SLOT: A1 + TA1

VIT

Vellore Institute of Technology

SCHOOL OF ELECTRICAL ENGINEERING

CONTINUOUS ASSESSMENT TEST – I

WINTER SEMESTER 2021-2022 (Freshers)

Programme Name & Branch: UG Freshers (B. Tech) Course Code: BEEE101L

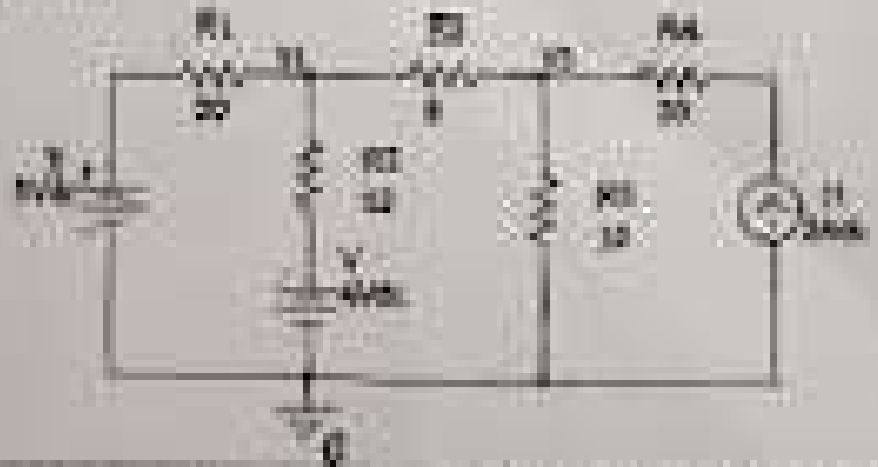
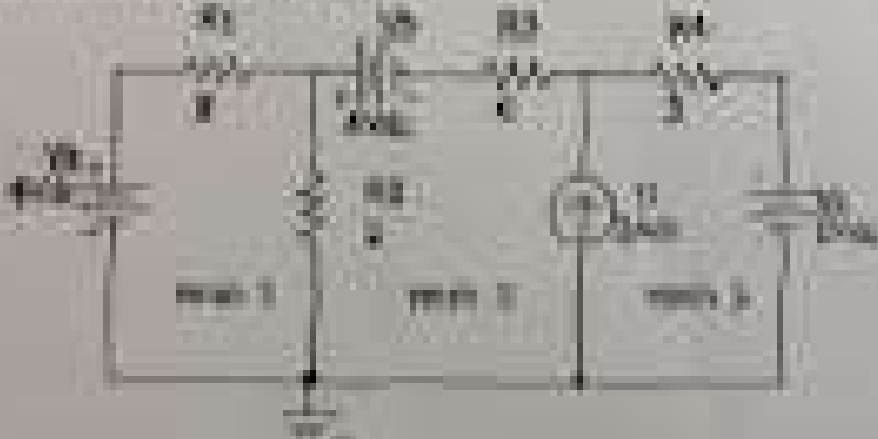
Course Name: Basic Electrical and Electronics Engineering

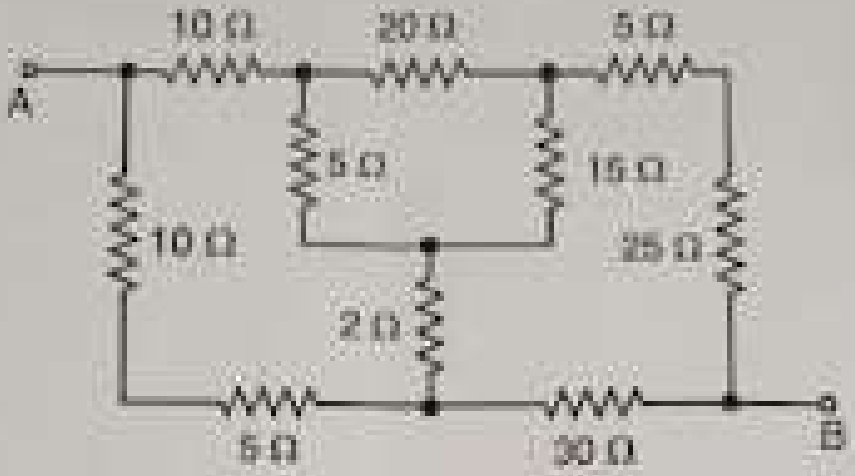
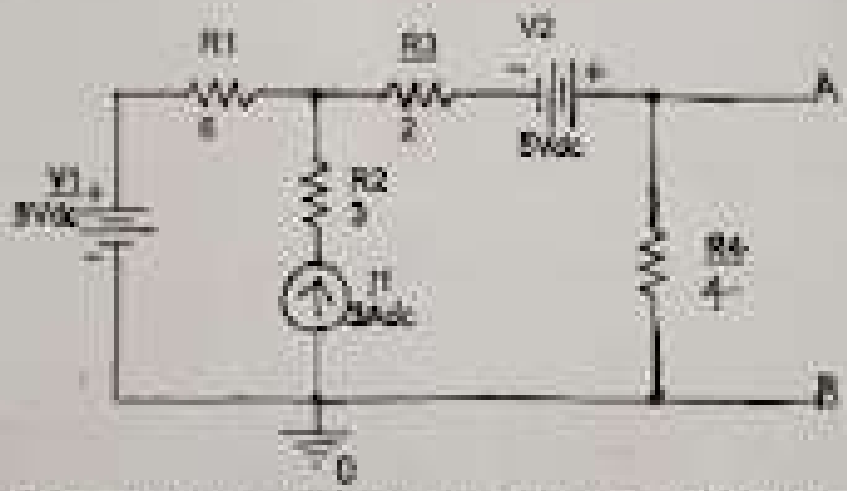
Faculty Name(s): Tapas Prakash

Emp.Hour: 17894

Class Number(s): VL2021210100370 Exam Duration: 90 minutes Maximum Marks: 50

General Instruction(s): Answer all questions. Assume suitable data if necessary.

Q.No	Question	Marks
1.	Analyse circuit given below by node analysis and find the voltages V1 and V2. Minimum values are to show. 	10
2.	Find the branch current through resistance R1, R2, R3 and R4 using mesh current analysis. Resistance values are as shown. 	10

3.	Apply star-delta transformation to determine equivalent resistance between terminals A and B.  	10
4.	Find the maximum power that can be transferred through terminal AB. Resistances are in ohms.  	10
5.	A resistance of 20 Ω, an inductance of 0.2 H and a capacitance of 100 μF are connected in series across 220 V, 50-Hz mains. Determine the following (a) impedance (b) current (c) voltage across R, L and C. Draw the phasor diagram.	10