Shri Shankaracharya Institute of Professional Management & Technology

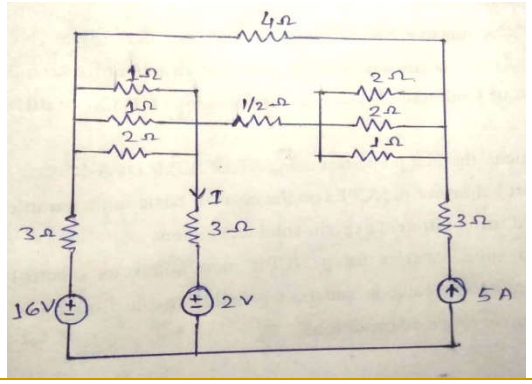
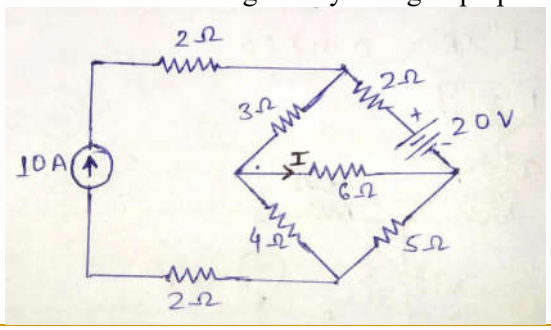
Department of First Year

Class Test – II Session- Jan-June, 2021 Date-03/08/2021

Sem- B.Tech II **Subject**- BEEE **Code**-A000113(024)

Time Allowed: 2 hrs **Max Marks**: 40

Note: Attempt any Two questions from parts (Q1), (Q2) & (Q3) of each question and carries 10 marks.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Unit-I (DC Network)			
Q1	Define Ohms Law? Find the current I in the circuit shown in figure. By using Kirchhoff current Law. 	[2+8]	Appling	CO1
Q2	Write Statement of superposition theorem. Find the current through 6 Ω resistor in the circuit shown in figure. By Using Superposition Theorem. 	[2+8]	Appling	CO1
Q3	(i) What is Difference Between Electric and Magnetic Circuit. (ii) A current of 1A flow through the coil of 200 turns uniformed wound on an soft iron ring having means circumference of 70 cm and has an air gap of 3 mm length. The relative permeability of iron is 300. Calculate flux density in Wb/m^2 in the air gap. Neglect leakage and fringing.	[3+7]	Understanding	CO2
	Unit-II (Transformer)			
Q1	Define Transformer and its working Principle of Transformer. And also Compare Core type and Shell type Transformer.	[2+3+5]	Understanding	CO5
Q2	Derive the expression for EMF equation of single phase transformer and also draw the equivalent circuit diagram of single phase transformer.	[5+5]	Understanding	CO5

Q3	Define efficiency of transformer. The efficiency of a 400 kVA, single phase transformer is 98.77% when delivering full load at 0.8 power factor and 99.13% half full load at unity power factor. Calculate iron loss and full load copper loss.	[2+8]	Applying	CO5