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SIS-074 B-17
B.Sc. Ist Semester Degree Examination
Bio-Technology (Optional)
(Cell Biology & Genetics)
Paper : 1.5

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates :

- 1) *Answer all the questions*
- 2) *Draw diagrams wherever necessary*

I. Answer the following in one word or one sentence each :

(15×1=15)

- 1) Cell theory
- 2) Back cross
- 3) Genome
- 4) Protobiont
- 5) Amino acid pool
- 6) Interference
- 7) Peroxisomes
- 8) G1 phase
- 9) Bacteriophage
- 10) 70s ribosome
- 11) Spontaneous mutation
- 12) Cilia
- 13) Stem cell
- 14) Inversion
- 15) Hfr strain

II. Answer any Five of the following

(5×5=25)

- 16) Differentiate between plant and animal cell.
- 17) Describe epistasis with an example.
- 18) Write the criss - cross inheritance with reference to Haemophilia.
- 19) Describe the fluid mosaic model of cell membrane.
- 20) ZZ - ZW type of sex determination.
- 21) Describe the structure of the polytene chromosome.
- 22) Describe the cell cycle.

III. Answer any Four of the following :

(4×10=40)

- 23) Define mitosis, explain the different stages involved in mitosis.
- 24) Explain complete linkage with an example.
- 25) Explain the law of independent assortment.
- 26) Write on different types of cell locomotion.
- 27) Describe the characteristics of Down's syndrome.
- 28) Give an account on various types of induced mutation.

