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3. Explain the X-ray and electron microscopic techniques of material characterization and compare them.
4. What do you mean by cyclotron resonance ? Explain in detail.
5. Describe about Weiss theory of Ferromagnetism.

**Section - B**

6. Write short notes on the following :
    - (a) Nucleon-Nucleon Scattering
    - (b) Spin dependence of Nuclear forces
  7. Describe liquid drop model of a nucleus. Explain fission by liquid drop model.
  8. Describe about Breit-Wigner one level formula in detail.
  9. Write about Fermi theory of Beta decay.
  10. Write short notes on the following :
    - (a) Nuclear Isomerism
    - (b) Hadrons and Leptons
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