

No. of Printed Pages : 03

Roll No.

C-12

B. Tech. EXAMINATION, Dec. 2018

(Third Semester)

(B. Scheme) (Main & Re-appear)

(EE, EEE)

EE201B

ELECTRICAL ENGINEERING MATERIALS

Time : 3 Hours]

[Maximum Marks : 75

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

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-13/18)M-C-12

P.T.O.

Unit I

1. (a) Explain Miller Indices in detail. 8
(b) What are the factors affecting electrical conductivity of metals ? 7
2. (a) Explain thermoelectric effect in detail. 8
(b) Explain super-conductivity in detail. 7

Unit II

3. (a) What is Piezoelectric effect ? 5
(b) Give classification of magnetic materials. 10
4. (a) What is Magnetostriction ? Explain in detail. 8
(b) What is dielectric loss ? Explain in detail. 7

Unit III

5. (a) Differentiate between conducting, semi-conducting, and insulating materials. 10
(b) Explain drift and diffusion current. 5

6. (a) Explain Hall effect in detail. 7
(b) Explain Volt-ampere characteristics of P-N diode in detail. 8

Unit IV

7. (a) Explain feebly magnetic materials in detail. 8
(b) Explain Aging of permanent magnets in detail. 7
8. Write short notes on the following : 5×3
(a) Losses in Magnetic Materials
(b) High frequency materials
(c) Permanent Magnetic Materials.