

B.Sc. (Part-III), Examination - 2019

(Faculty of Science)

(Common to Three and Five year Integrated Course)

BIOTECHNOLOGY

(Paper- BT-802)

(Fundamentals of Bio Information and Nanotechnology)

Time Allowed : 3 Hours

Maximum Marks : 50

Answer of all questions (short answer as well as descriptive) are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book. Write your roll number on question paper before start writing answers of question.

Question No. 1 is compulsory. Answer five questions in all, selecting at least one question from each Section.

PART-A

Comment on the following :

- (a) Quantum dots
- (b) BLAST
- (c) BTIS net
- (d) NCBI
- (e) FASTA
- (f) Nanowires
- (g) PBP
- (h) Pairwise alignment
- (i) Dendrimers
- (j) CNT

Section-A

2. Write an overview on bioinformatics. What is search engine and how search engines work?

OR

Differentiate between secondary and composite databases.

Section-B

3. Write short notes on :

- (a) Multiple sequence alignment
- (b) Application of bioinformatics.

OR

What is the scope of Bioinformatics in India?

4. What is nanotechnology? What are the physical and chemical properties of nanomaterials?

OR

Comment upon :

- (a) Richard Feynman's idea of nanotechnology
- (b) History of nanotechnology

Section-D

5. Describe in detail about application of nanotechnology in drug development.

OR

Write short notes on :

- (a) Nanocones
- (b) Bucky ball.