

15062

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2015.

FIRST SEMESTER

Microbiology

Paper II – BACTERIOLOGY AND VIROLOGY

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

SECTION A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Pock assay.
2. Ultra structure of $\phi \times 174$.
3. Poly β -hydroxybuterate.
4. Interferon.
5. PPLO.
6. DI particles.
7. Endospore.
8. Atypical Mycobacteria.

SECTION B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Elaborate the detailed structure of Gram positive and Gram negative bacterial cell walls and compare with archaebacterial cell wall

Or

10. Write notes on the following

- (a) Structure and function of flagella with diagrammatic illustrations. (8)
- (b) Bacterial reserve food materials. (7)

11. Classify bacteria according to Bergey's Manual of Systemic Bacteriology.

Or

12. Write about the difference between oxygenic and anoxygenic photosynthesis.

13. Write about the classification of animal viruses (DNA and RNA) according to ICTV.

Or

14. Write notes on:

(a) Methods of cultivation and quantification of animal viruses (8)

(b) Properties, chemical composition and symmetry of viruses. (7)

15. Write in detailed about the lytic cycle of T₄ phage and compare it with lysogenic life cycle.

Or

16. Write notes on:

(a) Life cycle of TMV and its transmission management. (8)

(b) Anti viral chemotherapeutic agents for AIDS and HSV. (7)

