

Exam Date & Time: 09-Mar-2022 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

**Microbial and Cellular Biology [PBT-MPB102T]**

**Marks: 75**

**Duration: 180 mins.**

### SECTION - A

**Answer all the questions.**

Answer the following (10 marks x 5 = 50 marks)

- 1) Explain the physical requirements of bacterial growth (5M) and classify culture media (3M). Explain any ONE technique for the isolation of pure culture (2M). (10)
- 2) Write a note on various types of microbe-host relationships (5M) and elaborate on the normal microbial flora of human body (5M). (10)
- 3) Discuss various portals of entry of microorganisms (5M). Elaborate on the epidemiology of infectious disease (5M). (10)
- 4) Write a note on antibacterial drugs that inhibit the biosynthesis of proteins. (10)
- 5) Write a note on
  - a) Spontaneous mutations and induced mutations (5 M) (10)
  - b) DNA Transposons (5M)

### SECTION - B

**Answer all the questions.**

Answer the following (5 marks x 5 = 25 marks)

- 6) Write a note on asexual spores of fungi (3M). Enlist various flagella arrangements in bacteria with one example for each type (2M). (5)
- 7) Write a note on bioremediation. (5)

- 8) Explain the role of multidrug resistance (MDR) pumps in biofilm resistance. (5)
- 9) Briefly explain the accidental discovery of antibiotic penicillin in the laboratory. (5)
- 10) Write a note on the mechanism of pre-mRNA splicing. (5)

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