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24-BC-24

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION
JUNE - JULY 2024**

BIOCHEMISTRY

Paper - IV

[Genetics]

[Max. Marks : 75]

[Time : 3:00 Hrs.]

[Min. Marks : 26]

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Explain Mendel's law of segregation and independent assortment with examples. (15 Marks)

OR

Write notes on -

i) Incomplete dominance and co-dominance. (7½ Marks)

ii) Crossing over. (7½ Marks)

Q. 2 Explain analysis of ordered and unordered tetrads in fungi. (15 Marks)

OR

Write notes on -

i) Three factor genetic crosses. (10 Marks)

ii) Interference. (05 Marks)

Q. 3 Explain process of somatic cell hybridization in animals. (15 Marks)

OR

Write note on -

i) Complementation test (10 Marks)

ii) Recombination in bacteriophage. (05 Marks)

Q. 4 Describe various methods of horizontal gene transfer in microbes. (15 Marks)

OR

P.T.O.

Give a brief account of Transposable Elements.

(15 Marks)

Q. 5 What do you mean by Mutation. Explain molecular basis of Mutation.

(15 Marks)

OR

Write notes on -

i) Mutagenicity testing.

(05 Marks)

ii) DNA repair Mechanisms.

(10 Marks)

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