

RIZVI COLLEGE OF ENGINEERING.

APPLIED PHYSICS -I, TERM TEST 2

ATTEMPT ANY 3 OF THE FOLLOWING (5 MKS EACH)

- 1) For intrinsic semiconductor, prove that Fermi level lies midway between conduction band and valence band.
- 2) Draw energy band diagram for pn diode (zero bias) and hence explain drift current, diffusion current, depletion region and barrier potential.
- 3) Draw and explain hysteresis curve. What are applications of soft and hard magnetic materials.
- 4) Consider an air torroid, with 500 turns, cross sectional area 6cm^2 , mean radius 15cm, coil current 4A, calculate mmf, reluctance, flux, flux density, magnetic field strength..