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**SIS - 074 B-16**

**B.Sc. Ist Semester Degree Examination**

**Biotechnology (opt)**

**(Cell Biology and Genetics)**

**Paper -1.5**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates :***

- 1) Answer all the questions.
- 2) Draw diagram wherever necessary.

**I. Answer all the following in one word or Sentence each.**

**(15×1=15)**

- 1) Linkage
- 2) Centromere
- 3) Cytosol
- 4) Genotype
- 5) Nucleosome
- 6) Heterochromatin
- 7) Epistasis
- 8) Trisomy
- 9) Homozygous
- 10) Law of segregation
- 11) Centrioles
- 12) Protobiont
- 13) Hexaploidy

14) Cell Senescence.

15) Telomere.

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

**(5×5=25)**

16) Structure of Skeletal muscle.

17) Ultrastructure of Plasma membrane.

18) Chromosomal map.

19) Amoeboid locomotion of cell.

20) Gene interference.

21) Specialized transduction

22) Down's syndrome causes and symptoms.

**III. Answer any FOUR of the following.**

**(4×10=40)**

23) Describe the Structure of mitochondria and add its functions.

24) Explain the mechanism of differentiation of plant cells.

25) Explain Complementary gene interactions in sweet pea.

26) Explain the evolution of Wheat by Polyploidy.

27) What is Sex determination ? Explain sex determination in animals.

28) State Law of Independent assortment in garden pea plant.

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