

End Semester/Reappear (Semester I) Examination December, 2024

Programme: B.Tech (MiE/CSE)

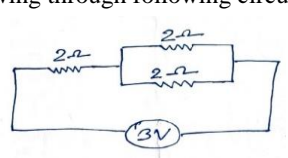
Course: Basic Electrical Engineering

Course Code: 8ESC101/3ESC101

Enrolment no. _____

Full Marks: 70

Time: 3 Hrs.

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks	
Section I					
1	Short Answer type questions.				
a	State Ohm's Law. Write down the limitation of Ohm's Law. or	CO1	Remember	4 x 5 = 20	
	State Kirchoff's Current law and Kirchoff's Voltage law.	CO1	Remember		
b	What do you understand by power factor of the Electric circuit? or	CO2	Understand		
	Describe the term form factor and peak factor.	CO2	Remember		
c	Write down the difference between AC Machine and DC Machine. or	CO3	Understand		
	Distinguish between AC Power and DC Power.	CO3	Remember		
d	Explain the Average Value & RMS Value of the signal. or	CO2	Understand		
	Define the following: i. True Power ii. Apparent Power iii. Reactive Power iv. Power Triangle	CO2	Remember		
Section II					
Long Answer type questions.					
2	Find the value of current flowing through following circuit.  or	CO1	Apply	3 x 10 = 30	
	What do you understand by series and parallel combination of resistance in electric circuit?	CO1	Remember		
3	Explain the concept of resonance in RLC series circuit. or	CO2	Understand		
	Describe the RLC series circuit combination with suitable diagram.	CO2	Understand		
4	Write down the difference between fuse & Circuit Breakers. or	CO3	Understand		
	Explain the followings: (a) Electric Earthing (b) Electric Grounding (c) Buck Converter (d) Boost Converter	CO3	Understand		
Section III					
Application based questions					
5	Describe the constructional features of DC motor in details. Also write down the advantages and applications of DC Motor. or	CO3	Understand	1 x 20 = 20	
	Describe the construction and principle of operation of the transformer also write down the types and applications of transformer.	CO3	Understand		

Course Outcome:

On the completion of the Course, the students will be able to:

CO1 Analyze basic electric circuit and able to find various parameters

CO2 Design the basic electrical circuits.

CO3 Apply the simple principles to troubleshoot basic electrical circuits