

- N.B. :** (1) Attempt any four out of six questions.  
 (2) Figures to right indicate full marks.  
 (3) Draw diagrams wherever necessary.

1. Attempt any four :-
  - (a) Define biomaterials classify. 5
  - (b) Explain properties of biomaterial. 5
  - (c) Explain the difference between thermosetting and thermoplastic plastic. 5
  - (d) What is corrosion ? Enlist the different types of corrosion. 5
  - (e) Explain the difference between ESCA and Contact Angle Method. 5
2. Why is surfaces analysis of biomaterials required ? Enlist all the surface testing techniques. Explain any two in detail. 20
3.
  - (a) Explain properties and application of Nitinol. 10
  - (b) Enlist various polymers used for biomedical application. Explain any two in detail. 10
4.
  - (a) Write a note on maxillofacial implants and biomaterials in urological practice. 10
  - (b) Explain in detail the physicochemical test carried out for biological testing of materials. 10
5.
  - (a) Define and classify composite material. Enlist various fabrication techniques of composite material and explain any one in detail. 10
  - (b) What are biodegradable polymers and ceramics? Explain in detail. 10
6.
  - (a) Write a note on materials and its properties used for sutures. 10
  - (b) Write a note on calcium phosphate properties and its applications. 10