61129

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

(CBCS – Semester Scheme – Freshers & Repeaters – 2018-19 Onwards)

Genetics

Paper I (GNT 101) – FUNDAMENTALS OF CELL BIOLOGY

Time : 3 Hours] *[Max. Marks : 70*

Instructions to Candidates : Draw neat labeled diagrams wherever necessary.

PART – A

Answer any **FIVE** of the following : **(5 × 3 = 15)**

1. Write the principle of fluorescent microscope.
2. What is budding?
3. Define osmosis.
4. Mention any three functions of mitochondrion.
5. What is Lytic cycle?
6. Give the chemical composition of plant cell wall.
7. Write a note on apoptosis.

PART – B

Answer any **FIVE** of the following : **(5 × 5 = 25)**

8. Explain the principle and application of phase contrast microscope.
9. Explain the conjugation in E.Coli.
10. Describe the prokaryotic cell with a neat labelled diagram.
11. Write a note on desmosomes.
12. Describe the ultra structure of endoplasmic reticulum. Mention its functions.
13. With a neat labelled diagram, explain the synaptonemal complex.
14. What is crossing over? Explain chlasma formation.

PART – C

Answer any **THREE** of the following : **(3 × 10 = 30)**

15. Explain the principle of electron microscope, with neat labelled diagram. Mention the types and applications.

16. With a neat labelled diagram, explain the life cycle of Arabidopsis Thaliana.

17. Write note on :
    (a) Mitotic inhibitors
    (b) Mitotic apparatus.

18. Describe the structure of Golgi complex with a neat labelled diagram. Mention its functions.

19. Explain the prophase I of meiosis with a neat labelled diagram.