

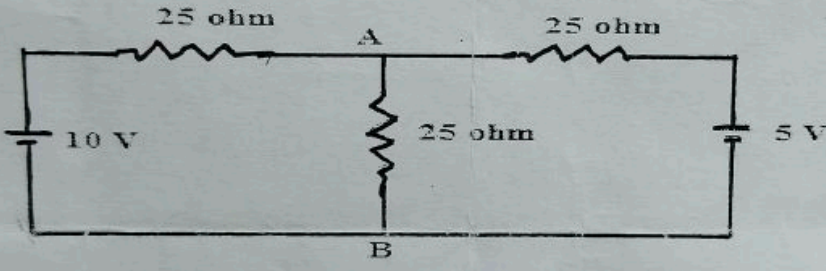
SECTION 'C'		Course Objective	Marks
Q.N.3. Attempt any one part of the following:			
a)	Explain two wattmeter-method for the measurement of three phase AC power.	CO2	10
b)	<p>Three phasors: $X = 3 + j4$, $Y = 3 + j0$, $Z = 10 \angle 60^\circ$ Find: $\frac{YZ}{X}$.</p> <p>Calculate the current in branch AB in given circuit, using Thevenin theorem.</p> 	CO1	10
c)	Three similar coils each having a resistance of 5ohm and an inductance of 0.02H are connected in delta to a 440V, 3-phase, 400V, and 50Hz supply. Calculate the line current and total power absorbed.	CO2	10

Table 1: Mapping between COs and questions

(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	1 (a, b, c), 2(a, b), 3(b)	28
CO2	1(d, e) 2(c, d) 3(a, c)	37

Student University Roll No.:

Pages:2

School of Engineering

First Sessional Examination, Even Semester (AS: 2022-23)

B. Tech: CS11-18

Year: 1

Semester: I

Course Title: Basic Electrical Engineering

Max Marks: 30

Course Code: BEE3201

Time: 1 hr

Instructions if any: Read the question Carefully.

SECTION 'A'

Q.N.1. Attempt all parts of the following:

Course Objective	Marks
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- | | | | |
|----|-------------------------------------|-----|---|
| a) | What is an ideal Voltage source? | CO1 | 1 |
| b) | State Tellegen's Theorem. | CO1 | 1 |
| c) | Define Kirchhoff's Voltage Laws. | CO1 | 1 |
| d) | Define true power in AC. | CO2 | 1 |
| e) | State Bandwidth and Quality factor. | CO2 | 1 |

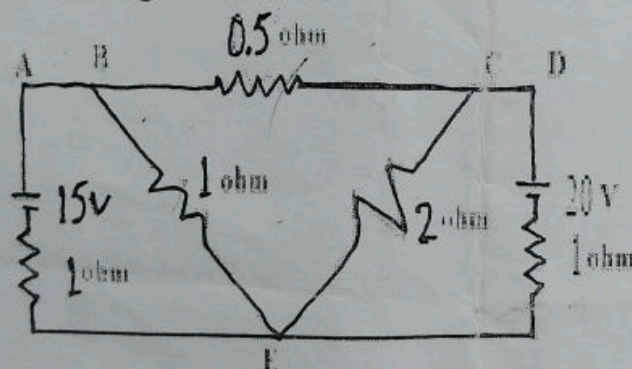
SECTION 'B'

Q.N.2. Attempt any two parts of the following:

Course Objective	Marks
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- | | | | |
|----|--|-----|-----|
| a) | State and explain Maximum Power transfer theorem to solve network problems, and also write two applications. | CO1 | 7.5 |
|----|--|-----|-----|

By using nodal analysis, find the total power consumed in given circuit:



- | | | | |
|----|--|-----|-----|
| b) | By using nodal analysis, find the total power consumed in given circuit: | CO1 | 7.5 |
| c) | Prove that the average power consumed in a pure inductive circuit is zero. | CO2 | 7.5 |
| d) | Prove that $I_{rms} = I_m / \sqrt{2}$ for single phase AC circuit. | CO2 | 7.5 |