



DCBT – 101

**First Semester B.Sc. Examination, February/March 2023
(NEP Scheme)
BIOTECHNOLOGY
Paper – I : Cell Biology and Genetics**

Time : 2½ Hours

Max. Marks : 60

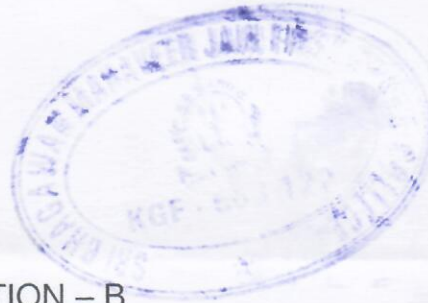
Instruction : Draw *neat* labelled diagram *wherever* necessary.

SECTION – A

I. Write short answers on the following :

(5×2=10)

- 1) Passive transport
- 2) Cell senescence
- 3) Crossing over
- 4) Codominance
- 5) ZO-ZZ.



SECTION – B

II. Answer **any four** of the following :

(4×5=20)

- 6) Describe the structure and function of Intermediate filament.
- 7) Give an account on Salivary gland chromosome.
- 8) Explain the structure and function of cell wall.
- 9) What is maternal inheritance ? Explain Kappa particles in paramecium.
- 10) Define allosome. Briefly explain the cause and features of Turner's Syndrome.

SECTION – C

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

(3×10=30)

- 11) Describe the structure and function of Mitochondria.
 - 12) Explain the ultrastructure of chromosome. Add a note on Karyotype.
 - 13) Define Cell Cycle. Explain the phases of cell division.
 - 14) What are complementary gene ? Explain the flower colour in sweet peas.
 - 15) What are the types of mutation ? Explain the mutation at the molecular level.
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