

Please check whether you have got the right question paper.

- N.B:
1. Question No.1 is compulsory.
 2. Answer any three out of remaining five questions.
 3. Figures to right indicate full marks.
 4. Assume suitable data wherever necessary.

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| 1.1. Explain application of Nitinol. | 05 |
| 2. With neat diagram explain the different abnormal spinal curvatures. | 05 |
| 3. Give the composition and application of stainless steel as a biomaterial. | 05 |
| 4. Define joints. Classify the synovial joints. | 05 |
| 2.a) Explain in detail below knee prosthetic system with neat diagram. | 10 |
| b) Define levers. Explain them by giving suitable anatomical examples. | 10 |
| 3.a) Explain various methods used for biological testing of biomaterials. | 10 |
| b) Explain the application and properties of Titanium and its alloys. | 10 |
| 4.a) Explain different types of corrosion which occurs in metallic implants. | 10 |
| b) State the various polymers used for Biomedical application. Explain any two in detail. | 10 |
| 5.a) Explain the stance phase of the gait cycle in detail, with neat diagrams. | 10 |
| b) What are biodegradable ceramics? Explain in detail biodegradable Biomaterials.. | 10 |
| 6.a) Write short notes on any FOUR | 20 |
| 1) Terminal devices | |
| 2) Three point pressure principle | |
| 3) Calcium phosphate Biomedical applications | |
| 4) Cobalt - Chromium alloys Properties | |
| 5) Application of biomaterials in drug delivery systems. | |