COURSE / BRANCH : BE MAX. MARKS : 25 DURATION : 60 Min

SUBJECT : TRANSFORMER & GENERATORS Faculty Name : Pradeep Kumar, Priyanka Nayak

Instructions: Answer any one Question from each PART

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator

Q.No	Question	Marks	CO	BL	PO	PI
	PART A					
1	a. Analyze the full load phasor diagram of 1-Φ transformer for UPF & lagging & leading power factor.	6	CO1	L2	PO2	2.1.3
	b. A 20 KVA, 25000/500V, single phase transformer has the following parameters: HV winding: r1= 8 Ω and x1= 17 Ω LV winding: r2=0.3 Ω and x2= 0.7 Ω Find the voltage regulation and the secondary terminal voltage at full load for a p.f of 0.8 lagging and 0.8 leading. The primary voltage is held constant at 2500V.	7	CO2	L3	PO2	2.2.1
	OR					
2	a. Draw and explain equivalent circuit of single phase transformer.	6	CO1	L2	PO2	2.1.3
	b. The following readings are obtained from O.C and S.C tests on 8 KVA, 400/120V, 50Hz, 1-Φ transformer. **O.C test:** 120 V, 4 A, 75 W (LV side) **S.C test:** 9.5 V, 20 A, 110W (HV side) Calculate:- i. Equivalent circuit constants ii. Voltage regulation and efficiency for 0.8 lagging transformer full load iii. The efficiency at half load at 0.8 p f load	7	CO2	L3	PO2	2.2.1
	PART B					
3	a. With the connection & phasor diagram, describe the different ways of connecting 3-Φ transformer.	6	CO4	L1	PO2	2.1.3
	b. Two 1-phase transformer A & B rated at 250KVA each are operated in parallel on both sides, Percentage of impedance A &B are (1+j6) & (1.2+j4.8) respectively. Compute the load shared by each when total load is 500KVA at 0.8 pf lagging.	6	CO4	L3	PO2	2.1.3
	OR					
4	a. Write a brief note on parallel operation of two-single phase transformers with equal voltage ratio. Derive the necessary relation.	6	CO4	L1	PO2	2.1.3
	b. A 3-Φ step down transformer is connected to 6600 volts' mains, it takes 10 A & turns ratio per phase is 12. Calculate the secondary line voltage, line current and output for the following connections i) Delta-Delta ii) Star-Star iii) Star-Delta iv) Delta-Star	6	CO4	L2	PO2	2.1.3

Verified by
QPSC Member

Approved By
HOD

Date | 01 | 03 | 2024 | Subject Code | BEE304 |

USN | 1 | M | V | | | | | | | |

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO : II SEM :III | COURSE / BRANCH : BE | MAX. MARKS : 25 | DURATION : 60 Min

SUBJECT : TRANSFORMER & GENERATORS | Faculty Name : Pradeep Kumar

Instructions: Answer any one Question from each PART

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analyzing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator

Q.No	Question	Marks	CO	BL	PO	PI
	PART A					
1	a. What is armature reaction? with a neat figures explain armature reaction. b. Derive EMF equation of alternator.	12	CO3	L3	PO2	2.2.1
	OR					
2	a. The open circuit and short circuit test results for 3-ϕ, star connected, 1000 kVA, 1905 V, 50 Hz alternator are: Open circuit terminal voltage (V_{oc}) line V: 760, 1500, 1700, 1905, 2300, 2600 Short circuit current (I_{sc}) A: -----, 220, ----, 335, ----, ---- Field current (I_f) A: 10, 20, 25, 30, 40, 50 The armature reactance per phase is 0.2 Ω. Draw the open circuit and short circuit characteristics and find the regulation on full load 0.8 lagging p.f. by (i) Ampere-turn method and (ii) synchronous impedance method.	12	CO3	L3	PO2	2.2.1
	PART B					
3	a. with a neat phasor diagram. Derive an expression for the power output of a salient pole alternator, Draw the variation of power Vs load angle.	6	CO4	L2	PO2	2.1.3
	b. A 3 phase salient pole synchronous alternator is rated at 3.5MVA,6. 6KV.Its Xd & Xq are 9.6 & 6 ohm per phase. The winding is star connected and resistance is negligible. If the generator is supplying 2.5MW at rated voltage and at 0.8 pf lagging. Find voltage regulation. What power can generator supply at the rated terminal voltage if the field becomes open circuited?	7	CO4	L3	PO2	2.1.3
	OR					
4	a. How parallel operation of alternators can be made? What are the condition to be satisfied? Explain in details with circuit diagram	6	CO4	L2	PO2	2.1.3
	b. The single phase alternators operating in parallel have induced emfs on open circuit of 230 at 0^0 and 230 at 10^0 and respective reactance of j2 ohm and j3 ohm. Calculate 1. terminal voltage 2. current 3. power delivered by each of the generator to a load impedance 6 ohm.	7	CO4	L2	PO2	2.1.3

Verified by
QPSC Member

28.02.24

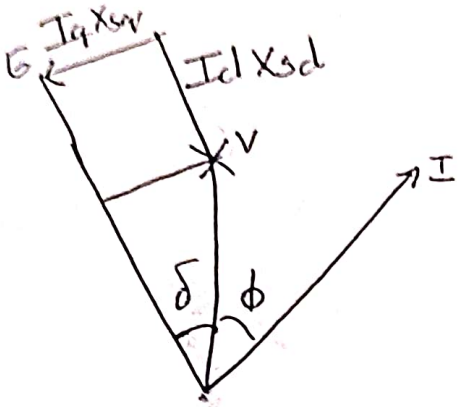
Approved By
HOD 28/02/24

	Sir M. Visvesvaraya Institute of Technology Bangaluru-562 157 PROGRAM : ELECTRICAL & ELECTRONICS ENGINEERING	
COURSE TITLE :		SEM:
COURSE CODE :		DATE:

SCHEME OF EVALUATION

Q.No	Description	MARKS
1a)	The effect of armature reaction on the main flux - then the reduces - the value & distribution is known as armature reaction. 1) Unity power factor load 2) Zero lagging Power factor load 3) Zero leading Power factor load	6M
b)	Emf equation of alternator Eavg Per conductor = $\frac{d\phi}{dt}$ $d\phi = \phi \times P$ $dt = \frac{60}{N_S}$ $= \frac{\phi \times P \times N_S}{60}$ $= 2\phi f$ Eavg Per turn :- $2 \times 2\phi f = 4\phi f$ $E_{ph} = T_{ph} 4\phi f$ Rms Value = $4.44 \phi f T_{ph}$ Volts.	6M 12M

3a)



$$E = V\cos\delta + I_d X_{sd}$$

$$I_d = \frac{E - V\cos\delta}{X_{sd}} \rightarrow (1)$$

$$V\sin\delta = I_q X_{sq}$$

$$I_q = \frac{V\sin\delta}{X_{sq}} \rightarrow (2)$$

6M

$$I_a = I_q\cos\delta + I_d\sin\delta \rightarrow (3)$$

$$I_r = I_d\cos\delta - I_q\sin\delta \rightarrow (4)$$

$$P = V\left[\frac{V\sin\delta}{X_{sq}}\cos\delta + \frac{E - V\cos\delta}{X_{sd}}\sin\delta\right]$$

$$P = \frac{VE\cos\delta}{X_{sd}} + \frac{V^2}{2}\left[\frac{X_{sd} - X_{sq}}{X_{sq}X_{sd}}\right]\sin 2\delta.$$

3b)

$$I_L = \frac{P}{\sqrt{3}V_L\cos\phi} = 273.36A \qquad \psi = 52.15^\circ$$

$$I_d = I_a\sin\psi = 215.52A$$

$$I_q = I_a\cos\psi = 167.2A$$

$$\delta = \psi - \phi = 15.24$$

$$E_f = V\cos\delta + I_d X_{sd} + I_q R_a$$

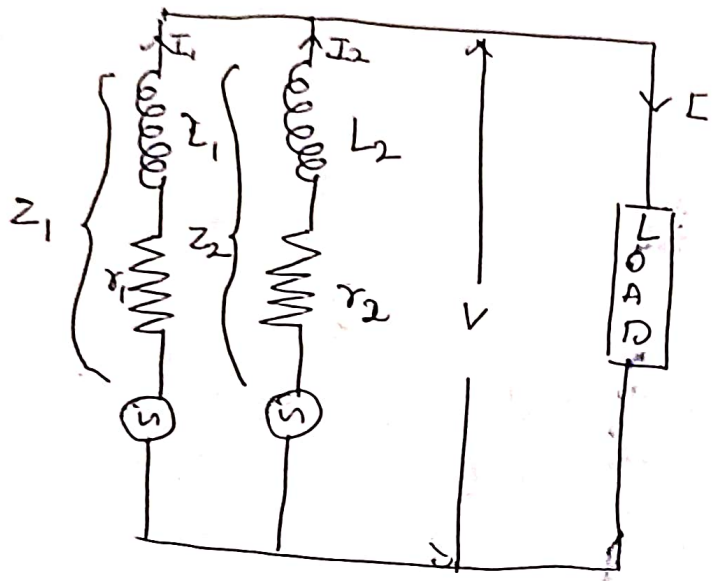
$$= 5747.79\,V$$

7M

∴ Regulation = 50.84%

$$P = 230.84\,kW$$

4 a)



6M

$$\bar{V}_1 = \bar{E}_1 - \bar{I}_1 \bar{Z}_1 \rightarrow (1)$$

$$\bar{V}_2 = \bar{E}_2 - \bar{I}_2 \bar{Z}_2 \rightarrow (2)$$

$$\bar{V} = \bar{I}\bar{Z} \rightarrow (3)$$

$$\bar{Z} = \frac{\bar{Z}_1 \bar{Z}_2}{\bar{Z}_1 + \bar{Z}_2} \rightarrow (4)$$

$$\bar{I} = \bar{I}_1 + \bar{I}_2 \rightarrow (5)$$

$$\bar{I}_1 = \frac{(\bar{E}_1 - \bar{E}_2)\bar{Z} + \bar{E}_1 \bar{Z}_2}{\bar{Z}(\bar{Z}_1 + \bar{Z}_2) + (\bar{Z}_1 \bar{Z}_2)}$$

$$\bar{I}_2 = \frac{(\bar{E}_2 - \bar{E}_1)\bar{Z} + \bar{E}_2 \bar{Z}_1}{\bar{Z}(\bar{Z}_1 + \bar{Z}_2) + (\bar{Z}_1 \bar{Z}_2)}$$

$$V = \frac{\bar{E}_1 \bar{Z}_2 + \bar{E}_2 \bar{Z}_1}{(\bar{Z}_1 + \bar{Z}_2) + \left(\frac{\bar{Z}_1 \bar{Z}_2}{\bar{Z}}\right)}$$

4 b) $\bar{I}_1 = 53.89 \angle -90^\circ$

$\bar{I}_2 = 48.066 \angle -90^\circ$

$\bar{V} = \bar{I}\bar{Z}$

$\bar{I} = I_1 + I_2$

$\bar{I} = 101.966 \angle -90^\circ$

$\bar{V} = 122.3592 V$

$P = \bar{V}\bar{I}$

$= 12470.43 \angle -90^\circ$

7M

(14)

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157

Academic Year 2023 - 2024

Test: 2 | Date: 01/03/24 | Time: 10.15 to 11.15 am | Room No: NB104

Course / Branch: B.E / EEE | Section: B | Semester: III | Sub Code: BEE304

Invigilator's Name: GEETHA.V.

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	EED68	SHRIRAM S	07372		19
2	EED69	GANGADHARA K	ABSENT		
3	EED70	CHARAN S	07368	Charan	22
4	EED71	SHRIVATSA T Y	07369	Shrivats	23
5	EED72	P SATYA SAI MOHAN	07375	Satyasai	18
6	EED73	DARSHAN H E	07370	Darshan HE	12
7	EED74	SAGAR ANJANEYA HARIJAN	07371		15
8	EED75	MALLIKARJUN	07378		08
9	EED76	BHARATH G	07376		15
10	EED77	CHANDANA M P	07363	chandana	18
11	EED78	KRUTHIK.K	07362	Kruthik	08
12	EED79	VARUN KUMAR S Y	07361	Varun	17
13			07369	Shrivats	
14					
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22					
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27					
28					
29					
30					

3rd Sec 'B'

BEE 304.

11/12

Valued

No. of Booklets Issued: 12		No. of Unused Booklets Returned: 01	
No. of Students Present: 11		No. of Students Absent: 01	
Receiver's Name:	Receiver's Signature		Invigilator's Signature

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157				Academic Year 2023 - 2024
Test: I	Date: 18-01-2024	Time: 9:15 - 10:15		Room No: NB005
Course / Branch: B.E / EE	Section:	Semester: III		Sub Code: BEE304
Invigilator's Name: Thrisha V.S.				

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	1MV22EE001	AFTAB JANNATH D	04639	Aftab	04
2	1MV22EE002	AMIT M BIRADAR	Absent		
3	1MV22EE003	ASHWINI	04650	Ashwini	11
4	1MV22EE004	ATHISH KUMAR	04645	Athish K	12
5	1MV22EE005	BASAVARAJ	04651	Bas	07
6	1MV22EE006	CHAYASHREE C	04644	chay	14
7	1MV22EE007	CHIRAG C	04646	Chirag	17
8	1MV22EE008	DAYANANDA HIREMATH	04647	Dayach	13
9	1MV22EE009	DEEKSHITHA R	04642	Deeksh	11
10	1MV22EE010	DEEPAK KUMAR RANJAN	Absent		
11	1MV22EE011	DIKSHITHA N	04652	DN	17
12	1MV22EE012	DILEEP SHIVAPPA CHIMMALAGI	04640	Dilip	18
13	1MV22EE013	GAUTAM KUMAR	04641	G	05
14					
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Valued
23/1/24
EC-A
BEE 304

No. of Booklets Issued: 13	No. of Unused Booklets Returned: 02
No. of Students Present: 11	No. of Students Absent: 02

Receiver's Name:	Receiver's Signature	Invigilator's Signature

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157			Academic Year 2023 - 2024
Test: I	Date: 18/1/24	Time: 9.15-10.15	Room No: NB006
Course / Branch: B.E / EEE	Section: A	Semester: III	Sub Code: BEE304
Invigilator's Name: Dr. Poongothai. C			

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	1MV22EE014	GUNASHREE S	03335		12
2	1MV22EE015	GURUKIRAN BASAVARAJ DEVARAMANI	03336		08
3	1MV22EE016	JAYASHREE U	03340		08
4	1MV22EE017	KANAKAMBARI ANNASAHEB HIRAVE	03338		10
5	1MV22EE018	KARAN D GUNAGA (COB)	← COB AB. →		
6	1MV22EE019	KESHAVA PRASAD D	03339		15
7	1MV22EE020	LOKESH GOWDA P N	03265		14
8	1MV22EE021	MAHESH D	03267		00
9	1MV22EE022	MANJUNATH G	03266		14 (12)
10	1MV22EE023	MANUKUMAR R	03257		20
11	1MV22EE024	NANDAKUMARA	03253		08
12	1MV22EE025	NIKHITA N LAMANI	03341		09
13	1MV22EE026	NIRANJAN D A	03359		07
14	1MV22EE027	NIZAM UDDIN	03337		06
15	1MV22EE028	PRANATHI S	← AB →		
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13/15

III EEE A: 13/15

No. of Booklets Issued: 15		No. of Unused Booklets Returned: 02	
No. of Students Present: 13		No. of Students Absent: 02	
Receiver's Name: A. NIVADITHI	Receiver's Signature		Invigilator's Signature

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157			Academic Year 2023 - 2024
Test: 2	Date: 01/03/24	Time: 10:15	Room No: NB003B
Course / Branch: B.E / EE	Section: B	Semester: III	Sub Code: BEE304
Invigilator's Name: Prashanth L			

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	EED01	HARSHITHA BAI	11678	Harshitha	15
2	EED02	YASHWANTH S J	11677		21
3	EED03	NIRANJAN B Y	11574		12
4	EED04	VISHMITHA J M	11687		18
5	EED05	DHANUSH M	11676		23
6	EED06	CHINNURAGOUDA G M	11663	chinnu	23
7	EED07	OMKARESHWARI	ABSENT		
8	EED08	THIPPESWAMY C	09930	Thippe	10
9	EED09	GIRISHA T A	11668	Girisha T.A	18
10	EED10	SANGAMESH ARJUN MURANAL	11689		03
11	EED11	PREMARASHI G P	11669	Rashi.G.P.	16
12	EED12	PRAJWAL H C	11671	Prajwal	14
13	EED13	PRASHANTH T V	11673	Prashanth.V	14
14	EED14	JEENESH G M	11675	Jeenesh	16
15	EED15	DARSHAN J	11666	Darshan	16
16	EED16	DHANARAJ U P	11686	Dhanaraj.up	10
17	EED17	MANJUNATHA T S	11680	manjunatha T.S	15
18	EED18	NIKHIL S P	11667	Nikhil	25
19	EED19	DEEKSHITH N	11672	Deekshith N	09
20	EED20	MAHESH V	11670		11
21	EED21	SUMANTH KUMAR B V	08370	Sukumar	07
22	EED22	M RAGHAVENDRA	11662	M. Raghu	06
23	EED23	GAGANDEEP B M	11679		15
24	EED24	RIYAZ D K	11661	Riyaz	13
25					
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3rd EEE

BEE304

Valued

23/24

24.5
18.5

No. of Booklets Issued: 24	No. of Unused Booklets Returned: 21
No. of Students Present: 03	No. of Students Absent: 01
Receiver's Name: Rashmi KV	Receiver's Signature	Invigilator's Signature

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157				Academic Year 2023 - 2024
Test: 1	Date: 1/2/24	Time: 10.15 to 11.15		Room No: NB006
Course / Branch: B.E / OE	Section: B	Semester: III		Sub Code: OEB704
Invigilator's Name: DHANAN-C				

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	EED50	B G HEMANTH	11121		11
2	EED51	VAMSHI S	11122	Vamshi.S	18
3	EED52	NAGENDRA B M	11123		24
4	EED53	VANDANA S	11124	VandanaS	15
5	EED54	PRASHANTHA	11125		21
6	EED55	GURURAJ H R	11126		23
7	EED56	GANGADHARA K T	11130	Gangadhara KT	20
8	EED57	PUNEETH B Y	11131	PuneethBY	18
9	EED58	SHESHADHRI	11132		16
10	EED59	LIKITH B C	11133		11
11	EED60	KIRAN T G	11134	KiranTG	25
12	EED61	GIREESH R U	11135	GireeshRU	17
13	EED62	AKASH B K	11136	AkashBK	21
14	EED63	MANOJ C	11137		10
15	EED64	SWAPNA T S	11144	SwapnaTS	17
16	EED65	ASHRAY H S	11145		12
17	EED66	PRATHVI RAVI NAIK	11146		12
18	EED67	DODDA BASAVANAGOUDA K ← ABSENT →			
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EE-B
BEE304
Valued

17/18

No. of Booklets Issued: 18	No. of Unused Booklets Returned: 18
No. of Students Present: 17	No. of Students Absent: 01
Receiver's Name:	Receiver's Signature / Invigilator's Signature

EE-A

Sir M. Visvesvaraya Institute of Technology, Bangalore 562 157

Academic Year 2023 - 2024

Test: 1 | Date: 01/03/24 | Time: 5

Course / Branch: B.E / EEE | Section: B | Semester: III | Room No: NB005 | Sub Code: BEE 304

Invigilator's Name: Chetana. M.B

Sl. No.	USN	Student's Name	Booklet's Number	Student's Signature	Marks Obtained
1	EED25	KEERTHIVARDHAN N	09048		15
2	EED26	PRUTHVI RAJ A	10150	A Pruthvi Raj	13
3	EED27	MANJUNATHA S G	13101	Manjunatha	11
4	EED28	GAGAN D	14460	Gagan D	05
5	EED29	NITHIN N	14424	Nithin.N	22
6	EED30	DHANUSH K J	13095	Dhanushkj	17
7	EED31	SUHAS S H	10087	Suhas.S.H	22
8	EED32	DARSHAN K M	13210	Darshan.K.M	09
9	EED33	JAYARAJ K	14388	Jayaraj.K	17
10	EED34	VIDYA H K	08620	Vidya H.K	19
11	EED35	NARESH P	09078	Naresh.P	18
12	EED36	BHAGYASHRI	09119	Bhagyashree	19
13	EED37	SANGAMESH SHANKARAPPA SULLIKERI	14078	SSS	25
14	EED38	SANGAMESH	14404	Sangu	23
15	EED39	SANJAY A K	14389	[illegible]	19
16	EED40	SOWMYA G	14487	Sowmya.G	20
17	EED41	BHUMIKA	14340	Bhumika.	18
18	EED42	DEEKSHITH G R	09090	[illegible]	16
19	EED43	MOHAMMAD SOHAIL GOVE	14370	[illegible]	14
20	EED44	KAVYA S	—	ABSENT	
21	EED45	KUSHAL B M	14390	Kushal-B.M	00
22	EED46	SWATHI C	09120	Swathi.C	22
23	EED47	ASHWINI M	08603	[illegible]	24
24	EED48	SANDEEP H N	14391	Sandeep	18
25	EED49	K M JAYADEVA	10172	[illegible]	18
26					
27					
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29					
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Verified EE-B BEE-304 24/25

No. of Booklets Issued: 25 | No. of Unused Booklets Returned: 25

No. of Students Present: 24 | No. of Students Absent: 01

Receiver's Name: | Receiver's Signature: | Invigilator's Signature

Sir M. Visvesvaraya Institute of Technology
off Kempegowda International Airport Road, Bangalore – 562157

Department of Electrical and Electronics Engineering

REMEDIAL CLASSES FOR SLOW LEARNERS

Subject Code: BEE304	Subject Name: Transforms & Numerical	Semester: 3rd
Teacher's Name: Pradeep	AY: 2023-24	Date: 9/3/24

SL.NO	USN	NAME	SIGNATURE
1	1MV23EE439	Karthik. K	
2	1MV23EE441	Mallikarjun	
3	1MV22EE006	Baoraj	
4	1MV22EE005	Aftab	
5	1MV22EE002	Gadilam kumar	
6	1MV22EE016	Jayashreelc	
7	1MV22EE021	Mahesh D	
8	1MV22EE027	Nizam uddin	
9			
10			
11			
12			
13			

Topics Covered: First Model Important Questions are discussed

Faculty incharge: Pradeep kumar
Designation : Asst. professor
Signature :

Sir M. Visvesvaraya Institute of Technology

off Kempegowda International Airport Road, Bangalore – 562157

Department of Electrical and Electronics Engineering

REMEDIAL CLASSES FOR SLOW LEARNERS

Subject Code: BEE304	Subject Name: Transformers & Generators	Semester: 3rd
Teacher's Name: Pradeep	AY: 2023-24	Date: 23/3/24

SL.NO	USN	NAME	SIGNATURE
1	1MV22EE439	Karthik. K	
2	1MV23EE441	Mallikarjun	
3	1MV22EE005	Basvaraj	
4	1MV22EE002	Aftab	
5	1MV22EE006	Gautam kumar	
6	1MV22EE016	Jayashree K	
7	1MV22EE021	Mahesh D	
8	1MV22EE027	Nizam uddin	
9			
10			
11			
12			
13			

Topics Covered: Previous Year Question paper Solved

Faculty incharge: Pradeep kumar
Designation : Assl. professor
Signature :

Sir M. Visvesvaraya Institute of Technology

off Kempegowda International Airport Road, Bangalore – 562157

Department of Electrical and Electronics Engineering

REMEDIAL CLASSES FOR SLOW LEARNERS

Subject Code: BEE304	Subject Name: Transformers & Generators	Semester: 3rd
Teacher's Name: Pradeep	AY: 2023-24	Date: 30/3/24

SL.NO	USN	NAME	SIGNATURE
1	1MV23EE439	Karthik. K	
2	1MV23EE441	Mallikarjun	
3	1MV22EE005	Basvaraj	
4	1MV22EE002	Aftab	
5	1MV22EE006	Gautam kumar	
6	1MV22EE016	Jayashree K	
7	1MV22EE021	Mahesh D	
8	1MV22EE027	Nizam uddin	
9			
10			
11			
12			
13			

Topics Covered: Previous Year Question paper Solved

Faculty incharge: Pradeep Kumar
Designation : Asst. professor
Signature :

(15)

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru
Department of Electrical and Electronics Engineering
COURSE END SURVEY

Student USN	1	M	V	2		E	E				CAY : 2023-24
Student Name											ODD SEMESTER

Course Title: TRANSFORMER&GENREATORS (BEE304) Semester: III

Sl. No	Outcome description	Strongly agree (3)	Agree (2)	Partially agree (1)
1	This course has enabled you to study the electrical and electronics materials, their importance, classification and operational requirement.			
2	The course has enabled you study the conducting, dielectric and insulating magnetic materials used in engineering, their properties and classification			
3	The course has given an ability to study the magnetic materials used in engineering, their properties and classification and phenomenon superconductivity, super conducting materials and their application in engineering.			
4	The course has given an ability to explain the plastic and its properties and applications.			
5	Handouts/Assignments were useful in improving subject expertise			
6	The methodologies used for teaching the course were comfortable.			
	Signature with date			

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru
Department of Electrical and Electronics Engineering
COURSE END SURVEY

Student USN	1	M	V	2	1	E	E				CAY :2023-24 (EVEN)
Student Name											ODD SEMESTER

Course Title: TRANSFORMER&GENREATORS (BEE304) Semester: III

Sl. No	Outcome description	Strongly agree (3)	Agree (2)	Partially agree (1)
1	This course has enabled you to study the electrical and electronics materials, their importance, classification and operational requirement.			
2	The course has enabled you study the conducting, dielectric and insulating magnetic materials used in engineering, their properties and classification			
3	The course has given an ability to study the magnetic materials used in engineering, their properties and classification and phenomenon superconductivity, super conducting materials and their application in engineering.			
4	The course has given an ability to explain the plastic and its properties and applications.			
5	Handouts/Assignments were useful in improving subject expertise			
6	The methodologies used for teaching the course were comfortable.			
	Signature with date			

Department of ELECTRICAL ENGG

Attainment of Course Outcome from Course End Survey

Subject Code : BEE304 **Semester : 3**

Subject Name :TRANSFORMER & GENERATORS **Section : A & B**

Faculty Name : PRADEEP KUMAR

Course End Survey

SLNo.	USN	Students Name	C802.1	C802.2	C802.3	C802.4
1	1MV22EE400	AKASH B K	3	3	3	3
2	1MV22EE401	ASHRAY H S	3	3	3	3
3	1MV22EE402	ASHWINI.M	3	3	3	3
4	1MV22EE403	B G HEMANTH	3	3	3	3
5	1MV22EE404	BHAGYASHRI	3	3	3	3
6	1MV22EE405	BHARATH G	3	3	3	3
7	1MV22EE406	BHUMIKA	3	3	3	3
8	1MV22EE407	CHARAN S	3	3	3	3
9	1MV22EE408	CHINNURAGOUDA GM	3	3	3	3
10	1MV22EE409	DARSHAN H E	3	3	3	3
11	1MV22EE410	DARSHAN J	3	3	3	3
12	1MV22EE411	DARSHAN K M	3	3	3	3
13	1MV22EE412	DEEKSHITH G R	3	3	3	3
14	1MV22EE413	DEEKSHITH N	3	3	3	3
15	1MV22EE414	DHANARAJ U P	3	3	3	3
16	1MV22EE415	DHANUSH K J	3	3	3	3
17	1MV22EE416	DHANUSH M	3	3	3	3
18	1MV22EE417	DODDABASAVANAGOUDA K	3	3	3	3
19	1MV22EE418	GAGAN D	3	3	3	3
20	1MV22EE419	GAGAN D	3	3	3	3
21	1MV22EE420	GAGANDEEP B M	3	3	3	3
22	1MV22EE421	GANGADHARA K	3	3	3	3
23	1MV22EE422	GANGADHARA K T	3	3	3	3
24	1MV22EE423	GIREESH R U	3	3	3	3
24	1MV22EE424	GIRISHA T A	3	3	3	3
24	1MV22EE425	GURURAJ H R	3	3	3	3
24	1MV22EE426	HARSHITHA BAI	3	3	3	3
24	1MV22EE427	JEENESH G M	3	3	3	3
24	1MV22EE428	K JAYARAJ	3	3	3	3
24	1MV22EE429	K M JAYADEVA	3	3	3	3
24	1MV22EE430	KAVYA S	3	3	3	3
24	1MV22EE431	KEERTHIVARDHAN N	3	3	3	3
24	1MV22EE432	KIRAN T G	3	3	3	3
24	1MV22EE433	KUSHAL B M	3	3	3	3
24	1MV22EE434	LIKITH B C	3	3	3	3
24	1MV22EE435	M RAGHAVENDRA	3	3	3	3
24	1MV22EE436	MAHESH V	3	3	3	3
24	1MV22EE437	MALLIKARJUN	3	3	3	3
24	1MV22EE438	MANJUNATHA S G	3	3	3	3

24	1MV22EE439	MANJUNATHA SG	3	3	3	3
24	1MV22EE440	MANJUNATHA T S	3	3	3	3
24	1MV22EE441	MANOJ C	3	3	3	3
24	1MV22EE442	MOHAMMADELIYAS GOVE	3	3	3	3
24	1MV22EE443	NAGENDRA B M	3	3	3	3
24	1MV22EE444	NARESH P	3	3	3	3
24	1MV22EE445	NIKHIL S P	3	3	3	3
24	1MV22EE446	NIRANJAN B YARAGATTI	3	3	3	3
24	1MV22EE447	NITHIN N	3	3	3	3
24	1MV22EE448	OMKARESHWARI	3	3	3	3
24	1MV22EE449	P SATYA SAI MOHAN	3	3	3	3
24	1MV22EE450	PRAJWAL H C	3	3	3	3
24	1MV22EE451	PRASHANTH T V	3	3	3	3
24	1MV22EE452	PRASHANTHA	3	3	3	3
24	1MV22EE453	PRATHVI RAVI NAIK	3	3	3	3
24	1MV22EE454	PREMARASHI G P	3	3	3	3
24	1MV22EE455	PRUTHVI RAJ A	3	3	3	3
24	1MV22EE456	PUNEETH B Y	3	3	3	3
24	1MV22EE457	RIYAZ DAVALASAB KOTABAL	3	3	3	3
24	1MV22EE458	SAGAR ANJANEYA HARIJAN	3	3	3	3
24	1MV22EE459	SANDEEP H N	3	3	3	3
24	1MV22EE460	SANGAMESH	3	3	3	3
24	1MV22EE461	SANGAMESH ARJUN MURANAL	3	3	3	3
24	1MV22EE462	SULLIKERI	3	3	3	3
24	1MV22EE463	SANJAY AK	3	3	3	3
24	1MV22EE464	SHESHADHRI	3	3	3	3
24	1MV22EE465	SHRIRAM SARAVANAN	3	3	3	3
24	1MV22EE466	SHRIVATSA T Y	3	3	3	3
24	1MV22EE467	SOWMYA G	3	3	3	3
24	1MV22EE468	SUHAS S H	3	3	3	3
24	1MV22EE469	SUMANTH KUMAR B V	3	3	3	3
24	1MV22EE470	SWAPNA T S	3	3	3	3
24	1MV22EE471	THIPPESWAMY C	3	3	3	3
24	1MV22EE472	VAMSHI S	3	3	3	3
24	1MV22EE473	VANDANA S	3	3	3	3
24	1MV22EE474	VIDYA HANAMANT KUNDARGI	3	3	3	3
24	1MV22EE475	VISHMITHA J M	3	3	3	3
24	1MV22EE476	YASHWANTH S J	3	3	3	3

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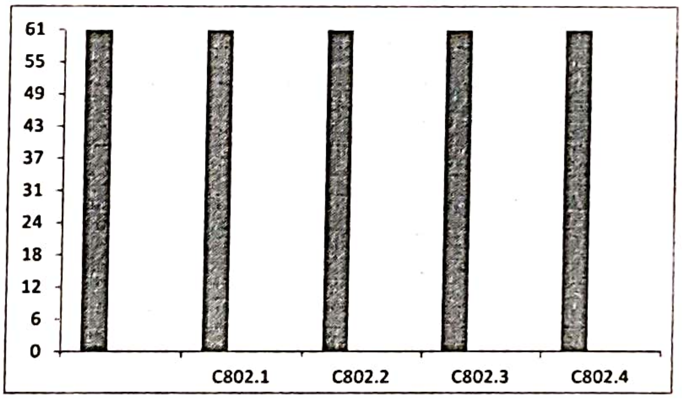
Co's	3	2	1	Attainment
	(80-100%)	(60-79%)	(40-59%)	
	1	1	1	
C802.1	61	0	0	90
C802.2	61	0	0	90
C802.3	61	0	0	90
C802.4	61	0	0	90
C802.5	61	0	0	90



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE - 562 157

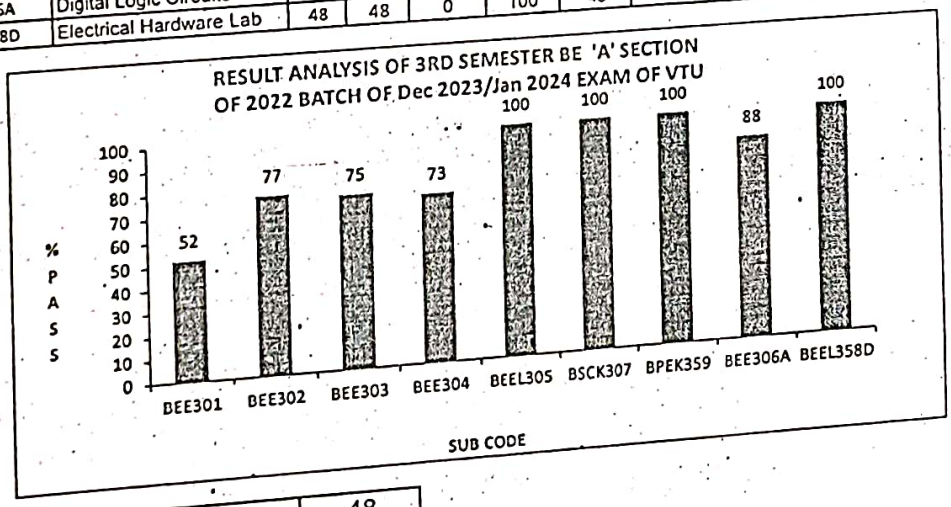
RESULT ANALYSIS

DEPARTMENT:ELECTRICAL & ELECTRONICS ENGINEERING DATE : 14/06/2024
SEMESTER : III EXAMINATION : Dec 2023/Jan 2024
SECTION : A (Regular) BATCH : 22 BATCH

DEPT OF ELECTRICAL & ELECTRONICS ENGG. No: 059 Date: 18.06.2024 SIR MVIT BENGALURU-562157

AFTER REVALUATION

Sl No	SUBJECT CODE	NAME OF THE SUBJECT	REGULAR				TOTAL PASS %				NAME OF THE STAFF
			APP	PASS	Failed	% OF PASS	APP	PASS	Failed	% OF PASS	
1	BEE301	Engg Mathematics for EEE	48	25	23	52	48	25	23	52	Smt Shubha
2	BEE302	Electric Circuit Analysis	48	37	11	77	48	37	11	77	Dr H L Suresh
3	BEE303	Analog Electronic Circuits	48	36	12	75	48	36	12	75	Smt D Beula
4	BEE304	Transformers & Generators	48	35	13	73	48	35	13	73	Sri Pradeep Kumar
5	BEEL305	Transformers & Generators Lab	48	48	0	100	48	48	0	100	Faculty
6	BSCK307	Social Connect & Responsibility	48	48	0	100	48	48	0	100	Dr C V Mohan
7	BPEK359	Physical Education/NSS/Yoga	48	48	0	100	48	48	0	100	Non Credit Course
8	BEE306A	Digital Logic Circuits	48	42	6	88	48	42	6	88	Smt Rekha Radhakrishnan
9	BEEL358D	Electrical Hardware Lab	48	48	0	100	48	48	0	100	Faculty



Total Appeared	48
FAIL	25
TOTAL PASS	23
PERCENTAGE	48%

18/06/24
PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
(Via) Yelahanka, Bengaluru - 562 157

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE - 562 157

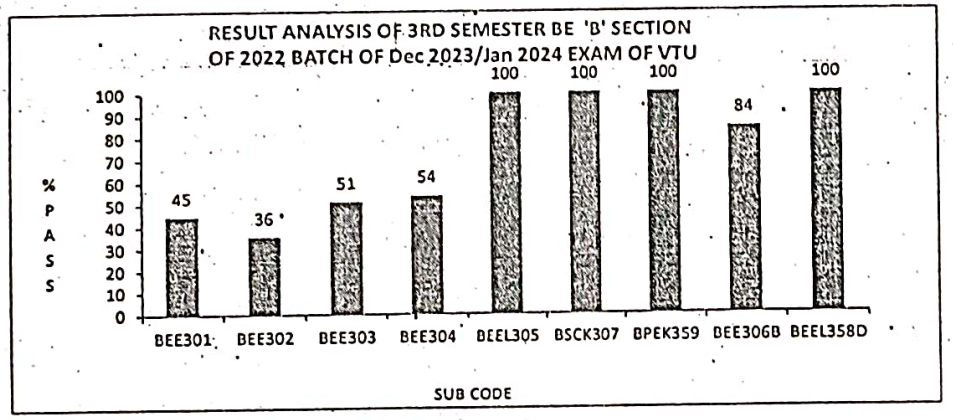
RESULT ANALYSIS

DEPARTMENT:ELECTRICAL & ELECTRONICS ENGINEERING
SEMESTER : III
SECTION : B (Lateral Entry)

DATE : 14/06/2024
EXAMINATION : Dec 2023/Jan 2024
BATCH : 22 BATCH

AFTER REVALUATION

Sl No	SUBJECT CODE	NAME OF THE SUBJECT	DQ			% OF PASS	TOTAL PASS %			% OF PASS	NAME OF THE STAFF
			APP	PASS	Failed		APP	PASS	Failed		
1	BEE301	Engg Mathematics for EEE	76	34	42	45	76	34	42	45	Smt Vasudha
2	BEE302	Electric Circuit Analysis	76	27	49	36	76	27	49	36	Dr H L Suresh
3	BEE303	Analog Electronic Circuits	76	39	37	51	76	39	37	51	Sri Kumaraswamy R
4	BEE304	Transformers & Generators	76	41	35	54	76	41	35	54	Sri Pradeep Kumar
5	BEEL305	Transformers & Generators Lab	76	76	0	100	76	76	0	100	Faculty
6	BSCK307	Social Connect & Responsibility	76	76	0	100	76	76	0	100	Dr C V Mohan
7	BPEK359	Physical Education/NSS/Yoga	76	76	0	100	76	76	0	100	Non Credit Course
8	BEE306B	Electrical Measurements & Instrumentation	76	64	12	84	76	64	12	84	Smt Vijayalakshmi A K
9	BEEL358D	Electrical Hardware Lab	76	76	0	100	76	76	0	100	Faculty



Total Appeared	76
FAIL	61
TOTAL PASS	15
PERCENTAGE	20%

PROF. & HEAD 18/06/24
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(Via) Yelahanka, Bangaluru - 562 157

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE - 562 157

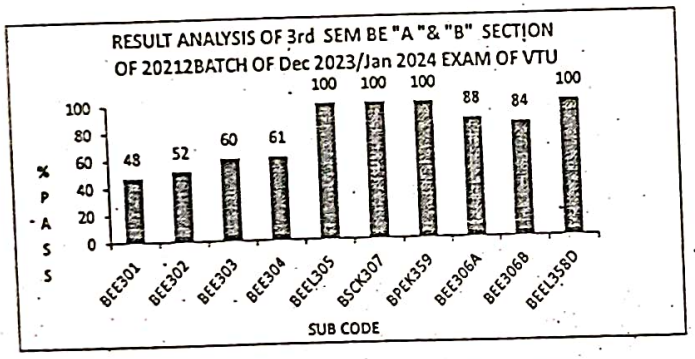
RESULT ANALYSIS

DEPARTMENT : ELECTRICAL & ELECTRONICS ENGG
SEMESTER :III
SECTION: A & B

DATE:14.06.2024
EXAMINATION: DEC 2023/JAN 2024
BATCH :22 BATCH

AFTER REVALUATION

Sl No	SUBJECT CODE	NAME OF THE SUBJECT	REGULAR				REPEATERS				DIPLOMA QUOTA				TOTAL PASS %				NAME OF THE STAFF
			APP	PASS	Failed	% OF PASS	APP	PASS	Failed	% OF PASS	APP	PASS	Failed	% OF PASS	APP	PASS	Failed	% OF PASS	
1	BEE301	Engg Mathematics for EEE	48	25	23	52	0	0	0	0	76	34	42	45	124	59	65	48	Smt Shubha , Smt Vasudha
2	BEE302	Electric Circuit Analysis	48	37	11	77	0	0	0	0	76	27	49	36	124	64	60	52	Dr H L Suresh
3	BEE303	Analog Electronic Circuits	48	36	12	75	0	0	0	0	76	39	37	51	124	75	49	60	Smt D Beula, Sri Kumaraswamy R
4	BEE304	Transformers & Generators	48	35	13	73	0	0	0	0	76	41	35	54	124	76	48	61	Sri Pradeep Kumar
5	BEEL305	Transformers & Generators Lab	48	48	0	100	0	0	0	0	76	76	0	100	124	124	0	100	Faculty
6	BSCK307	Social Connect & Responsibility.	48	48	0	100	0	0	0	0	76	76	0	100	124	124	0	100	Dr C V Mohan
7	BPEK359	Physical Education/NSS/Yoga	48	48	0	100	0	0	0	0	76	76	0	100	124	124	0	100	Non Credit Course
8	BEE306A	Digital Logic Circuits	48	42	6	88	0	0	0	0	0	0	0	0	48	42	6	88	Smt Rekha Radhakrishnan
9	BEE306B	Electrical Measurements & Instrumentation	0	0	0	0	0	0	0	0	76	64	12	84	76	64	12	84	Smt Vijayalakshmi A K
10	BEEL358D	Electrical Hardware Lab	48	48	0	100	0	0	0	0	76	76	0	100	124	124	0	100	Faculty



FCD - 38

	Freshers	Diploma	Total
Total Appeared	48	76	124
FAIL	25	61	86
TOTAL PASS	23	15	38
PERCENTAGE	48%	20%	31%

PROF. & HEAD 06/24
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(Via) Yelahanka, Bengaluru - 562 157

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Staff Name PRADEEP KUMAR Subject Code BEE304 Subject Name TRANSFORMER & GENERATORS

Targets and Level			
Target		Value	Level
60%	60% and Above	60.0	3
55%	Between 50% to 59%	55.0	2
50%	Below 50%	50.0	1

Test Attainment Level			University Attained		Survey		Attainment
Co's	% Attained	Level	% Attained	Level	% Attained	Level	
C304.1	93.44	3	70.00	3	35.41	1	2.80
C304.2	93.44	3	70.00	3	35.41	1	2.80
C304.3	93.65	3	70.00	3	35.41	1	2.80
C304.4	95.36	3	70.00	3	35.41	1	2.80
C304.5	83.33	3	70.00	3	35.41	1	2.80

Weightage	
Test %	18%
University %	72%
Survey %	10%

Semester	8
Academic Year	2023-24
Class Strength	122
Maximum Marks	100

CONTRIBUTION TO PROGRAMME OUTCOMES (PO's) AND PROGRAM SPECFIC OUTCOMES (PSO's) for Intake Year 2019 for Academic Year 2021-22

CO's			Program Outcomes												Program Specific Outcome			
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
C304.1	Mapping		3	3	1										3			
	Attainment	2.80	2.80	2.80	0.93										2.80			
C304.2	Mapping		3	2				1							3			
	Attainment	2.80	2.80	1.87	.			0.93							2.80			
C304.3	Mapping		3	3											3			
	Attainment	2.80	2.80	2.80											2.80			
C304.4	Mapping		3	3											3			
	Attainment	2.80	2.80	2.80											2.80			
C304.5	Mapping		3	3											3			
	Attainment	2.80	2.80	2.80											2.80			
C802			2.80	2.61	0.93			0.93							2.80			