61134

First Semester B.Sc. Degree Examination, August/September 2021

(CBCS)

Biotechnology

Paper I – CELL BIOLOGY AND GENETICS

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

Instructions to Candidates : Draw a neat labeled diagrams wherever necessary.

SECTION – A

I. Write short answers on the following : **(5 × 2 = 10)**

1. Deletions
2. Uniport
3. Pinocytosis
4. Phospholipids
5. Purines

SECTION – B

II. Answer any **FOUR** of the following : **(4 × 5 = 20)**

6. What are intermediate filaments?
7. Describe Davson and Danielli model.
8. Explain cell senescence.
9. Explain Kleinfelters syndrome.
10. Explain cytoplasmic inheritance in Mirabilis jalapa.

SECTION – C

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

11. Explain the structure of mitochondria and add a note on its significance.
12. What are chromosomes? Explain the ultra structure of chromosomes.

13. What is cell cycle? Explain the various phases of the cell cycle.

14. What are complementary genes? Explain with an example.

15. What are chromosomal aberrations? Explain numerical aberrations in detail.

SECTION – D

IV. Answer the following in a word or a sentence each : **(10 × 1 = 10)**

16. SAT - chromosome

17. Crossing over

18. Tight junction

19. Test cross

20. ZW – zz type of sex determination is seen in _____.

21. Negro

22. The function of food vacuole is _____.

23. _____ blood group is called Universal Recipient.

24. _____ is used for the study of Barr bodies in humans.

25. Heterochromatin