

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

M.D. DEGREE EXAMINATION - May 2019

MICROBIOLOGY

**PAPER IV – MYCOLOGY, APPLIED MICROBIOLOGY AND
RECENT ADVANCES**

Time: Three hours

Total Marks : 100

SECTION A

Write Essays on : (1 x 20 = 20)

1. Discuss automation in the clinical microbiology laboratory

Write short notes on (5 x 6 = 30)

2. Oncogenic viruses
3. Interferon and its uses
4. Cartridge based- nucleic acid amplification technology (CB- NAAT)
5. Antinuclear antibody test
6. Outer membrane protein

SECTION B

Write Essays on : (1 x 20 = 20)

7. Enumerate opportunistic fungal infections. Write in detail about candidiasis

Write short notes on (5 x 6 = 30)

8. *Sporothrix schenckii*
9. Lab diagnosis of dermatophyte infections
10. *Coccidioides immitis*
11. Ebola virus
12. Typhoid vaccines