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(Pages : 2)

Name...

Reg. No

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2016

(CUCSS)

Microbiology

MB 3E 02—DIAGNOSTIC MICROBIOLOGY

Time : Three Hours

Maximum : 36 Weightage

Section A

*Explain **all** the following questions in 2 **or** 3 sentences.
Each has a weightage of 1.*

1. Agglutination.
2. MIC.
3. Catalase test.
4. Various steps in PCR.
5. dNTP.
6. Horse radish peroxidase.
7. T_m.
8. Hybrid capture.
9. Restriction enzymes.
10. Real time PCR.
11. Probe.
12. AFLP.
13. E-test.
14. Molecular beacons.

(14 x 1 = 14 weightage)

Section B

*Write short notes on any seven.
Each has a weightage of 2.*

15. Describe ERIC sequence.
16. Explain MLST.

Turn over

17. Explain PFGE.
18. Explain FRET.
19. Describe applications of automated blood culture in diagnostic microbiology.
20. Describe transcription mediated amplification.
21. Explain importance of 16Sr RNA sequence based identification in clinical microbiology.
22. Describe probe amplification systems.
23. Compare conventional and commercial microbial identification systems based on biochemical tests.
24. Explain DNA sequencing.

(7 x 2 = 14 weightage)

Section C

*Answer any **two** of the following in detail.*

Each has a weightage of 4.

25. Explain microarray based microbial identification and characterisation.
26. Explain methods used for phenotypic testing of bacterial antimicrobial susceptibility.
27. Describe probe based microbial detection and identification.
28. Explain advanced methods used for the diagnosis of *Mycobacterium tuberculosis*.

(2 x 4 = 8 weightage)