



MA-200913

Seat No. _____

B. Sc. (Sem. V) Examination

March / April - 2012

Microbiology : Paper - MB - IV

(Analytical Techniques & Bioinformatics)

Time : 3 Hours]

[Total Marks : 75

- 1 (a) Give the answer in short : 1×5=5
- (i) Define : Good Laboratory practice.
 - (ii) What is Lambert's law ?
 - (iii) Give the function of Solenoid in NMR.
 - (iv) Who discover the X-Ray diffraction technique ?
 - (v) Give the example of two detectors used in Spectrophotometer.
- (b) What is Radioisotopes ? Explain various applications of radioisotope. 10

OR

- 1 Write short note on following : 3×5=15
- (i) Monochromator
 - (ii) Application of IR and NMR
 - (iii) Bragg equation.
- 2 (a) Give the answer in short : 1×5=5
- (i) What is Distribution coefficient ?
 - (ii) What is FPLC ?
 - (iii) Give the function of Metrics in Chromatography technique.
 - (iv) Write the name of Tracking dye used in SDS PAGE
 - (v) Write the full name of TEMED.
- (b) Discuss in detail HPLC. 10

OR

- 2 Write short note on following : 3×5=15
- (i) Principle of Ion exchange chromatography
 - (ii) Agarose gel
 - (iii) Pulsed-field gel electrophoresis.
- 3 (a) Give the answer in short : 1×5=5
- (i) What is FISH ?
 - (ii) Write the use of Nitrocellulose paper in blotting technique.

- (iii) Who discover PCR technique ?
 - (iv) What is the function of Glucose Biosensor ?
 - (v) Explain SNP.
- (b) Discuss Principle and Application of PCR. 10

OR

- 3 Write short note on following : 3×5=15
- (i) Maxam Gilbert method
 - (ii) Gene machine
 - (iii) RFLP.

- 4 (a) Give the answer in short : 1×5=5
- (i) What is WWW ?
 - (ii) Give any two example of Web browser.
 - (iii) Explain OMIM
 - (iv) What is IP Address ?
 - (v) Give two example of Primary nucleic acid data base.
- (b) Write an assay on File formats. 10

OR

- 4 Write short note on following : 3×5=15
- (i) NCBI
 - (ii) SWISS-PORT
 - (iii) Organism specific database.

- 5 (a) Give the answer in short. 1×5=5
- (i) What is BLAST ?
 - (ii) Write the use of SRS.
 - (iii) What is Clustal package ?
 - (iv) Define Phylogram.
 - (v) What is a p value ?
- (b) How to build up Phylogenetic Tree ? 10

OR

- 5 Write short note on following : 3×5=15
- (i) Chemical structure database
 - (ii) Principles of drug development
 - (iii) Multiple sequence alignment.



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