



AH-648

Seat No. _____

B. Sc. (Sem. VI) Examination

March - 2019

Biotechnology : Paper - CC-I-14

(Analytical Techniques in Biotechnology)

Time : 3 Hours]

[Total Marks : 70

1 Answer the following : (All Ten) **10**

(1) Which technique is used for detection of molecular mass ?

- (A) Chromatography
- (B) Electrophoresis
- (C) Mass spectroscopy
- (D) Ion exchange chromatography

(2) Records are created as per GLP.

- (A) By planning protocols and SOPs.
- (B) By doing documents.
- (C) By Checking documents.
- (D) All of the above.

(3) Biosensors contain.

- (A) Immobilized enzymes.
- (B) Metal sensing devices.
- (C) Mobilized enzymes.
- (D) A bar code sensing device.

(4) Which of the following is Protein database ?

- (A) DDBJ
- (B) SWISS PORT
- (C) Both (A) & (B)
- (D) None.

(5) BLAST program is applied for :

- (A) Bioinformatics
- (B) DNA barcoding
- (C) Amino acid sequencing.
- (D) DNA sequencing

- (6) Funding for the Human Genome Project comes from :
- (A) NIH.
 - (B) DOE.
 - (C) NIH and the DOE.
 - (D) NIH, the DOE and ELSI.
- (7) Which of the following is an example of reagents used in enzyme entrapment method :
- (A) Calcium alginate
 - (B) Porous glass
 - (C) Cotton fiber
 - (D) DEAE cellulose.
- (8) Which piece of laboratory equipment can be used to store chemicals for long periods of time ?
- (A) Burette
 - (B) Beaker
 - (C) More than one of the above
 - (D) None.
- (9) The correct order for the basic features of a mass spectrometer is
- (A) acceleration, ionisation, deflection, detection.
 - (B) acceleration, deflection, ionisation, detection.
 - (C) acceleration, deflection, detection, ionisation.
 - (D) ionisation, acceleration, deflection, detection.
- (10) Full form of HCP.
- (A) HUMAN CYTOME PROJECT.
 - (B) HUMAN CANCER PROJECT..
 - (C) HUMAN BRAIN PROJECT.
 - (D) HUMAN PROTEOME PROJECT.

2 Answer the followings : (any five) 10

- (1) Immobilized enzyme.
- (2) Draw the components of confocal laser microscopy.
- (3) Define Bioinformatics.
- (4) Give any four example of biological test in analysis of finished product.
- (5) Give full name of MALDI.
- (6) What is NCBI and give its one advantage.
- (7) Any two advantages of electron microscopy.

3 Answer the followings : (any five) 30

- (1) Write short note on GLP.
- (2) Explain Human Genome project.
- (3) Scanning Electron Microscopy.
- (4) Biological software-Rasmol.
- (5) Mass spectroscopy.
- (6) Write note on protein database.
- (7) Explain any two method of immobilization.

4 Answer the followings : 20

- (1) Explain in detail about Transmission Electron Microscopy.
- (2) Good Manufacturing practices in detail.
- (3) Describe Biosensor and its applications.
- (4) Fluorescence microscopy.