

M.Sc. 2nd Semester Examination, 2025

MICROBIOLOGY

(Fundamental Genetics)

PAPER – MCB-203

Full Marks : 25

Time : 1 hour

Answer all questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP – A

Answer any two questions from the following :

2 × 2

- 1. What is law of independent assortment as per Mendel's law ?**

(Turn Over)

2. What is competence ?
3. Mention the significance of horizontal gene transfer.
4. What is C-value paradox ?

GROUP – B

Answer any two questions from the following :

4 × 2

5. ABO blood groups are example of complete dominance, co-dominance and multiple allelism-explain.
6. Explain Sex linked and autosome linked gene characters with example.
7. What is dosage compensation ? In which strategies it can be achieved among different lives on earth ?
1 + 3
8. Differentiate generalized and specialized transduction with suitable diagram.

GROUP - C

Answer any one question from the following :

8 × 1

9. Write note on :

4 + 4

(i) Recombination and its importance

(ii) Polygenic trait with example.

10. What is Hfr ? Why it is so named ? With schematic diagram describe a Hfr and F⁻ conjugation process.

2 + 1 + 5

[Internal Assessment - 5 Marks]

