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Roll No. ....

B.Sc.(Bio-Tech.)-I Year

NS-3457

B. Sc. (Bio-Tech.) Examination, May 2016

Cell Biology

(B-103)

(New)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any Five questions. All questions carry equal marks.

1. "Cell is a structural and functional unit of life". Justify the statement giving suitable diagrams. 10

2. Describe the structure of ribosome as observed under electron microscope giving details of ribosomal protein and ribosomal RNA. 10

3. Write short notes on the following : 2½×4

- (a) PPLO
- (b) Labelled sketch of prokaryotic cell
- (c) Interphase
- (d) Role of Ca<sup>++</sup> ions in cell signalling.

4. Describe the structure and function of chromosome. 10

5. Write detailed note on the following : 5 each

- (a) Differences in prokaryotic and eukaryotic cell giving suitable diagram.
- (b) Differentiate between metaphase-I and metaphase-II giving suitable diagram.

6. Giving suitable diagrams, describe the different sub-stages of prophase-I of meiotic cell division. 10

7. Give an account of the detailed ultra-structure of plasma membrane and also discuss its functions. 10

8. Write the short note on the following : 4+3+3

- (a) Functions of endoplasmic reticulum
- (b) Inositol phosphate
- (c) Difference between normal and cancer cell.

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9. Describe in detail the process of protein synthesis in prokaryotes. 10
10. Write detailed note on the following : 5 each
- (a) Differences in mitotic and meiotic cell division
  - (b) Functions of chromosomes.