

(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID :**Roll No.**

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B.TECH.**Theory Examination (Semester-VI) 2015-16****BIOMATERIALS****Time : 3 Hours****Max. Marks : 100****SECTION- A****1. Attempt all parts. Write answer of each part in short.****(2X10=20)**

- Define biomaterial.
- Discuss the effect of physiological fluid on the properties of biomaterial?
- What is the importance of passive films for tissue adhesion?
- Illustrate in brief about heart valve implants?
- What is the importance of molecular structure?
- Differentiate between acrylic and fluorocarbon polymer?
- List the physiochemical characteristics of biopolymers?
- What is the importance of wear resistance?
- Define sensitization?
- Write short notes on: composite theory of fiber reinforcement?

SECTION- B**2. Attempt any five questions from this section:****(10X5=50)**

- Explain the surface properties of the biomaterials?
- Write the desired properties of implantable bioceramics and uses of bioinert ceramics.
- Explain about percutaneous and skin implants?
- Write a short note on host tissue reactions.
- Define osteoblast and osteoclasts cells and their function.
- Write a short note on tissue response to implants.
- Write a short note on orthopedic implants.
- Give a list of biodegradable polymers used for medical purposes.

SECTION- C**Attempt any two question from this section:****(15X2=30)**

- What are bio ceramics? What are common types of bio ceramics? Explain in brief?
- Discuss in brief about synthetic polymeric membranes and their biological applications?
- Write short notes on:
 - Biocompatibility or blood compatibility
 - Carcinogenicity
 - Mutagenicity

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