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BTECH
(SEM III) THEORY EXAMINATION 2020-21
ELECTRICAL AND ELECTRONICS MATERIALS

*Time: 3 Hours**Total Marks: 70***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x 7 = 14

a.	What is leakage current?
b.	Name some special purpose magnetic materials?
c.	What is ageing of magnets?
d.	What is transmission line structure?
e.	What is bimetal fuse?
f.	Name different type of insulating varnishes and coolant?
g.	What are refractory materials?

SECTION B

2. Attempt any three of the following: 7 x 3 = 21

a.	Explain electric conductivity in solid, liquid and gaseous dielectric?
b.	Explain dielectric as Electric field medium?
c.	Explain magnetic anisotropy and magnetostriction?
d.	Explain material used for resistor?
e.	Explain solid, liquid and gaseous insulating materials?

SECTION C

3. Attempt any one part of the following: 7 x 1 = 7

(a)	Explain piezoelectric and pyroelectric materials?
(b)	Explain properties of ferromagnetic materials in static fields?

4. Attempt any one part of the following: 7 x 1 = 7

(a)	What are factor effecting permeability and hysteresis?
(b)	Explain cast and cermet permanent magnets?

5. Attempt any one part of the following: 7 x 1 = 7

(a)	What are the integration techniques for VLSI?
(b)	Explain the properties of semiconductors?

6. Attempt any one part of the following: 7 x 1 = 7

(a)	Explain the effect of moisture on insulation?
(b)	Explain electric carbon materials and its applications?

7. Attempt any one part of the following: 7 x 1 = 7

(a)	Explain Galvanization and Impregnation of materials?
(b)	Explain properties and application of minerals oils?