



DII-003-013405

Seat No. _____

M. Sc. (Sem. IV) (CBCS) (Biotechnology)

Examination

May / June - 2015

BT-423 : Pharmaceutical Biotechnology (ELE)

Faculty Code : 003

Subject Code : 013405

Time : 3 Hours]

[Total Marks : 70

1. Multiple Choice question -Attempt any Seven out of ten [7x2]

i. Molecular markers are used to construct

- a. Chromosome Maps
- b. Cytogenic map
- c. Physical Map
- d. All of Above

ii. Protein-coding genes can be identified by

- a. Transposon tagging
- b. ORF scanning
- c. Zoo-blotting
- d. Nuclease S1 mapping

iii. The function of genes can be determined by

- a. Gene inactivation
- b. Exon trapping
- c. Zoo-blotting
- d. Northern analysis

iv. Microarrays

- a. Are used for analysis of transcriptomes
- b. Are made of glass
- c. Contain RNA sequences
- d. Are smaller than DNA chips

v. Expression of genes can be analyzed by

- a. Northern analysis
- b. Southern analysis
- c. Comparative genomics
- d. RNA interference

vi. Viral Nucleic Acid can be detected by

- a. ELISA
- b. Western Blotting
- c. PCR
- d. Viral Isolation

vii. Which Structural Component of HIV is required for cell- cell fusion?

- a. p 24
- b. gp 41
- c. gp 120
- d. p32

viii. The process of introduction of weakened pathogen into human body is called

- a. Immunization
- b. Vaccination
- c. Attenuation
- d. None of these

- ix.. Which of the following is combined vaccine
- a. Hepatitis B vaccine
 - b. Hib vaccine
 - c. Var vaccine
 - d. DPT vaccine
- x. The first recombinant antigen vaccine approved for human use is
- a. Hepatitis B vaccine
 - b. Hib vaccine
 - c. Var vaccine
 - d. DPT vaccine

2. **Attempt any two out of three –** [7x2]
- a. Write a brief note on techniques involved in functional genomics.
 - b. Explain Drug Metabolizing Enzymes (DMEs) with its importance & Types
 - c. Explain briefly different types of vaccines with example.

3. **Attempt the following (All Compulsory)** [5,5,4]
- a. What is the difference between bacteriostats, sanitizers, disinfectants and sterilizers?
 - b. What is an antibacterial and how are antibacterials classified?
 - c. What is HIV & What happens after infection with HIV?

OR

3. **Attempt the following (All Compulsory)** [7x2]
- a. Explain modern approaches of vaccination?
 - b. Write an account on genome variations among the HIV strains?

4. **Attempt any two out of three –** [7x2]
- a. Explain Molecular Diagnostic with its Applications.
 - b. What is Microarray ? Explain Protein Microarray & its applications.
 - c. Describe HIV Life Cycle

5. **Attempt any two out of Four –** [7x2]
- a. Mention Key aspects for drug designing targets
 - b. Explain c DNA & Oligo Microarray
 - c. Explain 2D Gel Electrophoresis with its Applications
 - d. Explain Physical Mapping and Linkage analysis