

Roll No.

OLE-3245

B. Tech. 5th Semester (EE) (Elective - II) Examination – April, 2021

ELECTRICAL ENGINEERING MATERIALS

Paper : OEC-EE-01-G

Time : Three Hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) What do You mean by thermionic emission ? 15
- (b) What do you mean by polarization ?
- (c) Explain magnetization curve.
- (d) Explain intrinsic type of semiconductor with suitable example.

UNIT – I

2. (a) Explain the effect of temperature on electrical conductivity of metals. 15
(b) What are the factor affecting the resistivity of electrical material ?
3. Write short note on : 15
(a) equation of motion of an electron.
(b) photoelectric emission.

UNIT – II

4. (a) What are the dielectric properties of polymeric system ? 15
(b) Explain the ionic conductivity in insulators.
5. Write short note on : 15
(a) dielectric los
(b) ferroelectricity

UNIT – III

6. What are the classification of magnetic material, explain them ? 15
7. Explain the factors affecting permeability and hysteresis loss. 15

UNIT – IV

- 8.** Write short note on : 15
- (a) Einstein relation
 - (b) Diffusion
- 9.** Explain Hall effect in details. 15
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