Roll No. _____

END SEMESTER EXAMINATION
SEMESTER- III

COURSE CODE : EE-401 | **DURATION : 3 (THREE)HRS**
COURSE TITLE : ELECTRICAL ENGINEERING MATERIALS | **MAXIMUM MARKS : 75**
PASS MARKS : 35 %
SESSION : JULY-DEC'2021

NOTE:
1. All the questions are compulsory
2. Attempt any 5 (five) questions.
3. Mark for each question is shown against it.
4. Assume suitable logical data wherever necessary.

1.	**(a)**	Define the following terms: (i) Dielectric strength (ii) Dielectric loss (iii) Polarization	**(6)**
	(b)	What are Ferrites. Also explain the types of ferrites.	**(6)**
	(c)	Define Dielectric Constant.	**(3)**
2.	**(a)**	Explain about the coolants used for Electrical machinery.	**(6)**
	(b)	What are the characteristics of a good conducting material.	**(3)**
	(c)	Define the term: (i)Magnetic intensity (ii) Permeability (iii) Hysteresis loop	**(6)**
3.	**(a)**	With neat diagram explain about the hysteresis loop.	**(8)**
	(b)	Classify the insulating materials in the terms of temperature ranges.	**(7)**
4.	**(a)**	Which material is better for use in coil of a generator and core of Transformer and why?	**(4)**
	(b)	What are the general properties and application of insulating varnishes.	**(8)**
	(c)	What is fuse material.	**(3)**
5.	**(a)**	Explain the electrical, mechanical and chemical properties of insulating Material.	**(9)**
	(b)	Define Curie point .	**(2)**
	(c)	Explain the properties and use of hydrogen when used as an insulator.	**(4)**
6.	**(a)**	Differentiate Ferromagnetic, Diamagnetic and Paramagnetic material.	**(9)**
	(b)	What are the factors affecting the dielectric loss.	**(3)**
	(c)	List the applications of dielectric.	**(3)**
7.	**(a)**	Compare aluminium and copper as conductors for power transmission line.	**(4)**
	(b)	Define alloys. what are the properties of alloys.	**(4)**
	(c)	Explain the application and working of semiconductor material.	**(7)**
8.	**(a)**	Is there any relationship between dielectric strength and relative permittivity? Explain.	**(7)**
	(b)	Explain resistivity of conductor material.	**(3)**
	(c)	List the application of CRGO and ALNICO.	**(5)**

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