DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE FILE

Subject: BASIC ELECTRICAL ENGINEERING Branch: CSE **Class: B.Tech- I Year-I sem**

Code: R22EEE1114

Academic Year: 2022-2023 **Regulation: R22**

Core/Elective/H&S: H&S **Credits: 2**

Prepared By

Name: S N ASHLESHA

Designation: ASST.PROF.

Verified By:

Head of the Department:

Name:

N.SAILAJA

Verified by IQAC Co-ordinator

INSTITUTION VISION

To be a premier Institution in Engineering & Technology and Management with competency/ values and social consciousness.

INSTITUTION MISSION

IM_1 Provide high quality academic programs/ training activities and research facilities.

IM_2 Promote continuous Industry-Institute interaction for employability/ Entrepreneurship/ leadership and research aptitude among stakeholders.

IM_3 Contribute to the economical and technological development of the region/ state and nation.

PRINCIPAL

DEPARTMENT VISION

To be a premier Institution in Engineering & Technology and Management withcompetency, values and social consciousness.

DEPARTMENT MISSION

DM1: To offer quality education in computing.

DM2: To provide an environment that enables overall development of all the stakeholders.

DM3: To impart training on emerging technologies like Data Analytics, Artificial Intelligenceand Internet of Things.

DM4: To encourage participation of stakeholders in research and development.

Head of the Department (CSE)

PO	Description
PO 1	**Engineering Knowledge**: Apply the knowledge of mathematics/ science/ engineering fundamentals/ and an engineering specialization to the solution of complex engineering problems.
PO 2	**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.
PO 3	**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.
PO 4	**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.
PO 5	**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.
PO 6	**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.
PO 7	**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.
PO 8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice
PO 9	**Individual and team work:** Function effectively as an individual/ and as a member or leader in diverse teams/ and in multidisciplinary settings.
PO 10	**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.

PO 11	**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.
PO 12	**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
Program Specific Outcomes	
PSO 1	**Basic Electronic and communications knowledge:** Apply basic knowledge related to electronic circuits/ VLSI/ communication systems/ signal processing and embedded systems to solve engineering/societal problems.
PSO 2	**Design Methods:** Design/ verify and authenticate electronic functional elements for different applications/ with skills to interpret and communicate results.
PSO 3	**Experimentation & Communications:** Engineering and management concepts are used to analyze specifications and prototype electronic experiments/projects either independently or in teams.

Head of the Department (CSE)

Program Educational Objectives (PEOs)

Program: B. Tech – CSE

PEO 1: **Higher Studies:** Graduates with an ability to apply knowledge of Basic Sciences and programming skills in their career and higher education.

PEO 2: **Lifelong Learning:** Graduates with an ability to adopt new technologies for ever changing IT industry needs through Self-Study, Critical thinking and Problem solving skills.

PEO 3: **Professional Skills :** Graduates will be ready to work in projects related to complex problems involving multidisciplinary projects with effective analytical skills.

PEO 4: **Engineering citizenship:** Graduates with an ability to communicate well and exhibit social, technical and ethical responsibility in process or product.

Head of the Department (CSE)

BR22 – B.TECH. – COMPUTER SCIENCE & ENGINEERING

balanced circuits, voltage and current relations in star and delta connections.

UNIT-III:

Transformers: Ideal and practical transformer, equivalent circuit, losses in transformers, regulation and efficiency. Auto-transformer and three-phase transformer connections.

UNIT-IV:

Electrical Machines: Construction and working principle of dc machine, performance characteristics of dc shunt machine. Generation of rotating magnetic field, Construction and working of a three-phase induction motor, Significance of torque-slip characteristics. Single-phase induction motor, Construction and working. Construction and working of synchronous generator.

UNIT-V:

Electrical Installations: Components of LT Switchgear: Switch Fuse Unit (SFU), MCB, ELCB, MCCB, Types of Wires and Cables, Earthing. Types of Batteries, Important Characteristics for Batteries. Elementary calculations for energy consumption, power factor improvement and battery backup.

TEXT BOOKS:

1. D.P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 4th Edition,2019.
2. MS Naidu and S Kamakshaiah, "Basic Electrical Engineering", Tata McGraw Hill, 2nd Edition,2008.

REFERENCE BOOKS:

1. P. Ramana, M. Suryakalavathi, G.T. Chandrasheker, "Basic Electrical Engineering", S. Chand,2nd Edition, 2019.
2. D. C. Kulshreshtha, "Basic Electrical Engineering", McGraw Hill, 2009
3. M. S. Sukhija, T. K. Nagsarkar, "Basic Electrical and Electronics Engineering", Oxford, 1stEdition, 2012.
4. Abhijit Chakrabarthi, Sudipta Debnath, Chandan Kumar Chanda, "Basic Electrical Engineering", 2nd Edition, McGraw Hill, 2021.
5. L. S. Bobrow, "Fundamentals of Electrical Engineering", Oxford University Press, 2011.
6. E. Hughes, "Electrical and Electronics Technology", Pearson, 2010.
7. V. D. Toro, "Electrical Engineering Fundamentals", Prentice Hall India, 1989

Course Objectives:

- To introduce the concepts of electrical circuits using network laws and theorems.
- To understand magnetic circuits, DC circuits &AC single phase &three phase circuits.
- To study and understand the different types of DC/AC machines and transformers.
- To import the knowledge of various electrical installations.
- To introduce the concept of power, power factor &its improvement.

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Department of CSE

Justification of CO's and PO's Mapping

SUB NAME: BASIC ELECTRICAL ENGINEERING (C113)

SUB CODE: R22EEE1114

Course out comes (COs):

Course Outcomes	Statements
C113.1	To analyze and solve electrical circuits using network laws and theorems.(L3 & L4- Applying & Analyze)
C113.2	To understand and analyze basic Electric and Magnetic circuits(L4- Analyze)
C113.3	To study and design the transformer. (L3&K6-Applying & Create)
C113.4	Summarize the regulation and efficiency of Transformer. (L5- Evaluating)
C113.5	To study the working principles of Electrical Machines and design. . (L3&L6-Applying & Create)
C113.6	To introduce components of Low Voltage ElectricalInstallations.(L3-Applying)

Course: Articulation Matrix

CO	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO1 2	PSO1	PSO2	PSO3
C113.1	3	2	2	2	-	1	2	-	2	1	-	2	2	2	3
C113.2	-	3	1	1	-	2	1	2	-	2	-	1	3	2	2
C113.3	2	-	2	-	1	2	2	-	1	1	2	3	2	3	2
C113.4	2	2	-		2	2	2	2	3	2	3	3	2	2	2
C113.5	3	3	-	2	3	1	2	1	2	2	3	2	2	3	3
C113.6	3	-	3	3	2	3	3	3	3	3	2	3	3	2	3
CO	2.1	1.6	1.3	1.3	1.3	1.8	2	1.3	1.8	1.8	1.6	2. 3	2.3	2.3	2.5

3-High 2-Medium 1-Low

High (3): Understanding and designing the Electrical circuit and Electrical motor and generators are fully analyzed. Various losses in the machine are studied and those are incorporated for future enhancement, complex mathematical circuit problems and machine losses are observed with mathematical evaluation that may extend for further research.

Medium (2) comparison of various circuits and machines are fully advantageous to be applied at the contextual basis which also be dealt with principles and mathematical analysis.

Justification- Mapping of Cos with POs & PSOs

BASIC ELECTRICAL ENGINEERING

High (3): PO1, PO2

Explanation: The basic knowledge of Electrical fundamentals, circuits and machines are provided to find the solution of complex Electrical Problems.

Design procedure of machines are observed. The circuits and also losses, performance of machine are studied using Theorems, Tests on machines.

Medium (2): PO1, PO2, PO3, PO12

Losses in the machines are observed and studied and recognize the need for electricity and finding solutions to complex electrical problems.

Low (1):PO3, PO4

Design solutions for complex electrical problems and machine components and provided valid conclusions.

PSO'S: High (3): PSO1, PSO2

The basic knowledge of solving the mathematical problems and solving technical solutions to complex Electrical engineering problems.

The losses occurring possibilities detected & corrected by different mathematical principles related to basic electrical engineering and are evaluated with small team work efforts.

Medium(2): PSO2

Losses in the Machine are observed and studied , formulate the losses in the machines and conduct test for future extension.

Faculty Signature

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																			APRIL - 23	
DAYS							JANUARY -23												1	I SEMESTER END EXAMINATIONS
SUNDAY							1	NEW YEAR/ HOLIDAY											2	HOLIDAY
MONDAY	NOVEMBER -22						2	MID I EXAM											3	COMMENCEMEN OF II SEMESTER CLASSES- I MID
TUESDAY	1						3	MID I EXAM	FEBRUARY - 23						MARCH - 23				4	
WEDNESDAY	2		DECEMBER - 22				4	MID I EXAM	1				1						5	
THURSDAY	3	INDUCTION & ORIENTATION PROGRAM	1				5	I SEMESTER CLASSES- II MID	2				2						6	
FRIDAY	4	I SEMESTER CLASSES- I MID	2				6		3				3	MID II EXAM					7	
SATURDAY	5		3				7		4				4	MID II EXAM					8	
SUNDAY	6	HOLIDAY	4	HOLIDAY			8	HOLIDAY	5	HOLIDAY			5	HOLIDAY					9	HOLIDAY
MONDAY	7	INDUCTION & ORIENTATION PROGRAM	5				9		6				6	MID II EXAM					10	
TUESDAY	8	I SEMESTER CLASSES- I MID	6				10		7				7	MID II EXAM					11	
WEDNESDAY	9		7				11		8				8	HOLI					12	
THURSDAY	10		8				12		9				9	MID II EXAM					13	
FRIDAY	11		9				13	PONGAL / HOLIDAY	10				10	PREPARATION & LAB END EXAMINATIONS					14	
SATURDAY	12		10				14	PONGAL / HOLIDAY	11				11						15	
SUNDAY	13	HOLIDAY	11	HOLIDAY			15	PONGAL/ HOLIDAY	12	HOLIDAY			12	HOLIDAY					16	HOLIDAY
MONDAY	14		12				16	PONGAL / HOLIDAY	13				13	PREPARATION & LAB END EXAMINATIONS					17	
TUESDAY	15		13				17		14				14						18	
WEDNESDAY	16		14				18		15				15						19	
THURSDAY	17		15				19		16				16	I SEMESTER END EXAMINATIONS					20	
FRIDAY	18		16				20		17				17						21	
SATURDAY	19		17				21		18	SIVARATHRI/ HOLIDAY			18						22	

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Department of Humanities & Sciences

I B.Tech I Semester CSE-A - TIME TABLE 2022-23

ROOM NO: F-201 w.e.f: 10-11-2022

Time/Day	9:40am-10:30am I	10:30-11:20am II	11:20-12:10pm III	LUNCH	12:40-01:45pm IV	1:45-2:50pm V	2:50-4:00pm VI
MON	PPS	← BEE LAB →			EC	M&C	COUNS
TUE	M&C	PPS	BEE		← CAEG →		
WED	← CAEG →				PPS	EC	M&C
THU	← EC LAB →				M&C	BEE	EC
FRI	PPS	M&C	EC		← Elements of CSE →		
SAT	BEE	PPS	EC		← PPS LAB →		

COURSE CODE	COURSE NAME	FACULTY NAME
M&C	Matrices And Calculus	Ch Ravali
EC	Engineering Chemistry	A Shiva Kumar
PPS	Programming for Problem Solving	D Mounika
BEE	Basic Electrical Engineering	G Sharada
CAEG	Computer Aided Engineering Graphics	B Vineeth
Elements of CSE	Elements of Computer Science & Engineering	Dr T Charan Singh
EC LAB	Engineering Chemistry Laboratory	A Shiva Kumar
PPS LAB	Programming for Problem Solving Laboratory	D Mounika
BEE LAB	Basic Electrical Engineering Laboratory	G Sharada
COUNS	Counseling	

CLASS COORDINATOR: A Shiva Kumar TIME TABLE INCHARGE: B Vineeth

Sri Indu College of Engineering & Technology :: Sheriguda (V), R.R.Dist
Department of Humanities & Sciences

I B.Tech I Semester CSE-B - TIME TABLE 2022-23

ROOM NO: F-202 w.e.f: 10-11-2022

Time/Day	9:40am-10:30am I	10:30-11:20am II	11:20-12:10pm III	LUNCH	12:40-01:45pm IV	1:45-2:50pm V	2:50-4:00pm VI
MON	M&C	EC	BEE		PPS	← BEE LAB →	
TUE	← EC LAB →				PPS	BEE	EC
WED	← Elements of CSE →				EC	PPS	M&C
THU	← PPS LAB →				PPS	COUNS	M&C
FRI	← CAEG →				EC	M&C	PPS
SAT	BEE	EC	M&C		← CAEG →		

COURSE CODE	COURSE NAME	FACULTY NAME
M&C	Matrices And Calculus	Ch Ravali
EC	Engineering Chemistry	A Shiva Kumar
PPS	Programming for Problem Solving	K.S. Archana
BEE	Basic Electrical Engineering	N Ashlesha
CAEG	Computer Aided Engineering Graphics	B Vineeth
Elements of CSE	Elements of Computer Science & Engineering	Dr T Charan Singh
EC LAB	Engineering Chemistry Laboratory	A Shiva Kumar
PPS LAB	Programming for Problem Solving Laboratory	K.S. Archana
BEE LAB	Basic Electrical Engineering Laboratory	N Ashlesha
COUNS	Counseling	

CLASS COORDINATOR: A Shiva Kumar TIME TABLE INCHARGE: B Vineeth

Sri Indu College of Engineering & Technology :: Sheriguda (V), R.R.Dist
Department of Humanities & Sciences

I B.Tech I Semester CSE-C - TIME TABLE 2022-23

ROOM NO: F-203 w.e.f: 10-11-2022

Time/Day	9:40am-10:30am I	10:30-11:20am II	11:20-12:10pm III	LUNCH	12:40-01:45pm IV	1:45-2:50pm V	2:50-4:00pm VI
MON	PPS	EC	M&C		← EC LAB →		
TUE	EC	M&C	PPS		BEE	← BEE LAB →	
WED	← PPS LAB →				M&C	BEE	PPS
THU	← CAEG →				BEE	COUNS	EC
FRI	M&C	EC	PPS		← CAEG →		
SAT	← Elements of CSE →				PPS	EC	M&C

COURSE CODE	COURSE NAME	FACULTY NAME
M&C	Matrices And Calculus	Ch Ravali
EC	Engineering Chemistry	U Sahithya Reddy
PPS	Programming for Problem Solving	Lavanya
BEE	Basic Electrical Engineering	G Sharada
CAEG	Computer Aided Engineering Graphics	K Vijaya Kumar
Elements of CSE	Elements of Computer Science & Engineering	Dr T Charan Singh
EC LAB	Engineering Chemistry Laboratory	U Sahithya Reddy
PPS LAB	Programming for Problem Solving Laboratory	Lavanya
BEE LAB	Basic Electrical Engineering Laboratory	G Sharada
COUNS	Counseling	

CLASS COORDINATOR: K Vijaya Kumar TIME TABLE INCHARGE: U Sahithya

Head of the Department

Principal

8/20

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Department of Humanities & Sciences

I B.Tech I Semester CSE-D - TIME TABLE 2022-23

ROOM NO: F-204 **w.e.f: 10-11-2022**

Time/Day	9:40am-10:30am I	10:30-11:20am II	11:20-12:10pm III	LUNCH	12:40-01:45pm IV	1:45-2:50pm V	2:50-4:00pm VI
MON	← PPS LAB →				COUNS	PPS	M&C
TUE	← CAEG →				EC	M&C	PPS
WED	← EC LAB →				BEE	PPS	EC
THU	M&C	BEE	EC		← CAEG →		
FRI	EC	PPS	M&C		BEE	← BEE LAB →	
SAT	M&C	EC	PPS		← Elements of CSE →		

COURSE CODE	COURSE NAME	FACULTY NAME
M&C	Matrices And Calculus	Ch Ravali
EC	Engineering Chemistry	U Sahithya Reddy
PPS	Programming for Problem Solving	K.S. Archana
BEE	Basic Electrical Engineering	N Ashlesha
CAEG	Computer Aided Engineering Graphics	K Vijaya Kumar
Elements of CSE	Elements of Computer Science & Engineering	Dr T Charan Singh
EC LAB	Engineering Chemistry Laboratory	U Sahithya Reddy
PPS LAB	Programming for Problem Solving Laboratory	K.S. Archana
BEE LAB	Basic Electrical Engineering Laboratory	N Ashlesha
COUNS	Counseling	

CLASS COORDINATOR: K Vijaya Kumar **TIME TABLE INCHARGE: U Sahithya**

Head of the Department Principal

INDIVIDUAL TIME TABLE

I B.Tech – I Semester TIME TABLE

ROOM NO: **CSE** **AY 2022-23**
W.E.F: 05-08-2019

TIME / DAY	9:40am To 10:30am	10:30am To 11:20am	11:20am To 12:10pm	12:10pm To 12:40pm	12:40pm To 1:45pm	1:45pm To 2:50pm	2:50pm To 4:00pm
	1	2	3	LUNC	4	5	6
MON		BEE					
TUE							

WED				**H**		BEE LAB	
THU	**BEE**						
FRI							
SAT					**BEE**		

STUDENTS NAME LIST

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	22D41A05Q2	
	22D41A05Q3	
	22D41A05Q4	
	22D41A05Q5	
	22D41A05Q6	
	22D41A05Q7	

	22D41A05Q8	
	22D41A05Q9	
	22D41A05R0	
	22D41A05R1	
	22D41A05R2	
	22D41A05R3	
	22D41A05R4	
	22D41A05R5	
	22D41A05R6	

	SRI INDU COLLEGE OF ENGG & TECH **LESSON PLAN** **(Regulation :R20)** **Department of Computer Science & Engineering**					**Prepared on** **Rev1:** **Page: 1 of 7**		
	Sub. Code & Title	**R22EEE1114 Basic Electrical Engineering**						
	Academic Year: 2022-2023		**Year/Sem./Section**	**I-I IT**				
	Faculty Name & Designation		**T RATNA BINDU**					
Unit / Item No.	**Topic (s)**	**Book Reference**	**Page**		**Teaching Methodology**	**Proposed No. of Periods**	**Actual Dateof Handled**	**CO/RBT**
			From	**To**				
UNIT-I								

I	**D.C. Circuits**					**12**		
1.1	Introduction Electrical Circuit	T1	1	2	Black board	01		CO1, L1
1.2	Electrical circuit elements (R, L and C),	T1	11	16	Black board	02		CO1, L1
1.3	voltage and current sources	T1	17	18	Black board	01		CO1, L1
1.4.	KVL&KCL, analysis of simplecircuits dc excitation.	T1	22	23	Black board	02		CO1, L1
1.5	Superposition, Thevenin and Norton Theorems.	T1	68	69	Black board	02		CO1,L1
1.6.	Time-domain analysis of first-order RL and RC circuits.	T2	117	129	Black board	02		CO1,L1
1.7	Numerical Problems	T2	129	139	Black board	02		CO1,L1

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SRI INDU COLLEGE OF ENGG & TECH
LESSON PLAN

(Regulation :R22)

Department of Information Technology

Prepared on
Rev1:

Page: 2 of 7

Sub. Code & Title	**R22EEE1114 Basic Electrical Engineering**
Academic Year: 2022-23	**Year/Sem./Section** **IT**
Faculty Name & Designation	**T.RATNA BINDU**

Unit/ Item	**Topic (s)**	**Book Reference**	**Page (s)**		**Teaching Methodology**	**Proposed No. of Periods**	**Actual Date of Handled**	**CO/RBT**
			From	**To**				

No.								
	UNIT II							
	A.C. Circuits					**17**		
2.1	Introduction	T2	184	185	Black board	01		CO 3, L1
2.2	Representation of sinusoidal waveforms,	T1	165	166	Black board	02		CO 3, L4
2.3	peak and rms values, phasor representation	T1	166	171	Black board	02		CO 3, L5
2.4	RealPower, Reactive Power, Apparent Power, Power factor,	T1	183	185	Black board	02		CO 3, L5
2.5	Analysis of single-phase ac circuits R, L, C	T2	168	174	Black board	01		CO 3,L4
2.6	RL, RC, RLC combinations in series	T2	184	188	Black board	01		CO 3, L2
2.7	R, L, C, RL, RC, RLC combinations in parallel	T2	190	194	Black board	01		CO 3, L2
2.8	Resonance in series R- L-Ccircuit	T2	212	216	Black board	01		CO 3, L3
2.9	Three-phase balanced circuits, voltage and current relations in star connections.	T2	239	240	Black board	02		CO 3, L2
2.10	Three-phase balanced circuits, voltage and current relations in delta connections.	T2	240	244	Black board	02		CO 3, L3

2.1 1	Numerical problems	T2	145	230	Black board	02		CO 3, L5
	Review	**Signature of the HOD/Coordinator**						

	SRI INDU COLLEGE OF ENGG & TECH **LESSON PLAN** **(Regulation :R22)** **Department of Information Technology**	**Prepared on** **Rev1:** **Page: 3 of 7**

Sub. Code & Title	**R22EEE1114 Basic Electrical Engineering**		
Academic Year: 2022-23	**Year/Sem./Section**	**I-I IT**	
Faculty Name & Designation	**T.RATNA BINDU**		

Unit/ Item No.	**Topic (s)**	**Book Reference**	**Page (s) From**	**To**	**Teaching Methodology**	**Proposed No. of Periods**	**Actual Date of Handled**	**CO/RBT**
UNIT III								
	Transformers					**11**		
3.1	Introduction	T2	261	262	Black board	01		CO4, L1
3.2	Ideal and practical transformer, losses in transformers,	T2	267	279	Black board	01		CO4, L2
3.3	equivalent circuit,	T2	279	283	Black board	02		CO4, L4
3.4	regulation and efficiency.	T2	283	288	Black board	02		CO4, L5
3.5	Auto-transformer	T2	290	293	Black board	01		CO4, L2

3.6	three-phase transformer connections	T2	294	297	Black board	02		CO4, L2
3.7	Numerical problems	T2	266	297	Black board	02		CO4, L5
	Review	**Signature of the HOD/Coordinator**						

	SRI INDU COLLEGE OF ENGG & TECH **LESSON PLAN** **(Regulation :R22)** **Department of Inforemation Technology**	**Prepared on** **Rev1:** **Page: 4 of 7**

Sub. Code & Title	**R22EEE1114 Basic Electrical Engineering**		
Academic Year: 2022-23	**Year/Sem./Section**	**I-I IT**	
Faculty Name & Designation	**T.RATNA BINDU**		

Unit/ Item No.	**Topic (s)**	**Book Reference**	**Page (s) From**	**Page (s) To**	**Teaching Methodology**	**Proposed No. of Periods**	**Actual Date of Handled**	**CO/RBT**
UNIT IV								
	Electrical Machines					**16**		
4.1	Introduction	T2	314	315	Black board	01		CO5, L1
4.2	Generation of rotating magnetic fields	T2	315	317	Black board	01		CO5, L2
4.3	Construction and working of a three-phase induction motor,	T2	318	322	Black board	02		CO5, L1
4.4	Significance of torque- slip characteristic.	T2	328	333	Black board	02		CO5, L2
4.5	Loss components and efficiency, starting and speed controlof induction motor	T2	326	335	Black board	02		CO5, L1

4.6	Single-phase induction motor. Construction, working,	T2	336	344	Black board	02		CO5, L1
4.7	torque-speed characteristicand	T2	337	339	Black board	01		CO5, L2
4.8	speed control of separately excited dc motor.	T2	358	369	Black board	01		CO5, L4
4.9	Construction and working of synchronous generators	T2	370	375	Black board	02		CO5, L1
4.10	Numerical problems	T2	317	377	Black board	02		CO5, L5
	Review	**Signature of the HOD/Coordinator**						

	SRI INDU COLLEGE OF ENGG & TECH **LESSON PLAN** **(Regulation :R22)** **Department of Information Technology**	**Prepared on** **Rev1:** **Page: 5 of 7**

Sub. Code & Title	**R22EEE1114 Basic Electrical Engineering**		
Academic Year: 2022-2023	**Year/Sem./Section**	**I-I IT**	
Faculty Name & Designation	**T RATNA BINDU**		

Unit/ Item No.	**Topic(s)**	**Book Reference**	**Page(s) From**	**Page(s) To**	**Teaching Methodology**	**Proposed No. of Periods**	**Actual Date of Handled**	**CO/RBT**
	UNIT V							
	Electrical Installations					**11**		
5.1	Introduction	T2	466	466	Black board	01		CO5, L1
5.2	Components of LT Switchgear:	T2	467	469	Black board	01		CO5, L2
5.3	Switch Fuse Unit (SFU), MCB, ELCB, MCCB,	T2	472	486	Black board	02		CO5, L2
5.4	Types of Wires and Cables, Earthing.	T2	486	490	Black board	02		CO5, L1
5.5	Types of Batteries, Important Characteristics for Batteries.	T2	494	498	Black board	02		CO5, L2
5.6	Elementary calculations for energy consumption,	T2	498	500	Black board	02		CO5, L4

5.7	power factor improvement and battery backup.	T2	500	506	Black board	01		CO5, L2
5.8	Numerical problems	T2	498	505	Black board	01		CO5, L5
	Review	**Signature of the HOD/Coordinator**						

TEXT BOOKS:

T1. Basic Electrical Engineering - D.P. Kothari and I.J. Nagrath, 3rd edition 2010, Tata McGraw Hill.

T2. D.C. Kulshreshtha, "Basic Electrical Engineering", McGraw Hill, 2009.

REFERENCE BOOKS:

R1. L.S. Bobrow, Fundamentals of Electrical Engineering", Oxford University Press, 2011

R2. Electrical and Electronics Technology, E. Hughes, 10th Edition, Pearson, 2010

R3. Electrical Engineering Fundamentals, Vincent Deltoro, Second Edition,Prentice Hall India, 1989

WEB REFERENCES FOR BASIC ELECTRICAL ENGINEERING

W1.

https://nptel.ac.in/syllabus/syllabus_html/Elec_Engg/Electrical%20PDFs/Basic%20Electrical%20Technology.pdf

W2 .https://www.electronicshub.org/basic-electrical-circuits-componentstypes/

W3. https://www.rapidtables.com/electric/Kirchhoff_laws.html

W4. https://www.mathsisfun.com/definitions/theorem.html

W5. https://www.resonance.ac.in/

W6. https://circuitglobe.com/circuit-analysis-of-3-phase-system-balanced-condition.html

W7. https://www.electronics-tutorials.ws/transformer/transformer-basics.html

W8. https://www.electricaleasy.com/2014/04/transformer-losses-and-efficiency.html

W9. https://www.electrical4u.com/single-phase-induction-motor/

W10. https://auto.howstuffworks.com/alternator1.htm

W11. https://www.elprocus.com/what-is-a-protection-device-different-types-of-protection-devices/

Faculty Signature

LECTURE NOTES

TUTORIAL LESSON PLAN:

S.No	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS	Proposed No. of Periods
1	KVL ,KCL problems	Black Board	T1	1
2	Super position Theorems	Black Board	T1	1
3	Thevenins theorems	Black Board	T1	1
4	Time domain analysis of first order RL,RC	Black Board	T2	1
5	Problems on DC circuits	Black Board	T2	2
6	Representation of sine wave form	Black Board	T1	1
7	Analysis of single phase AC RLC	Black Board	T2	1
8	Problems on AC circuits	Black Board	T2	1
9	Ideal/ practical Transformers	Black Board	T2	1
10	Equivalent circuit of transformer	Black Board	T2	1
11	Generation of RMF	Black Board	T2	1
12	Speed control of DC generators	Black Board	T2	1
13	Problems on Induction motors	Black Board	T2	1
14	Components of LT switch gear	Black Board	T2	**1**
15	Power factor improvement	Black Board	T2	1
16	Battery backup device	Black Board	T2	1
TOTAL				**17**

Faculty Signature

List of Power point presentations / Videos

S.No	Topic name	No. Of Slides/Duration
1	DC Motors	56
2	Three Phase Balanced Circuits	18
3	Transformers	26
4	Synchronous Machines	50

Faculty Signature

BR-22 **SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY** **D4**

I B.Tech - I Semester - I Mid Term Examination, December – 2022

(R22EEE1114) BASIC ELECTRICAL ENGINEERING

(For CSE, CS, DS, CSIT & IT)

Duration: 2 Hrs **Dt: 31-12-2022, Day-2 (AN)** **Max Marks: 30M**

Part – A

Answer *All:* multiple choice questions. **Marks: 10Qx1/2M = 5M**

* (L1-Remembering, L2-Understanding, L3-Applying, L4-Analyzing, L5-Evaluating, and L6-Creating.)	*Blooms Taxonomy Levels	Course Outcomes
1. Kirchhoff's laws are useful in determining. [ ] A) Current flowing in a circuit B) EMFs and Voltage drops in a circuit C) Power in a circuit D) All the above.	II	CO1
2. Three resistance 14.5 Ω, 25.5 Ω and 60 Ω are connected in series across 200 V. What will be the voltage drop across 14.5 Ω. [ ] A) 29 V B) 13.5 V C) 14 V D) 18 V.	V	CO1
3. A capacitor stores energy in …….. [ ] A) Magnetic field B) Electric field C) Electromagnetic field D) All.	I	CO1
4. Nodal analysis mainly depends on …….. [ ] A) kvl B) kcl C) kvl&kcl D) none.	II	CO1
5. Q –factor of a series resonant circuit is……. [ ] A) Voltage/current B) Voltage across L or C/Applied voltage	I	CO2

C) Power factor D) L/C.

6.	In series resonant RLC circuit if frequency increases then resistance will ……. [ ]	V	CO2
	A) increases B) decreases C) Remains constant D) none.		
7.	A power factor of 1 indicates. [ ]	II	CO2
	A) Purely resistive circuit B) Purely reactive circuit		
	C) Combination of both a and b D) None of those.		
8.	The phasor combination of resistive power and reactive power. [ ]	II	CO2
	A) true power B)apparent power C) reactive power D) Average power.		
9.	The efficiency of a transformer is maximum when. [ ]	IV	CO4
	A) Its run at half full load		
	B) Its run at full load		
	C) Reduce the eddy current losses		
	D) Turn ratio is higher than voltage ratio.		
10.	Transformer cores are laminated with. [ ]	II	CO3
	A) Low carbon steel		
	B) Silicon sheet steel		
	C) Nickel alloy steel		
	D) Chromium sheet steel.		

P.T.O.

Answer *All:* fill in the blank questions. **Marks: 6Qx1/2M = 3M**

11.	The polarity on the side of the resistor where current enters is _____. The polarity on the side of the resistor where current exits is _____.	III	CO1
12.	Kirchhoff's current law is based on_____.	II	CO1

13.	To get Norton's current, you have to_____.		III	CO1
14.	If the peak value of a certain sine wave voltage is 5v, what is the rms value---------- .		V	CO2
15.	In pure resistive circuit the power factor is…… .		V	CO2
16.	The efficiency of a power transformer is around---------- .		III	CO4

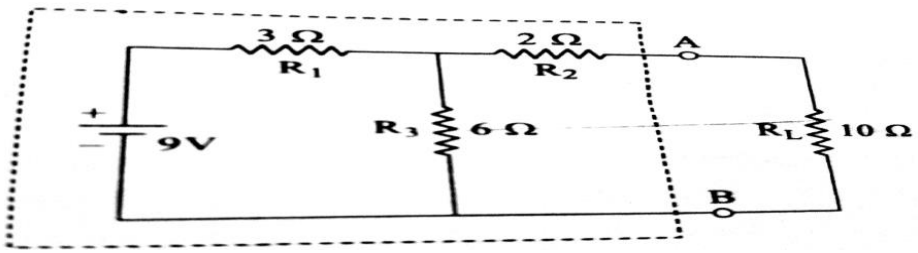
Answer *All:* Match the following questions. **Marks: 2Qx1M = 2M**

17.	a) Electrical current	i) watt	I	CO1
	b) potential difference	ii) ohms		
	c) Resistance	iii) volt		
	d) Electrical power	iv) ampere		
18.	a) Average power for inductor	i) V in phase I	III	CO2
	b) Relation V-I pure resistor	ii) V leads I by 90^o		
	c) Relation V-I Pure capacitor	iii) 0		
	d) Relation V-I pure inductor	iv) I lags V by 90^0		

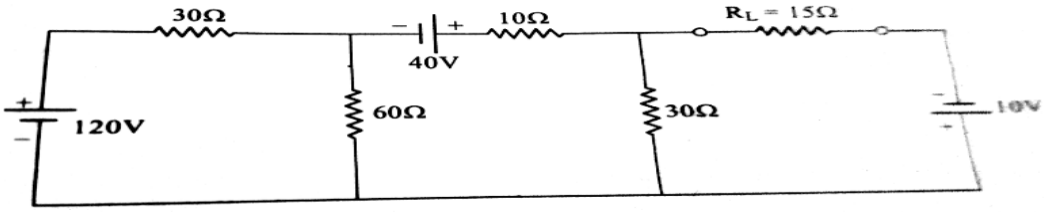
Part – B

Answer any *FOUR* questions. **Marks: 4Qx5M = 20M**

19.	a) State Thevenin's Theorem.	I	CO1
	b) Find the Thevenin's Equivalent circuit for the network shown in figure, and then find the current through 10ohm Resistor.	I	CO1



20.	a) Define Junction, Branch and loop.		I	CO1
	b) Using Norton's Theorem find the current in the branch AB containing 15ohm resistor of the network shown in figure?(Remembering)		I	CO1



21.	Develop the Expression for Transient analysis of Series RC circuit with DC Excitation?	III	CO1
22.	a) Define and derive the equations for RMS value, Average value, Form factor and peak Factor.	I	CO2
	b) Obtain the Form factor, peak factor of pure sine wave.	I	CO2
23.	a) Derive an Expression for the Resonance Frequency for an RLC seriescircuit.	V	CO2
	b) What do you understand by Real power, Reactive power and apparent power?	V	CO2
24.	What is a Transformer? Explain the constructional details of Transformer.	I	CO3

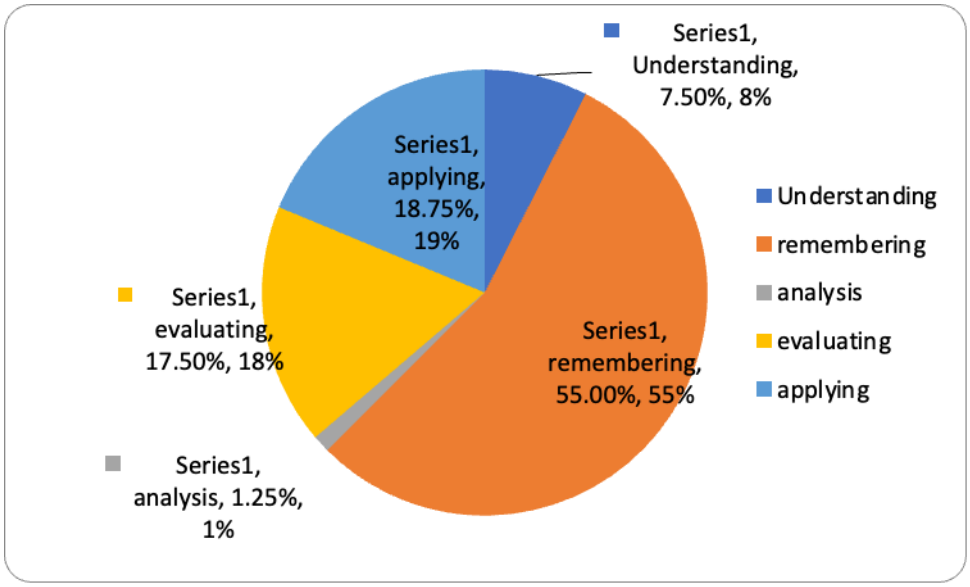
CO & BT for MID TEST – I

Question no.	Course outcome mapping	Bloom's Taxonomy level mapping
1	C113.1	L2- Understanding
2	C113.1	L5-Evaluating
3	C113.1	L1- Remembering
4	C113.1	L2- Understanding
5	C113.2	L1- Remembering
6	C113.2	L5-Evaluating

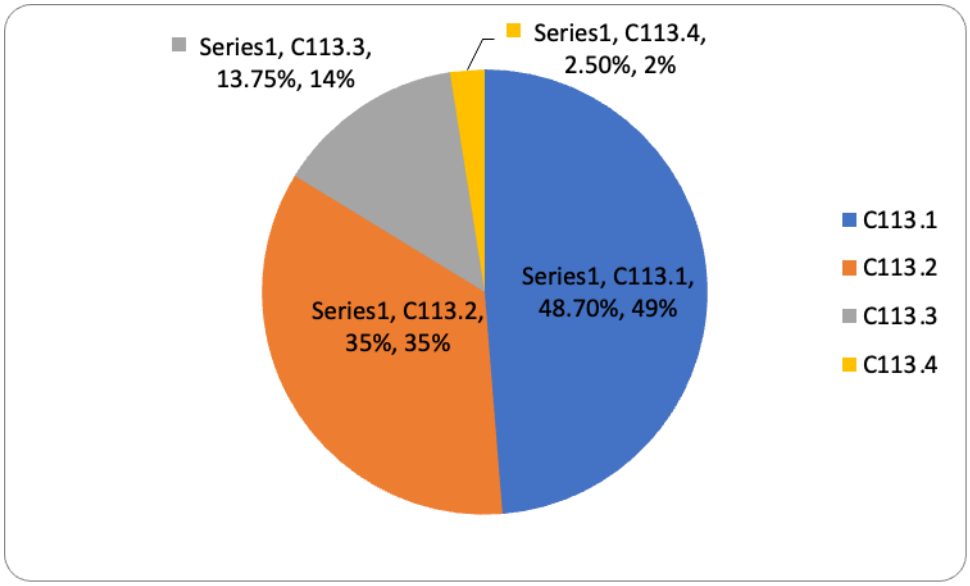
7	C113.2	L2- Understanding
8	C113.2	L2- Understanding
9	C113.4	L4-Analysising
10	C113.3	L2- Understanding
11	C113.1	L3-Applying
12	C113.1	L2- Understanding
13	C113.1	L3-Applying
14	C113.2	L5- Evaluating
15	C113.2	L5- Evaluating
16	C113.4	L3-Applying
17	C113.1	L1- Remembering
18	C113.2	L3-Applying
19	C113.1	L1- Remembering
20	C113.1	L1- Remembering
21	C113.1	L3-Applying

22	**C113.2**	**L1- Remembering**
23	**C113.2**	**L5-Evaluating**
24	**C113.3**	**L1- Remembering**

Understanding:3m(7.5%) remembering:22m(55.0%)analysis:0.5m(1.25%)evaluating::7m(17.5%)
Applying7.5m(18.75%)



Course outcomes	Max.marks	percentage
C113.1	19.5m	48.7%
C113.2	14m	35%
C113.3	5.5m	13.75%
C113.4	1m	2.5%



BR-22 **SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY** **D4**

I B.Tech - I Semester - II Mid Term Examination, March – 2023

(R22EEE1114) BASIC ELECTRICAL ENGINEERING

(For CSE, CS, DS, CSIT & IT)

Duration: 2 Hrs **Dt: 04-03-2022, Day-2 (AN)** **Max Marks: 30M**

Part – A

Answer *All:* multiple choice questions. **Marks: 10Qx1/2M = 5M**

*** (L1-Remembering, L2-Understanding, L3-Applying, L4-Analyzing, L5-Evaluating, and L6-Creating.)**

			*Blooms Taxonomy Levels	Course Outcomes
1.	Which of following connection is best suitable for 3-phase,4-wire service? A) delta-delta B) star-star C) delta-star D) star-delta.	[ ]	V	CO4
2.	Transformer is used. A) to step up the voltage B) to step down the voltage C) on dc D) to step up or step down the voltage.	[ ]	II	CO3
3.	Difference in speed between stator field and rotor is called. A) Full load speed B) No load speed C) Slip D) Regulation.	[ ]	II	CO5
4.	Why is the armature of a DC machine made of silicon steel stampings? A) to reduce eddy current loss B) to reduce hysteresis loss C) for ease with which the slots can be created D) to achieve high permeability.	[ ]	I	CO5
5.	Difference in speed between stator field & rotor is called_____	[ ]	V	CO5

A) full load speed B) no load speed C) slip D) regulation.

6.	When the motor runs at synchronous speed slip is_____ A) one B) infinity C) zero D) two.	[ ]	V	CO5
7.	A Fuse in a motor circuit provides protection against_____ A) short circuit B) over load C) open circuit D) both a |& b.	[ ]	I	CO6
8.	The lagging power factor is due to_____ power drawn by the circuit. A) active B) reactive C) apparent D) none.	[ ]	V	CO6
9.	The most economical power factor for a consumer is generally. A) 0.5lagging B) 0.8 lagging C) unity D) 0.95 lagging.	[ ]	V	CO6
10.	Heat generated in HRC fuse is dissipated mainly through. A) radiation B) convection C) conduction D) all the above.	[ ]	II	CO6

Answer *All:* fill in the blank questions. **Marks: 6Qx1/2M = 3M**

11.	The generation voltage is usually_____	I	CO4
12.	The principle of the DC motor works on_____	I	CO5
13.	Slip of the induction machine is 0.02 & the stator supply is 50 hz. what will be the frequency of the rotor induced emf_____	V	CO5
14.	Which material is used for construction of slip rings_____	II	CO5
15.	The neutral wire is colored_____	II	CO6
16.	Examples of secondary batteries_____	I	CO6

Answer *All:* Match the following questions. **Marks: 2Qx1M = 2M**

17.	a) Synchronous Speed	i) $(N_s-N_r)/N_s$	V	CO5
	b) Torque	ii) 120f/p		
	c) Rotor speed	iii) $KE_2I_2\cos\phi_2$		
	d) Slip	iv) sf.		
18.	a) Plate earthing	i) Large installations such as transmission towers	I	CO6
	b) Pipe earthing	ii) rocky area		
	c) Rod earthing	iii) In areas where the soil is loose or sandy		
	d) Strip earthing	iv) For 11kV/400V distribution transformers.		

P.T.O.

Part – B

Answer any *FOUR* questions. **Marks: 4Qx5M = 20M**

19.	A Single-phase Transformer has 90 primary turns and 180 secondary turns. The primary and secondary winding resistances are 0.067ohms and 0.233ohms respectively. Find the equivalent resistance of a) The primary winding in terms of secondary winding, b) The secondary winding in terms of primary winding, c) The total resistance of the Transformer referred to primary winding.	I	CO3
20.	What are ideal and practical transformers? Explain them in detail. Draw their phasor diagrams.	I	CO3
21.	a) Explain why an induction motor cannot run at synchronous speed. b) A Three phase 50Hz, 4-pole Induction motor runs at a slip of 4%at full load. Calculate rotor speed.	I II	CO5 CO5
22.	What is the significance and various factors determine the Torque –slip characteristics?	I	CO5
23.	Distinguish the types of single-phase Induction motors?	IV	CO5

24. What are SFU, MCB, MCCB? Explain them in detail. I CO6

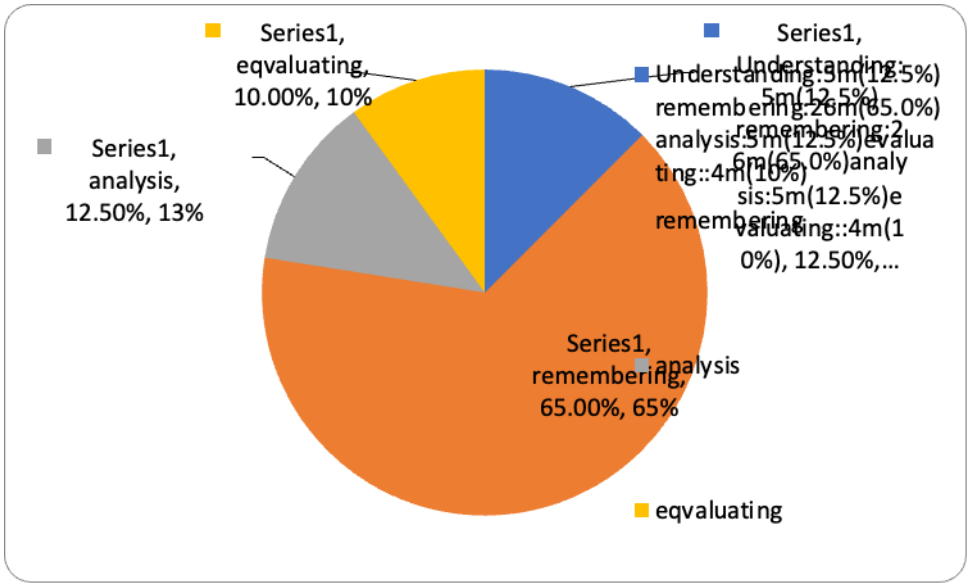
CO & BT for MID TEST – II

Question no.	Course outcome mapping	Bloom's Taxonomy level mapping
1	C113.4	L5-Evaluating
2	C113.3	L2- Understanding
3	C113.5	L2- Understanding
4	C113.5	L1- Remembering
5	C113.5	L5-Evaluating
6	C113.5	L5-Evaluating
7	C113.6	L1- Remembering

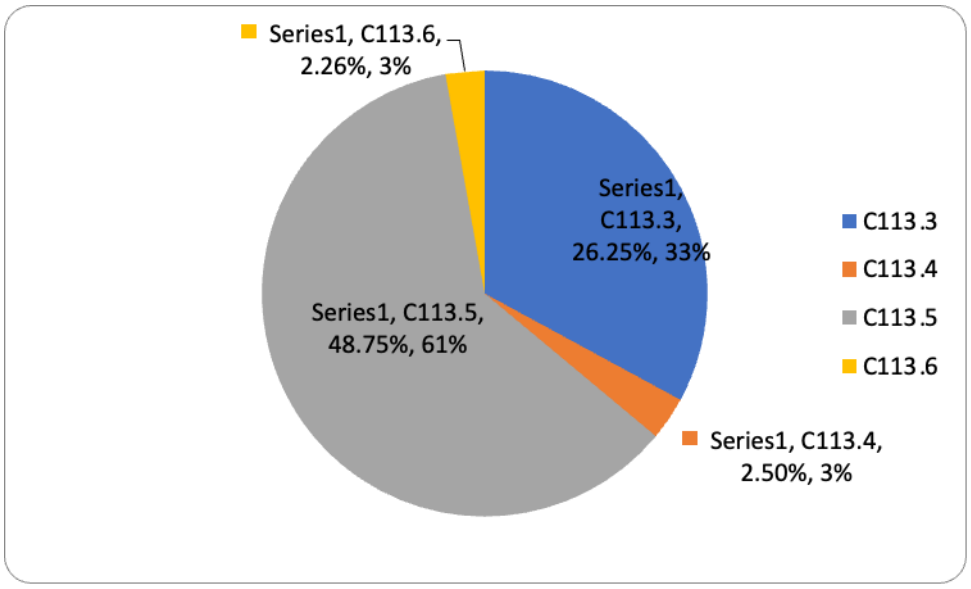
8	**C113.6**	**L5-Evaluating**
9	**C113.6**	**L5-Evaluating**
10	**C113.6**	**L2- Understanding**
11	**C113.4**	**L1- Remembering**
12	**C113.5**	**L1- Remembering**
13	**C113.5**	**L5-Evaluating**
14	**C113.5**	**L2- Understanding**
15	**C113.6**	**L2- Understanding**
16	**C113.6**	**L1- Remembering**
17	**C113.5**	**L5-Evaluating**
18	**C113.6**	**L1- Remembering**
19	**C113.3**	**L1- Remembering**
20	**C113.3**	**L1- Remembering**
21.a	**C113.5**	**L1- Remembering**
21.b	**C113.5**	**L2- Understanding**

22	**C113.5**	**L1- Remembering**
23	**C113.5**	**L4-Analysising**
24	**C113.6**	**L1- Remembering**

Understanding:5m(12.5%) remembering:26m(65.0%)analysis:5m(12.5%)evaluating::4m(10%)



Course outcomes	Max.marks	percentage
C113.3	10.5m	26.25%
C113.4	1m	2.5%
C113.5	19.5m	48.75%
C113.6	9m	2.255


Series1, C113.6, 2.26%, 3%
Series1, C113.3, 26.25%, 33%
Series1, C113.5, 48.75%, 61%
Series1, C113.4, 2.50%, 3%
C113.3
C113.4
C113.5
C113.6

BR-22 **D4**

Write Your Ht.No. | | |

QC1139

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi) - Recognized under 2(f) and 12(B) of UGC Act 1956

IB.Tech.ISemester(REGULAR)End Examinations, March – 2023.

(R22EEE1114) BASIC ELECTRICAL ENGINEERING

25/03/2023 **(For CSE, IT, CS, DS and CSIT)** **Day- 4(FN)**

Duration: 3 Hrs **Maximum Marks: 60M**

Blooms Taxonomy : (I-Remembering, II-Understanding, III-Applying, IV-Analyzing, V-Evaluating and VI-Creating)

Course Outcomes : CO

PART – A

***Answer ALLthe following questions*.(10Qx1M=10M)**

1.	a)	The resistors R_1 and R_2 are connected in series so that their equivalent resistance is 9 Ω, and when connected in parallel the equivalent resistance is 2Ω. Find the values of R_1 and R_2.	I	CO1
	b)	Write the limitations of Super Position Theorem.	V	CO3
	c)	Define RMS value.	I	CO1
	d)	Write the advantages of 3-Phase circuits.	II	CO2
	e)	Draw the equivalent circuit diagram of a single phase transformer with all the notations.	III	CO2
	f)	Write the advantages of Auto-Transformer.	III	CO1
	g)	Name the different parts of a D.C. Machine.	I	CO1
	h)	Define Slip.	II	CO2
	i)	Write the advantages of MCB.	IV	CO3

	j)	A 1.2 kW, 230V, water heater is operated for one hour. Calculate the energy consumed.	VI	CO2

PART – B

***Answer <u>FIVE</u> questions choosing at least one from each unit.*(5Qx10M=50M)**

UNIT-I

2.		Find the current delivered by the source for the circuit given in Fig.1.	I	CO1

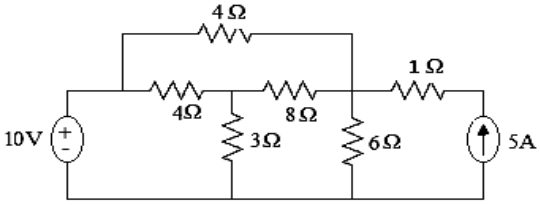


Fig.1

(OR)

		State and explain Thevenin's theorem with an example.	I	CO1

UNIT-II

3.		Obtain the Average and RMS values, form factor and peak factor for a voltage of symmetrical square wave whose amplitude is 10 V and time period is 40 Sec.	III	CO2

(OR)

P.T.O.

		A series RLC circuit has R = 10 Ω, L = 0.5 H and C = 40μF. The applied voltage is 100 V. Determine the Resonant frequency, Quality factor, Band width and current at resonance.	III	CO2

UNIT-III

4.		Describe how OC and SC tests facilitate to construct the equivalent circuit of a single phase transformer.	II	CO2

(OR)

		The efficiency of a 400 KVA, single phase transformer is 98.8% on full load at 0.8 p.f. lag and 99.1% at half load at U.P.F. Calculate the iron loss and the full load copper loss.	II	CO2

UNIT-IV

5.	Explain the characteristics of DC motors.	IV	CO1
	(OR)		
	Explain the constructional features and operation principle of synchronous generator.	IV	CO1

UNIT-V

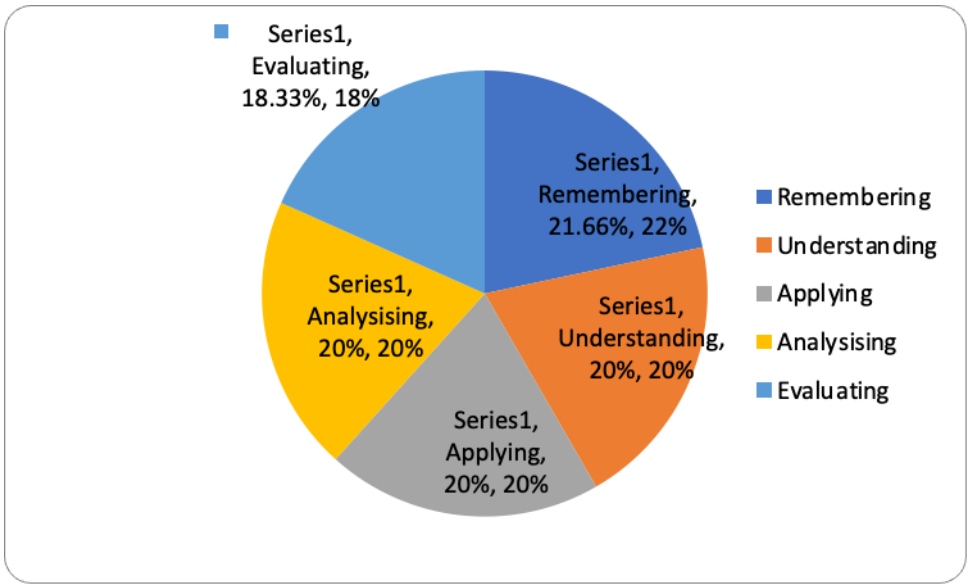
6.	Discuss in detail different types of cables used in Electrical system.	V	CO3
	(OR)		
	Define power factor and its improvement methods in detail.	V	CO3

Scheme of evaluation with CO & BT mapping

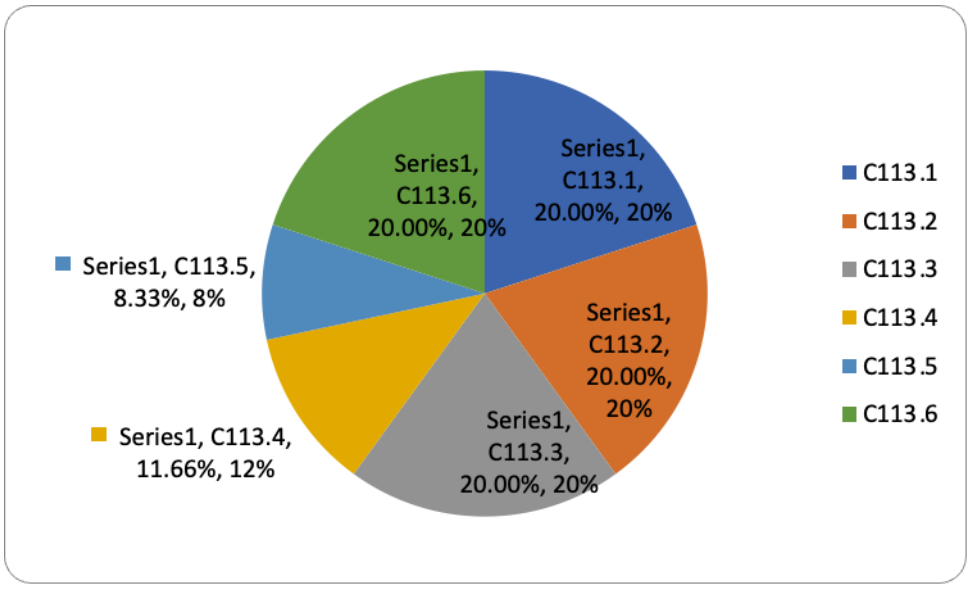
Question no.	Course outcome mapping	Bloom's Taxonomy level mapping
1	C113.1	K1- Remembering
2	C113.2	K1- Remembering
3	C113.4	K1- Remembering
4	C113.5	K2-Understanding
5	C113.6	K1- Remembering
6a	C113.1	K1—Remembering
6b	C113.1	K3-Applying
7a	C113.1	K1—Remembering
7b	C113.1	K3-Applying
8	C113.2	K3-Applying
9	C113.2	K2- Understanding
10a	C113.3	K2- Understanding
10b	C113.3	K5-Evaluating
11a	C113.4	K1- Remembering
11b	C113.4	K2- Understanding
12a	C113.5	K2- Understanding
12b	C113.5	K2- Understanding
13	C113.5	K5-Evaluating
14	C113.6	K6-Creating

15	**C113.6**	**K2- Understanding**

1.Remembering: 31M (25.83%);2.Understanding: 44M (36.66%); 3.Applying: 20M (16.6%), 4.evaluating:15M(12.5%);Creating:10M(8.33%)



C113.1	**24**	**20.00%**
C113.2	**24**	**20.00%**
C113.3	**10**	**8.33%**
C113.4	**14**	**11.66%**
C113.5	**24**	**20.00%**
C113.6	**24**	**20.00%**



Faculty signature

Assignment Questions

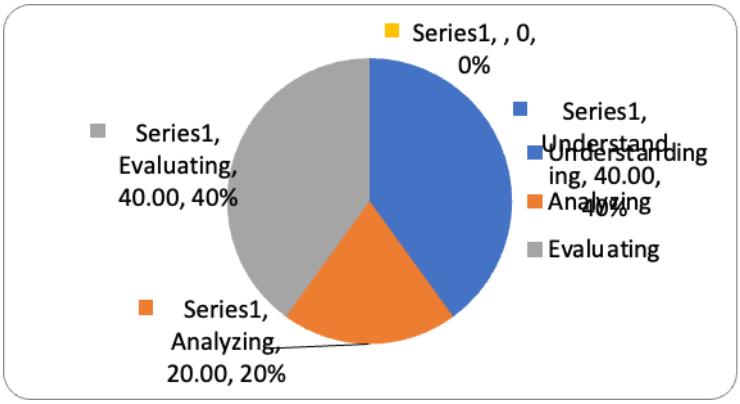
Assignment —— Mid – I

Q.NO		BT LEVEL	CO
1	State and Explain Norton's Theorem?	**L2**	**CO1**
2	State and Explain Superposition Theorem?	**L2**	**CO1**
3	Examine are the various losses occurring in transformer? Explain in detail?	**L4**	**CO4**
4	a)State the equation of an alternating quantity? State it's various forms? b)Prove that the voltage and current in purely resistive circuit are in phase?	**L5**	**CO3**
5	A single phase 50Hz Transformer has 100 turns on the primary winding and 400 turns on the secondary .The Net cross sectional area of the core is 250cm square .If the primary winding is connected to a 230v,50Hz supply, determine 1) Emf induced in the secondary winding 2)Maximum flux density in the core.	**L5**	**CO3**

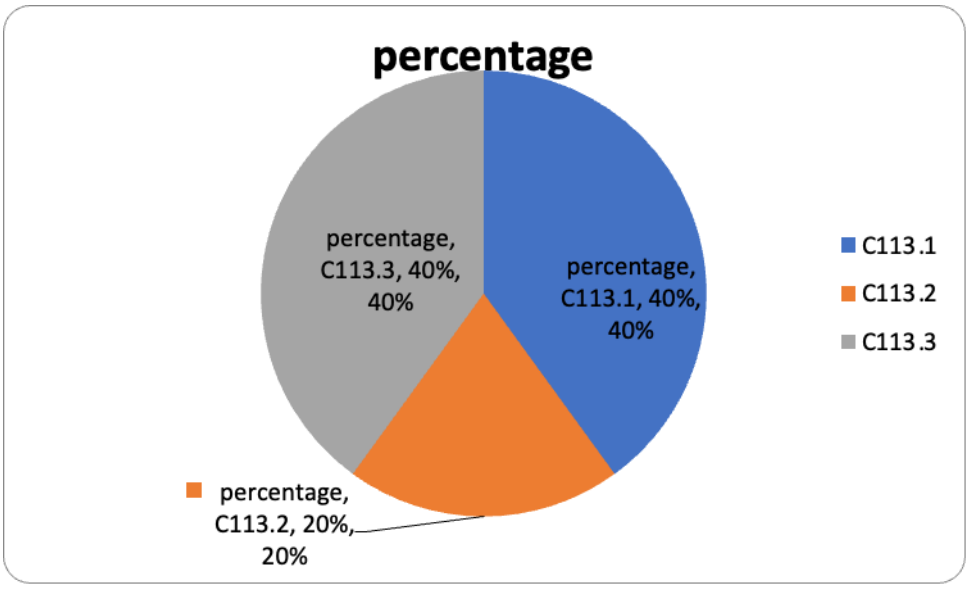
CO & BT for Assignment- Mid- I

Question no.	Course outcome mapping	Bloom's Taxonomy level mapping
1	C113.1	K2- Understanding
2	C113.1	K2- Understanding
3	C113.2	K4- Analyzing
4	C113.3	K5-Evaluating
5	C113.3	K5- Evaluating

Understanding: 2M (40%); Analysing: 1M(20%); Evaluating-2M(40%)



Course outcomes	Max.marks	percentage
C113.1	2M	40%
C113.2	1M	20%
C113.3	2M	40%



Faculty Signature

Assignment Questions

Assignment —— Mid – II

?

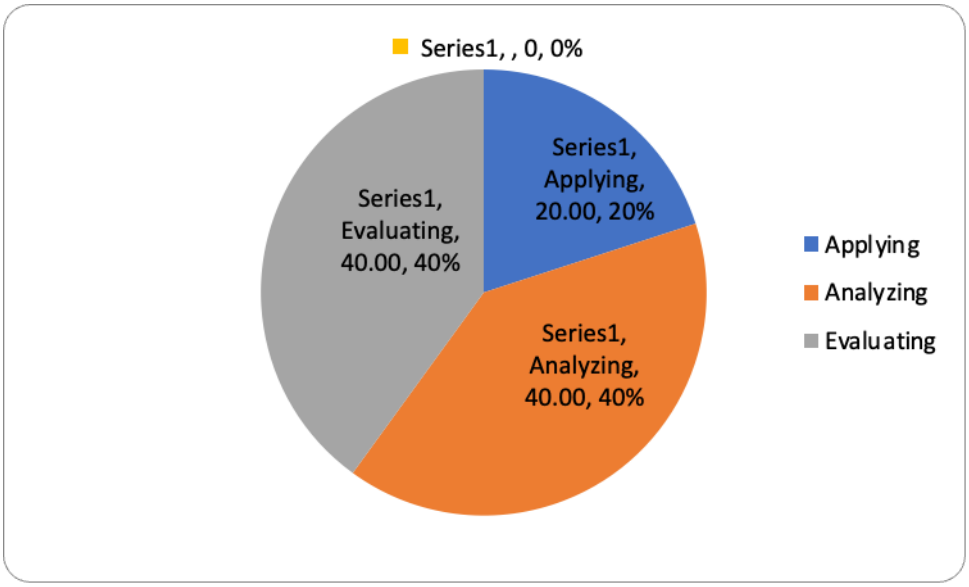
Q.NO		BT LEVEL	CO
1	What is the principal involved in Transformer? Draw the Equivalent circuit of transformer?	**L1**	**CO3**
2	Examine- Induction motor is not self starting and why we need speed control in any machine?	**L4**	**CO5**
3	Classify various losses occurring in an induction motor? Explain them in detail?	**L4**	**CO5**
4	Explain in detail about Switch gear and various components involved in it?	**L2**	**CO6**
5	What do you mean by Grounding or Earthing? Explain it with an example? Explain different types of grounding?	**L2**	**CO6**

CO & BT for Assignment- Mid-II

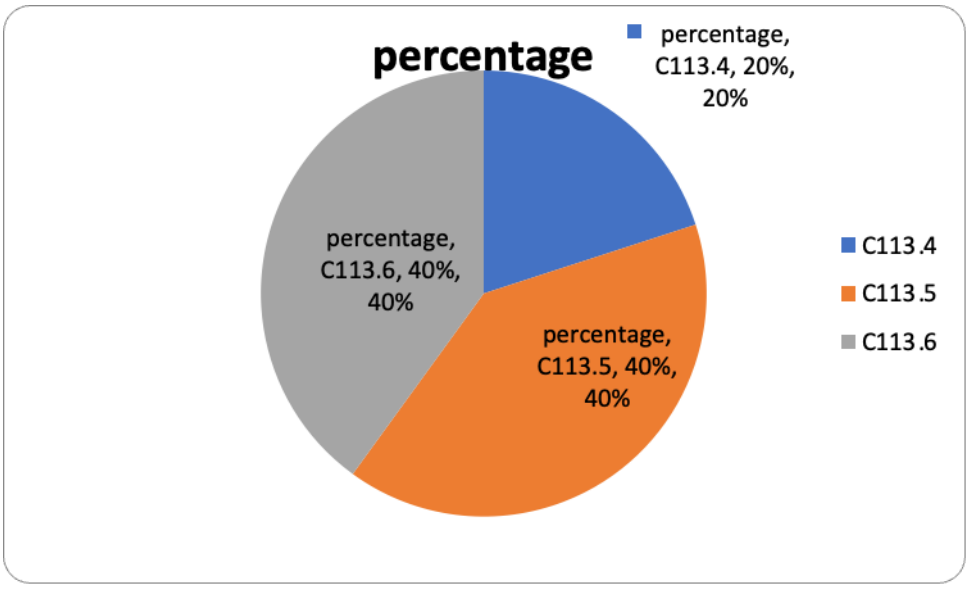
Question no.	Course outcome mapping	Bloom's Taxonomy level mapping
1	**C113.3**	**K1-Remembering**
2	**C113.5**	**K4- Analyzing**
3	**C113.5**	**K4- Analyzing**
4	**C113.6**	**K2-Understanding**

5	**C113.6**	**K2- Understanding**

Remembering: 1M (20%) ; Analyzing :2M(40%);Understanding:2M(40%)



Course outcomes	Max.marks	percentage
C113.4	1M	20%
C113.5	2M	40%
C113.6	2M	40%



Faculty Signature

different tasks.

The students who got < 60% of our mid or internal evaluation are identified as weak learners as given below/ 59 or 36 students are identified/ for them **Remedial classes** were conducted.

Sl.No.	**HT.No.**	**Name of the student**
1	22D41A1203	ADEPU GANESH
2	22D41A1205	ALASANI TEJAVARDHAN REDDY
3	22D41A1208	B PRANEETH REDDY
4	22D41A1212	BOGARAJU SRI CHARAN
5	22D41A1217	DOMA SHIVA REDDY
6	22D41A1220	ETTINI DEVENDHAR
7	22D41A1221	GODUGU SAI VISHAL
8	22D41A1222	GOLLA PAVAN KUMAR YADAV
9	22D41A1223	GOSULA SIDDHARTHA
10	22D41A1242	MANDALA POOJA
11	22D41A1245	MOHAMMAD FARHAAN
12	22D41A1246	PAGADALA KARTHIK
13	22D41A1247	PAGILLA VENKATESH
14	22D41A1252	RAVIRALA AJHAY BAABU
15	22D41A1255	VADLAKONDA VISHNU VARDHAN GOUD
16	22D41A1260	VEERAMALLA MANIDEEP
17	22D41A1262	VULUPALA TRISHA REDDY
18	22D41A1263	BAIRI RAHUL ROSHAN

Faculty Signature

Advance learners-seminar book: Internal marks above 25/ the students are identified as the advanced learners. For them seminars / ppts / small project works were assigned.

S.No	Date	Roll. No.	Name of the Student	Seminar/PPT/project Topic name	Signature of the student	Remarks	Sign
1		19D41A0514	A.Rajitha	transformers			
2		19D41A0569	G.Akanksha	Kirchoffs laws			
3		19D41A05A4	K.Soujanya	Battery backup device			
4		19D41A05F5	N.Martin	Elementary caluclations for energy consumption			
5		19D41A05G8	P.Srikar	Synchronous Generators			
6		19D41A05J3	R.Nagesh	Three phase Transformers			
7		19D41A05K6	S.Sidhartha	Types of Dc Motors			
8		19D41A05L3	T.Vineethreddy	Earthing			

9		19D41A05L9	Umeshsharma	Wires /Cables			
10		19D41A05M9	V.Prasanna laxmi	Switch Gear components			
11		19D41A05N5	Y.Pooja sri	Network Theorems			

Faculty Signature

Course Outcome Assessment

Course : cse AY: 2022-2023

CLASS: I B.Tech SEM: 1st Semester

S.NO	ROLL NO	1st Internal Exam	2nd Internal Exam	University Exam
	Max Marks	**40**	**40**	**60**
1	22D41A0501	15	29	30
2	22D41A0502	16	25	26
3	22D41A0503	20	34	36
4	22D41A0504	11	27	22
5	22D41A0505	11	28	14
6	22D41A0506	15	30	21
7	22D41A0507	12	23	22
8	22D41A0508	13	24	23
9	22D41A0509	28	34	35
10	22D41A0510	22	33	30
11	22D41A0511	27	34	45
12	22D41A0512	25	38	39
13	22D41A0513	12	22	13
14	22D41A0514	13	22	9
15	22D41A0515	8	24	6
16	22D41A0516	16	28	16

17	22D41A0517	10	27	7
18	22D41A0518	16	26	14
19	22D41A0519	17	25	21
20	22D41A0520	15	20	26
21	22D41A0521	22	29	27
22	22D41A0522	17	25	10
23	22D41A0523	15	35	36
24	22D41A0524	18	35	35
25	22D41A0525	17	29	22
26	22D41A0526	12	26	8
27	22D41A0527	27	32	25
28	22D41A0528	16	27	6
29	22D41A0529	22	35	31
30	22D41A0530	16	25	26
31	22D41A0531	13	21	9
32	22D41A0532	13	24	25
33	22D41A0533	13	28	6
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36	22D41A0536	23	27	15
37	22D41A0537	17	25	23
38	22D41A0538	16	24	27
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41	22D41A0541	9	26	26
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66	22D41A0566	14	10	AB
67	22D41A0567	11	22	30
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117	22D41A05B7	13	21	10
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119	22D41A05B9	20	25	29
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121	22D41A05C1	17	28	36
123	22D41A05C2	15	24	29
124	22D41A05C3	16	27	31
125	22D41A05C4	11	21	11
126	22D41A05C5	20	36	42
127	22D41A05C6	24	34	47
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130	22D41A05C9	12	20	24
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136	22D41A05D5	13	22	14
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183	22D41A05J1	16	34	33
184	22D41A05J2	9	34	29
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186	22D41A05J4	18	37	12
187	22D41A05J5	20	38	32
189	22D41A05J6	13	35	0
190	22D41A05J7	15	36	29
191	22D41A05J8	17	36	25
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199	22D41A05K6	14	23	29
200	22D41A05K7	11	22	29
201	22D41A05K8	13	23	28

202	22D41A05K9	20	23	32
203	22D41A05L0	13	20	21
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205	22D41A05L2	13	19	21
206	22D41A05L3	15	20	15
207	22D41A05L4	15	19	28
208	22D41A05L5	20	35	42
209	22D41A05L6	18	31	26
210	22D41A05L7	17	27	30
211	22D41A05L8	18	31	34
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221	22D41A05M8	21	23	34
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226	22D41A05N3	20	26	39
227	22D41A05N4	14	22	27

228	22D41A05N5	11	24	34
229	22D41A05N6	17	29	28
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235	22D41A05P2	13	22	25
236	22D41A05P3	19	28	21
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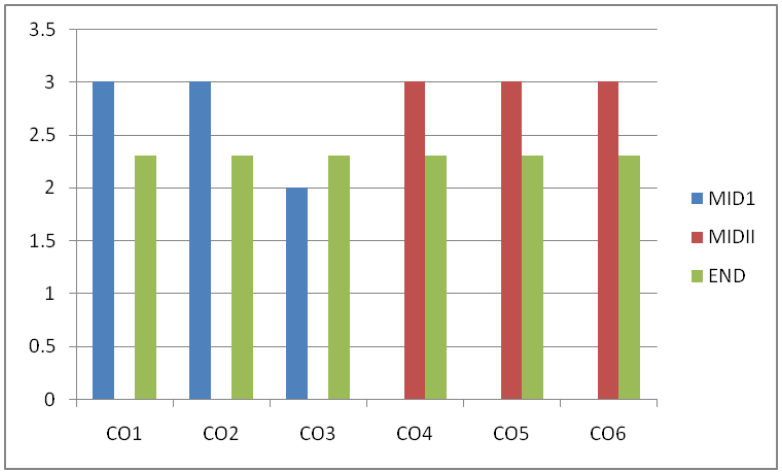
250	22D41A05Q7	9	24	22
251	22D41A05Q8	14	30	25
252	22D41A05Q9	10	22	22
253	22D41A05R0	14	24	15

254	22D41A05R1	14	25	15
255	22D41A05R2	14	30	28
256	22D41A05R3	12	21	25
257	22D41A05R4	15	22	25
258	22D41A05R5	12	22	14
259	22D41A05R6	9	24	27

Rubric for Attainment Level

	Level	Criterion
Low	1	<49% students
Moderate	2	50-69% students
High	3	>70% students

CO	MID1	**MIDII**	**END**
CO1	**3**		2.3
CO2	**3**		2.3
CO3	**2**		2.3
CO4		3	2.3
CO5		3	2.3
CO6		3	2.3



CO	**Program Outcomes**												**Program Specific Outcomes**		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO10	PO1 1	PO12	PSO 1	PSO 2	PSO3
C113. 1	3	2	2	2	-	1	2	-	2	1	-	2	2	2	3
C113. 2	-	3	1	1	-	2	1	2	-	2	-	1	3	2	2
C113. 3	2	-	2	-	1	2	2	-	1	1	2	3	2	3	2
C113. 4	2	2	-		2	2	2	2	3	2	3	3	2	2	2
C113. 5	3	3	-	2	3	1	2	1	2	2	3	2	2	3	3
C113. 6	3	-	3	3	2	3	3	3	3	3	2	3	3	2	3
CO	2.1	1.6	1.3	1.3	1.3	1.8	2	1.3	1.8	1.8	1.6	2.3	2.3	2.3	2.5

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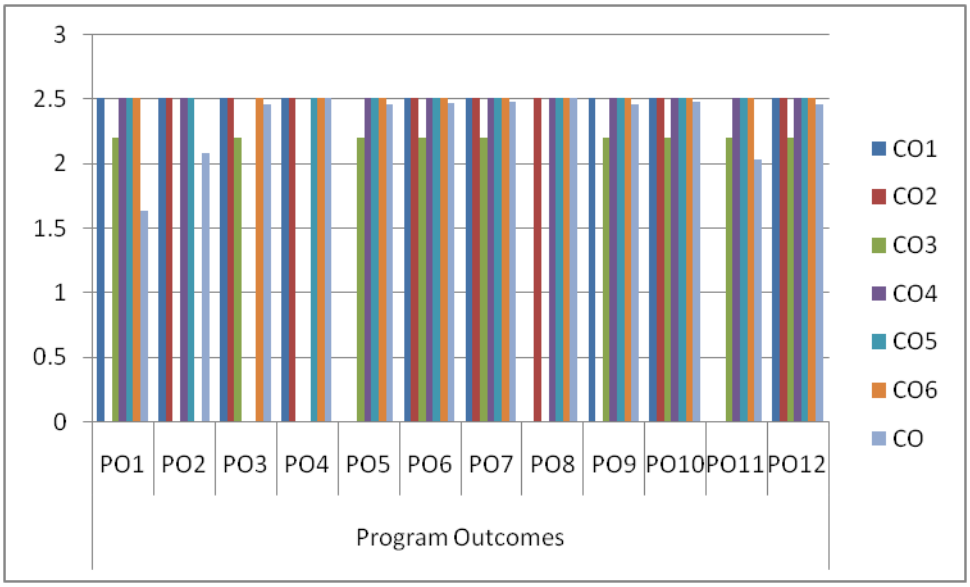
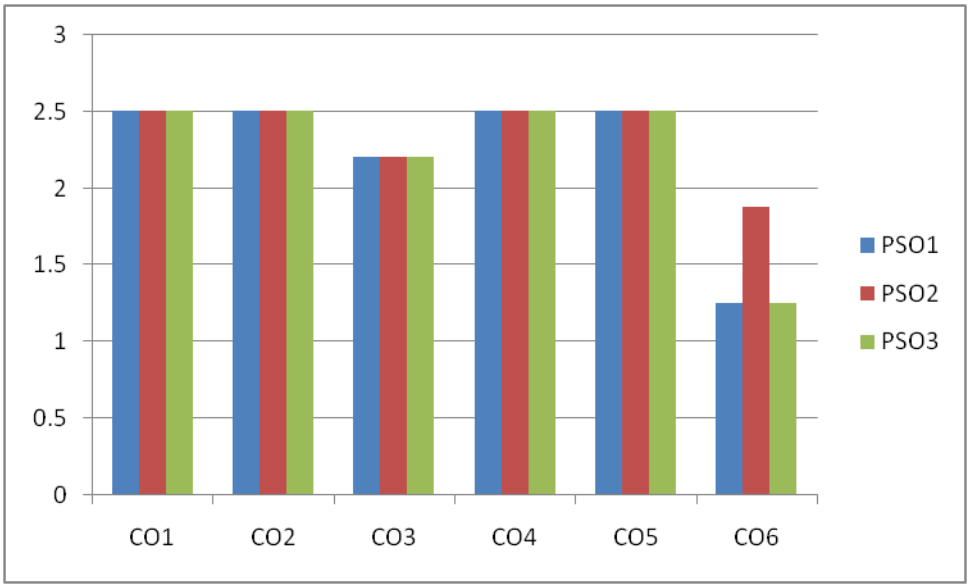
Program Outcome Assessment

CO	**Program Outcomes**											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2.51	2.51	2.51	2.51		2.51	2.51		2.51	2.51		2.51
CO2		2.51	2.51	2.51		2.51	2.51	2.51		2.51		2.51
CO3	2.21		2.21		2.21	2.21	2.21		2.21	2.21	2.21	2.21
CO4	2.51	2.51			2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
CO5	2.51	2.51		2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
CO6	2.51		2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
CO	1.64	2.09	2.46	2.51	2.46	2.47	2.48	2.51	2.46	2.48	2.04	2.46



Programme Specific Outcome Assessment

	CO1	CO2	CO3	CO4	CO5	CO6	OVER ALL
PSO1	2.51	2.51	2.21	2.51	2.51	1.25	2.06
PSO2	2.51	2.51	2.21	2.51	2.51	1.88	2.01
PSO3	2.51	2.51	2.21	2.51	2.51	1.25	2.05



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Course Improvements Based on Assessment

CO's		End Exam		Internal Assessment		CO Attainment	Overall Attainment
	Target %	Attained %	Attained level	Attained %	Attained level		
CO1	2	53.44	2.3	76	3	2.51	**2.46 (Attained)**
CO2		53.44	2.3	74	3	2.51	
CO3		53.44	2.3	56	2	2.21	
CO4		53.44	2.3	78	3	2.51	

CO5		53.44	2.3	71	3	2.51	
CO6		53.44	2.3	81	3	2.51	
Action plan	1 To Conduct More Practice Tests 2.Concentration toward students scoring less than Class Average should be more						

Best Performing Course Outcome CO1
Least Performing Course Outcome CO3
Observations/ Reasons for Low attainment :

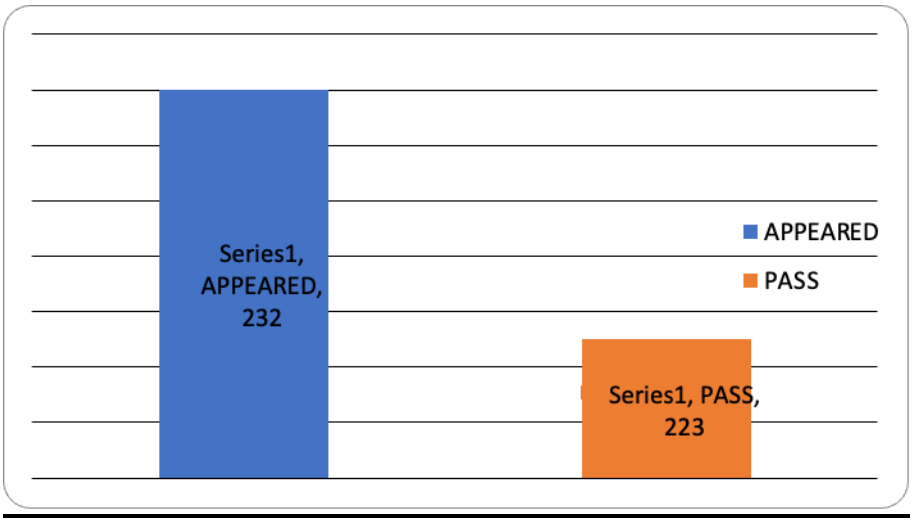
1	Additional Content was not covered.
2	Some Tutorials were not implemented.

Corrective measures/Action items:

1	More basics for filters required.
2	Tutorial Plan Sheet should be improved.

CSE - I BTECH I SEM RESULT ANALYSIS

A.Y	SUBJECT NAME	NUMBER OF STUDENTS		QUESTION PAPER SETTING		PASS%
		APPEARED	PASSED	INTERNAL	EXTERNAL	
2019-20	BEE	232	223	COURSE INSTRUCTOR	EXPERTS COMMITEE	**96.12%**



Faculty Signature