

Q.P. Code : 11129

**First Semester B.Sc. Degree Examination,
November/December 2019**

(CBCS – Freshers & Repeaters – 2018 onwards)

Genetics – I

GNT 101 – FUNDAMENTALS OF CELL BIOLOGY

Time : 3 Hours]

[Max. Marks : 70

Instructions to Candidates :

- 1) *Answers should be written completely in English*
- 2) *Draw diagrams wherever necessary.*

PART – A

- I. Answer any **FIVE** of the following : **(5 × 3 = 15)**
1. Define resolving power and magnification of the Microscope.
 2. List the genetic significance of Drosophila.
 3. State Cell Theory.
 4. Write a note on Cytokinesis.
 5. Comment on Nucleolus.
 6. What are Plastids? Mention its types.
 7. Write a note on Mitotic apparatus.

PART – B

- II. Answer any **FIVE** of the following : **(5 × 5 = 25)**
8. Explain the principle involved in Phase Contrast Microscopy.
 9. With a neat labeled diagram explain the life cycle of E.coli.
 10. Illustrate and explain the structure of Desmosomes.

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11. Describe the organization of a Prokaryotic Cell.
12. Give an account on the structure of Nucleus.
13. Briefly explain the role of Golgi bodies in a cell.
14. Comment on the process of Programmed Cell Death.

PART – C

III. Answer any **TWO** of the following : **(2 × 10 = 20)**

15. Discuss in detail Prophase – I of Meiosis.
16. With a neat labelled diagram explain Fluid Mosaic model of the Plasma membrane.
17. Describe the life cycle of Bacteriophage. Add a note on its genetic significance.
18. Explain the ultra structure of Chloroplast and its role in Photosynthesis.

PART – D

IV. Answer any **ONE** of the following : **(1 × 10 = 10)**

19. Explain :
 - (a) Mechanism of Active Transport
 - (b) Working principle of SEM.
20. Discuss :
 - (a) The stages in cell cycle
 - (b) Functions of Lysosome.