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I Semester B.Sc. Examination, December - 2019
(CBCS) (F+R)

BIOTECHNOLOGY - I
CELL BIOLOGY AND GENETICS

Time : 3 Hours Max. Marks : 70

Instruction : *Draw **neat** labelled diagrams **wherever** necessary.*

SECTION - A

I. Write short notes on the following : **5x2=10**

1. Cell Theory
2. Primary Cell Wall
3. Apoptosis
4. Petite Character
5. Cri-Du-Chat syndrome

SECTION - B

II. Answer **any four** of the following : **4x5=20**

6. Explain Fluid Mosaic Model of Plasma membrane.
7. Describe ribosomes in detail.
8. Explain incomplete dominance with an example.
9. Define Linkage. Explain linkage in maize.
10. Explain chromosome structural aberrations.

P.T.O.

SECTION - C

3x10=30

III. Answer **any three** of the following :

11. Explain : (a) Folded-Fibre model of chromosome
    (b) Polytene chromosomes

12. Explain the structure and functions of Mitochondria and Golgi Complex.

13. Describe mitosis in detail and add a note on its significance.

14. (a) Explain Epistasis with a suitable example.
    (b) What is sex determination ? Explain ZO-ZZ, ZW-ZZ types.

15. (a) Explain mutation at molecular level.
    (b) Describe B-DNA.

SECTION - D

IV. Answer the following in **a** word or **a** sentence **each** : 10x1=10

16. Idiogram

17. Plastid Inheritance

18. Haploid

19. Chromonemata

20. Aging

21. Non-allelic gene interaction

22. Nuclear Pore Complex

23. Allosomes

24. Microtubules

25. Supplementary factor

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