

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

M.D. DEGREE EXAMINATION - May 2019

MICROBIOLOGY

PAPER I : GENERAL MICROBIOLOGY, IMMUNOLOGY

Time: Three hours

Maximum: 100 marks

Answer ALL questions

SECTION - A

I. Essay: (1 x 20 = 20)

1. Enumerate methods of gene transfer in Bacteria. Add a note on conjugation and its application.

II. Write short notes on: (5 x 6 = 30)

2. Bacterial capsule
3. ETO sterilisation
4. Polymerase chain reaction
5. Anaerobic culture methods
6. Bacterial Toxins.

SECTION - B

I. Essay: (1 x 20 = 20)

7. Define and classify hypersensitivity. Write in detail about Type I hypersensitivity.

II. Write short notes on: (5 x 6 = 30)

8. T cell activation
9. Immunofloresence
10. Adjuvants
11. Biological effects of complement
12. Determinants of antigenicity.
