

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

ES-220 (EC/EI)

B.E. IV Semester

Examination, June 2017

Choice Based Credit System (CBCS)

Material Science

Time : Three Hours

Maximum Marks : 60

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Assume suitable data wherever necessary.

1. a) Explain Atomic structure and Crystal system.
b) Discuss polarisation and static dielectric constant for solids.
2. a) Discuss structural imperfections.
b) Discuss insulating materials and their properties.
3. a) Explain magnetic dipole movement of current loops.
b) Discuss spin magnetic moment.
4. a) Discuss Ferromagnetic materials.
b) Explain magnetic Anisotropy.
5. a) Discuss collision time, mean free path and electron scattering.
b) Discuss High resistivity materials.

[2]

6. a) Discuss super conductivity.
b) Explain Hall effect in semiconductors.
7. a) Explain Junction Transistor.
b) Discuss optical properties of materials.
8. Write short notes on any two:
a) Fibre materials
b) Magnetostriction
c) Ruby laser
