

NOVEMBER/DECEMBER 2018

**MAM31 — MICROBIAL GENETICS AND
MOLECULAR BIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 6 = 30 marks)

Answer ALL questions.

1. (a) Justify - DNA as the genetic material.

Or

- (b) Describe the isolation of mutants.

2. (a) Briefly describe the specialized transduction.

Or

- (b) Write a note on Hfr and F plasmid.

3. (a) Explain the properties of plasmid.

Or

- (b) Write an account on plasmid incompatibility.



4. (a) Describe the structure and mechanism of transposition in IS elements.

Or

- (b) Write short notes on retrótransposon.

5. (a) Give an account an concept of gene.

Or

- (b) List out tswhe events takes place in post translation regulation.

SECTION B — (3 × 15 = 45 marks)

Answer any THREE questions.

6. Define mutation. Explain the different types of mutation with suitable example.
7. Explain the method of examining DNA uptake by competent cells.
8. Discuss elaborately about structure of Ti plasmid.
9. Give a detailed account on properties, mechanism and regulation of transposition in TnS.
10. Write an essay on 'prokaryotic gene expression - lac operon is a model'.