

30/5/19

Q.P. Code :24504

[Time:3 Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Q.No.1 is compulsory.
 2. Attempt any three from remaining questions.
 3. Figures to the right indicate full marks.
 4. Assume suitable data if required.
 5. Draw neat figures wherever required.



- Q1. 1) Classify Synovial joints. 05
2) Draw a neat diagram of SOMI. 05
3) Classify bioceramics with their application. 05
4) Draw a neat labelled diagram of PTB prosthesis. 05
- Q2. a) Explain properties and applications of Nitinol. 10
b) Explain in detail biological testing of biomaterials. 10
- Q3. a) Explain any one spinal orthosis with a neat diagram. 10
b) Explain the stance phase of gait cycle with neat stick diagrams. 10
- Q4. a) Define lever. Classify them and give one anatomical example of each type with neat diagram. 10
b) Discuss properties and applications of following polymers. 10
1) PTFE.
2) Silicone rubber.
- Q5. a) Discuss various surface properties of biomaterials. Explain any one surface characterization technique of biomaterials. 10
b) Classify composites. Discuss various applications of composite biomaterials. 10
- Q6. Write short notes on any four. 20
- 1) Comparison of thermoplastics and thermosetting plastics.
 - 2) Discuss wear of biomaterials.
 - 3) Movements at synovial joints.
 - 4) Metallic biomaterials- application.
 - 5) Terminal devices.
