

2003001105020003
EXAMINATION FEBRUARY -MARCH 2024
BACHELOR OF SCIENCE (FIFTH SEMESTER)
INTRODUCTION TO NANOBIO TECHNOLOGY - LEVEL 2

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF SCIENCE (FIFTH SEMESTER)**
- b. Name of the Subject: **INTRODUCTION TO NANOBIO TECHNOLOGY- LEVEL 2**
- c. Subject Code No: **2003001105020003**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Define/Answer in short Any Four:

8

- (a) What is Encapping of Nanoparticles?
- (b) Define "Self Assembly Proteins"? Give two example
- (c) Define Bionanotechnology and its applications.
- (d) Brief on Quantum Dots?
- (e) Define Protein cage and protein tubes.

Q.2 Attempt Any Two:

14

- (a) Explain the Magnetic and Thermal properties of nanoparticles
- (b) Write a note on Nanolithography.
- (c) What are carbon nanotubes? Explain its structure, properties, application and limitations

Q.3 Explain in detail Any Two:

14

- (a) Write a note on how to enhance the Stability of Nanoparticles.
- (b) Compare with example top-down approach and bottom-up approach used for synthesis of nanoparticles
- (c) State application of nanoparticles as drug delivery system.

Q.4 Attempt Any Two of the following:

14

- (a) State the various applications of Protein Nanostructure.
- (b) How Viruses can be used as nanocages?
- (c) How Nanobiotechnology find its application in food and agriculture?
