11134

Reg. No. | | | | | | | | |

I Semester B.Sc. Degree Examination, August - 2021

BIOTECHNOLOGY

Cell Biology And Genetics

(CBCS Scheme Repeaters)

Paper : I

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates :

1) All Sections are compulsory.
2) Draw neat labelled **diagrams** wherever necessary.

SECTION - A

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

1) S - phase.
2) Receptor proteins.
3) Vacuole.
4) Incomplete dominance.
5) Test cross.

SECTION - B

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

6) Explain the functions of plasma membrane.
7) What is sex determination? Explain ZO - ZZ and ZW - ZZ systems.
8) Explain the types of RNA and their functions.
9) What is Down's syndrome? Explain its features.
10) Describe the structure and functions of mitochondrion.

SECTION - C

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

11) Explain the structure and functions of Chloroplast.
12) Explain different phases of mitosis. Add a note on its significance.
13) Describe in detail ultra structure of plant cell. Add a note on the functions of vacuole.

[P.T.O.

14) Illustrate supplementary gene interaction in poultry fowls.

15) a) A man belonging to blood group 'A' marries a woman belonging to blood group 'AB'. What will be the blood groups of their probable children?

b) Explain cytoplasmic inheritance in Paramecium.

SECTION - D

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

16) What is cell senescence?

17) Who discovered ribosome?

18) What are base analogues?

19) What is karyokinesis?

20) Where do balbiani rings occur?

21) Name a physical mutagen

22) What are allosomes?

23) Give an example for female heterogamety.

24) Who proposed nucleosome model of chromosome?

25) Give Dihybridcross F_2 ratio.