

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
SECOND SEMESTER 2022-2023
PHA G535: BIOMATERIALS

Mid-term Examination

Maximum marks: 30

Weightage: 30%

Date: 13/03/2022

Closed Book

Duration: 90 min

Note:

- Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
- All parts of a question should be answered consecutively.
- Each answer should start from a fresh page.
- Assumptions made if any, should be stated clearly at the beginning of your answer.

No. of Pages	= 1
No. of Questions	= 6

Q1. What are biomaterials? Biomaterials have been used in a range of applications. Give suitable examples wherein biomaterials have been for: [6 M]

- a. Visual impairment
- b. Diabetes management and control

Q2. Write a note on: [6 M]

- a. Gelatin as biomaterial
- b. Ring-opening polymerization of cyclic esters
- c. Poly amino acids

Q3. Explain the impact of degradation behavior on the release of the drugs from polymer systems. [6 M]

Q4. What is the degree of crystallinity, and how could it be determined? [5 M]

Q5. Write a short note on AFM and SEM as characterization tools. [5 M]

Q6. Give two examples of [2 M]

- a. Microparticles in market
- b. Polymeric nano-drug delivery systems in the market

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