



PP-468

Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) Examination**

April / May - 2016

**Biotechnology : Paper - CC-I-14**

*(Analytical Techniques in Biotechnology)*

Time : 3 Hours]

[Total Marks : 70

1 Answer the following : (all **ten**) 10

- (1) If the ocular of a microscope is 10 X and the objective is set at 100 X, then what is the total magnification of the microscope?
  - (a) 10 X
  - (b) 43 X
  - (c) 100 X
  - (d) 1000 X
- (2) Which one of the following achievements is Anton Von Leeuwenhoek famous for?
  - (a) He was a famous Dutch explorer.
  - (b) He captained the Dutch winning soccer team in the 1704 World Cup.
  - (c) He discovered the microscope
  - (d) He was one of the first to see and describe single-celled organisms under the microscope
- (3) The correct order for the basic features of a mass spectrometer is...
  - (a) acceleration, deflection, detection, ionisation
  - (b) ionisation, acceleration, deflection, detection
  - (c) acceleration, ionisation, deflection, detection
  - (d) acceleration, deflection, ionisation, detection

- (4) Which of the following is nucleotide database?  
(a) EMBL (b) SWISS PORT  
(c) PROSITE (d) TREMBL
- (5) BLAST programmer is used in  
(a) DNA sequencing  
(b) Amino acid sequencing  
(c) DNA barcoding  
(d) Bioinformatics
- (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) Biosensors contains  
(a) immobilized enzymes  
(b) metal sensing devices  
(c) mobilized enzymes  
(d) a bar code sensing device
- (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) What is NCBI?
  - (2) Give full name of MALDI
  - (3) Define Bioinformatics.
  - (4) Give any four example of biological test in analysis of finished product.
  - (5) Draw the components of confocal laser microscopy.
  - (6) Define immobilized enzyme.
  - (7) Any two disadvantages of electron microscopy.
- 3 Answer the followings : (any **five**) 30
- (1) Short note on GMP
  - (2) Human Genome project
  - (3) Explain any two method of immobilization
  - (4) Biological software Rasmol
  - (5) Draw the labeled diagram of Mass spectroscopy
  - (6) Write note on protein database
  - (7) SEM
- 4 Answer the followings : (any **five**) 20
- (1) Describe Biosensor in detail
  - (2) Good Laboratory practices in detail
  - (3) Explin in detail about Transmission Electron Microscopy
  - (4) Atomic force microscopy.
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