

26.5.15

Bio materials
Bm | III | CBAS | BMAT

16

Q.P. Code : 4866

(3 Hours)

[Total Marks : 80

- N.B. : (1) Question No.1 is compulsory.
(2) Solve any three out of remaining five question.
(3) Assume data wherever necessary.
(4) Figure to the right indicate full marks.

1. (a) What do you understand by 'Biocompatibility'? Why is it important? 05
(b) What do you understand by corrosion? How will you make material corrosion resistant? 05
(c) Explain what are thermosplastic and thermosetting resins. 05
(d) State properties and applications of silicone.
2. (a) Discuss properties and applications of Nitinol. 10
(b) Discuss properties of Titanium and its alloys also give its applications. 10
3. (a) Explain various methods of Biological testing of Biomaterials. 10
(b) Explain contact angle technique used for surface testing in Biomaterial. 10
4. (a) Explain what are composites? Explain its properties and applications. 10
(b) What are various Biomaterials used in soft tissue replacement? Discuss their properties. 10
5. (a) Explain properties and applications of stainless steel. 10
(b) Classify polymers. Explain properties and applications of PMMA. 10
6. Write short notes : 20
(a) Hydrogels
(b) Bioglass
(c) Degradable Polymers
(d) Heart valve replacement.
-