

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Mid Semester Exam

Semester: 4th
 Subject Code: 303111251
 Subject Name: Biomaterial and Implants

Date: 29/01/2024
 Time: (1hr: 30min)
 Total Marks: 40

Sr. No.		Marks
Q.1	(A) Answer the following Questions (Compulsory): 1. List out the types of factors influence the mechanical properties of polymers. 2. What is SMA? 3. Give the difference between Yield strength & Ultimate tensile strength. 4. Draw Phases of Wound healing process. 5. Enlist the types of Carbons. How Pyrolytic carbon works better than Vitreous carbon? Give justification on it.	05
	(B) Describe Tissue or Body response to Implants in detail.	05
Q.2	Attempt any four(Short Questions): (1) Describe Stainless steel alloys in detail with its composition, mechanical properties and its applications. (2) Enlist and explain the types of materials in detail. (3) Explain Condensation Polymerization in detail. (4) Explain Semi-inert ceramics in detail with one example. (5) Explain Titanium based alloys in detail with its composition, mechanical properties and its applications.	12
Q.3	Attempt any two questions: (1) Explain Polymer chain in detail. (2) Describe Mechanical Properties of Biomaterial in detail with neat diagram. (3) Explain Polyethylene with its Physical properties and applications in detail.	08
Q.4	(A) Explain SMA in detail.	05
	(B) Explain Addition Polymerization by taking example of Propylene.	05
	OR	
	(B) List out types of Polymer with its properties and Biomedical uses.	05