PADRE CONCEIÇÃO COLLEGE OF ENGINEERING

Verna - Goa

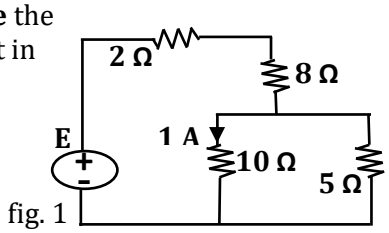
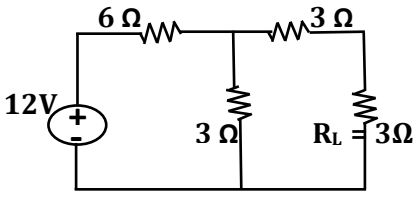
Department of Electronics and Telecommunication Engineering

Roll No:							

Internal Test-I

Semester & Course: I (RC 2019) **Date:** 09/01/2021
Course: FE130 Basic Electrical and Electronics Engineering **Time:** 10:00 am- 12:00 noon
Course Instructor: Shivani Lotlikar(Chemistry Group) **Max Marks:** 25

Instructions: *All questions are compulsory. Assume missing data, if any and justify.*

Q. No		Questions	Marks	CO	CL
Q1.	a.	**State** Kirchhoff's laws.	**[2]**	**FE130.1**	**CL1**
	b.	**Compare** the electric and magnetic circuit.	**[3]**	**FE130.1**	**CL2**
Q2.		**Explain** the following : i) Faraday's Law of Electromagnetic induction ii) Ampere's Law iii) Relutance in magnetic circuit iv) Leakage flux.	**[5]**	**FE130.1**	**CL2**
Q3.		In the circuit given in fig. 1 **determine** the value of the emf source E if the current in 10Ω resistor is 1 A.  fig. 1	**[5]**	**FE130.2**	**CL3**
Q4.	a.	State the Superposition Theorem.	**[1]**	**FE130.2**	**CL1**
	b.	In the circuit given in fig. 2 **determine** the current in R_L = 3Ω using Thevenin's theorem.  fig. 2	**[4]**	**FE130.2**	**CL3**
Q5.	a.	**Draw** a neat labelled V-I characteristics of a p-n junction diode. And **explain** the following: (i) Knee Voltage (ii) Reverse Breakdown Voltage	**[3]**	**FE130.3**	**CL2**
	b.	**Differentiate** between avalanche breakdown and zener breakdown.	**[2]**	**FE130.3**	**CL2**