



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)



SCAN ME

G₂ SLOT

SCHOOL OF ELECTRICAL ENGINEERING

Programme:- B.Tech.

Course :- Basic Electrical & Electronics Engineering

Time: 1½ hours.

Answer all Questions

Course Code:- EEE-1001

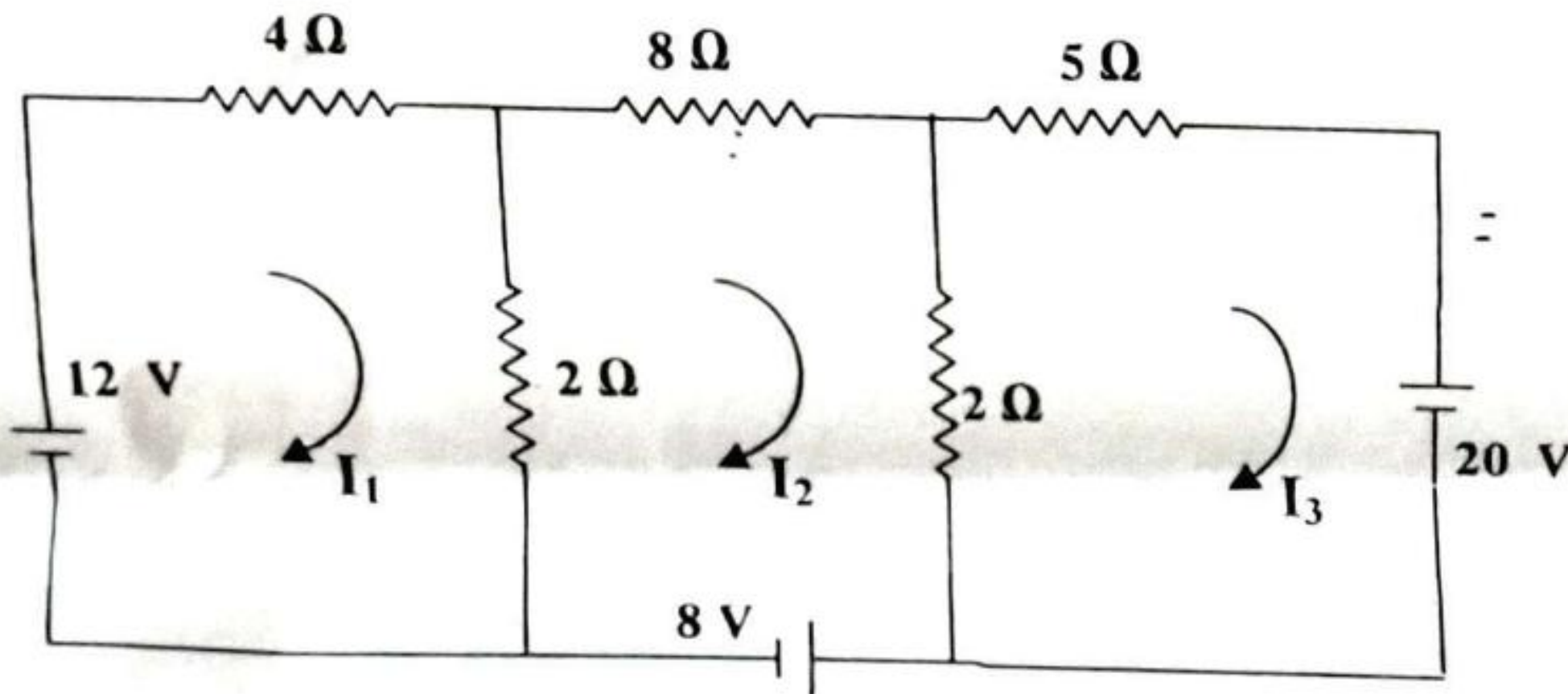
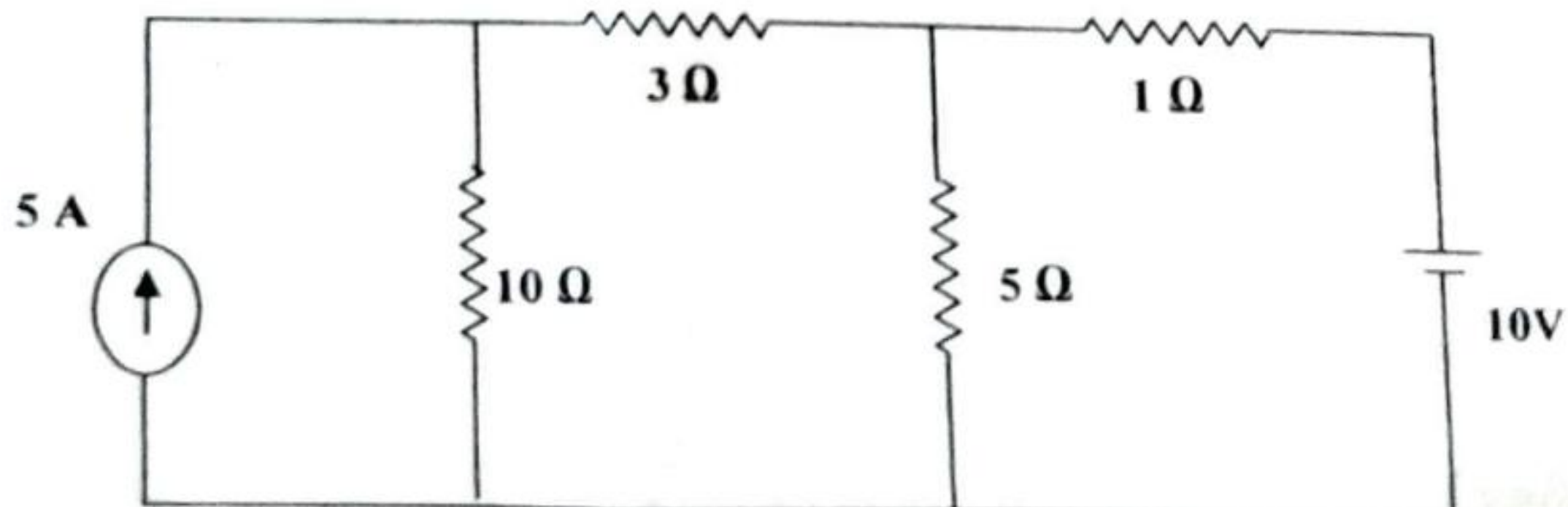
Semester :- Win -(19-20)

Max. Marks: 50

(5×10=50 Marks)

CAT- I

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1.			Marks
2.	a.	Distinguish between 'mesh' and 'loop'	[2]
	b.	Find the various branch currents for the circuit shown in figure-1.by using mesh analysis.  Figure-1	[8]
3.		Find the magnitude of current for the various branches in the circuit shown in figure-2 by using nodal analysis method.  Figure-2	[10]

In the circuit shown in figure-3, Find the current in 10 ohm resistor by using Thevenin's theorem.

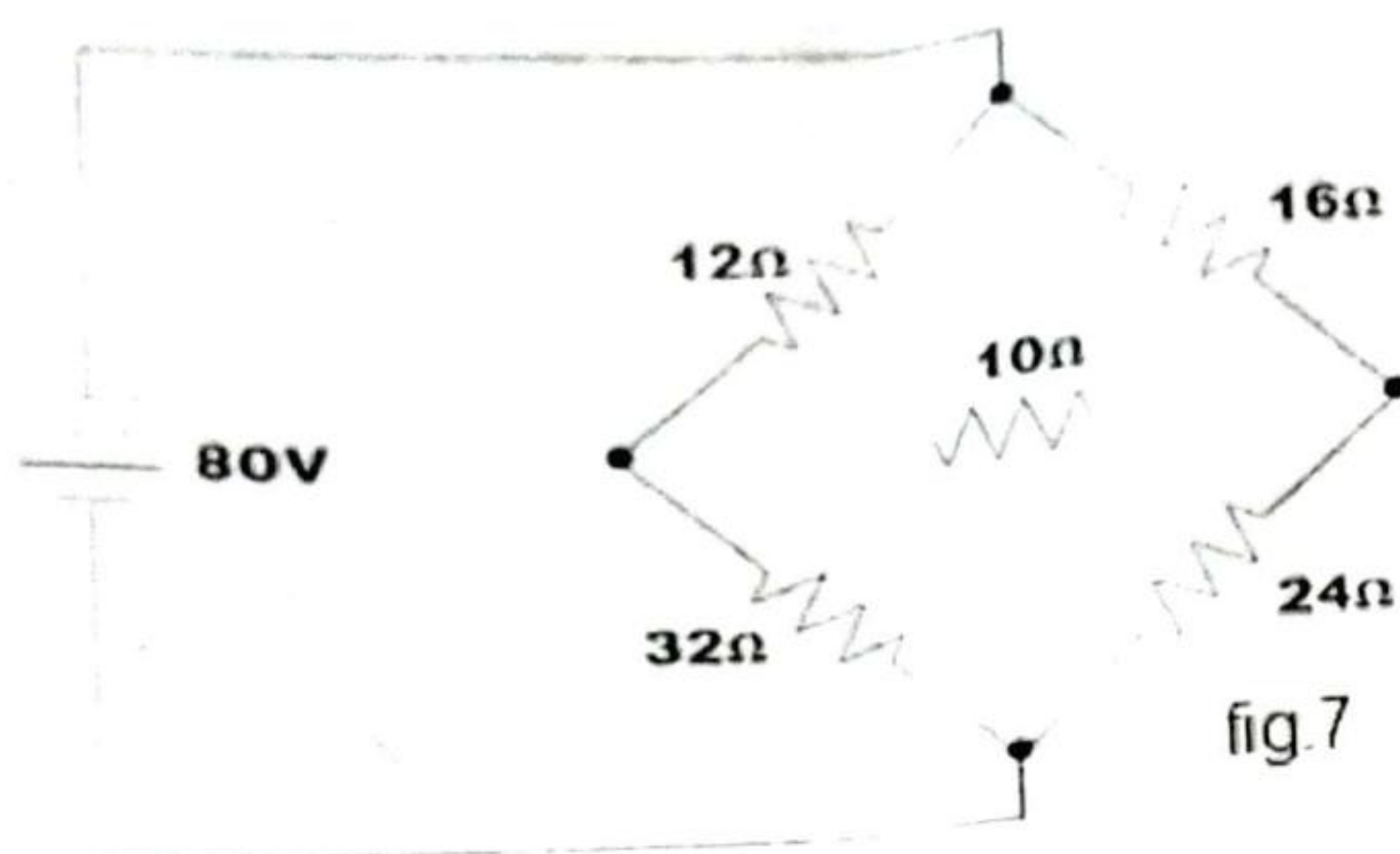


Figure-3.

[10]

[2]

4.

a.

State the maximum power transfer theorem.

[8]

b.

Calculate the value of load resistance R_L to which maximum power may be transferred from the circuit shown in figure-4. Also, determine the value of maximum power.

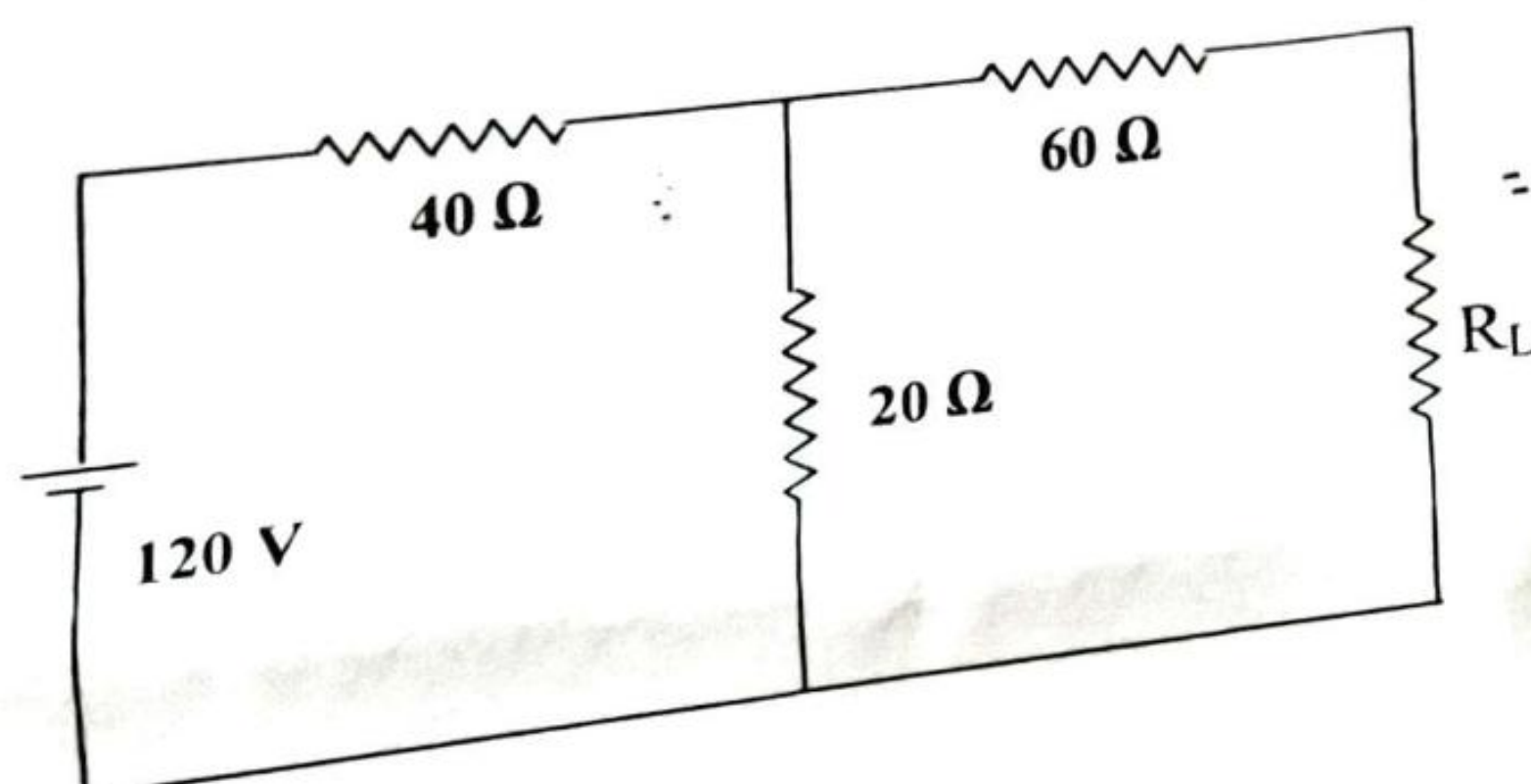


Figure -4.

[10]

A 230-V, 50-Hz, AC supply is applied to a coil of 0.06 H inductance and 2.5 ohm resistance in series with 6.8 micro farad capacitor. Calculate (i) Impedance, (ii). Current, (iii). Phase angle, (iv). Power factor and (v). Power consumed.

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