THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(CUCSS)

Microbiology

MB 3E 02—DIAGNOSTIC MICROBIOLOGY

(Regular)

Time : Three Hours   Maximum : 36 weightage

Part A

Answer **all** *questions.*

Each question carries 1 *weightage .*

1. In blood culture systems dilution of blood in broth enhances pathogen detection. Why ?

2. What are the advantages of automated antimicrobial sensitivity test systems ?

3. What is the application of API 20E system ?

4. What is NASBA ?

5. Define Ribotyping.

6. What is Taq polymerase ?

7. What is DNA microarray ?

8. What are the applications of Ligase Chain Reaction in clinical microbiology ?

9. What are restriction enzymes ?

10. What are the common enzyms used in EIAs ?

11. Define MIC.

12. What is meant by antibiogram ?

13. What is MRSA ?

14. What is O-zone test ?

(14 × 1 = 14 weightage)

Part B

Write short notes on any **seven** *of the following.*

Each question carries 2 *weightage.*

15. Analyical Profile System.

16. Immune-PCR.

17. Pulsed field gel electrophoresis.

18. Southern blotting.

19. RFLP.

20. In-situ hybridization technique.

21. FRET technology.

22. Hybrid capture assay.

23. Advances in Mycobacterium tuberculosis culture.

24. Precipitation reactions.

<div align="right">(7 × 2 = 14 weightage)</div>

Part C

Write essays on any **two** *of the following.*
Each question carries 4 weightage.

25. Differentiate Bacteremia and Septicemia. Write a note on blood culture systems.

26. Write a note on probe based detection and identification of microorganisms.

27. Describe the principle, method and application of RT-PCR. Add a note on the applications of RT-PCR in diagnosis of infectious diseases.

28. Discuss the advanced techniques used for diagnosis of tuberculosis. Comment on the methods used for the antimicrobial susceptibility testing of Mycobacterium tuberculosis.

<div align="right">(2 × 4 = 8 weightage)</div>