

B.Pharm. CBCS Pattern Semester-VI
BP605T - Pharmaceutical Biotechnology

P. Pages : 3

Time : Three Hours



GUG/W/23/14141

Max. Marks : 75

- Notes :
1. Illustrate your answers wherever necessary with the help of neat sketches.
 2. All questions are compulsory.

1. Multiple Choice Questions (Answer all questions)

**10x1
=20**

- 1) Humulin, a genetically engineered insulin was produced for the first time by-----
a) Biocon India Ltd. b) Glaxo
c) Eli-lilly and Company d) Cipla
- 2) Adsorption of cell or enzyme on supporting medium is due to-
a) Electrostatic force b) Hydrophobic interaction
c) Bonding to specific ligand d) All of these
- 3) The first developed biosensor was used for the detection of.
a) Hydrogen b) Oxygen
c) Ammonia d) Carbon-dioxide
- 4) An element that converts one form of energy into another measurable signal is called as-
a) Transducer b) Bioreceptor
c) Electronics d) Amplifier
- 5) The first β -lactamase enzyme produced from-
a) B. Subtilis b) S. Aureus
c) S. Pyrogenesd d) E. Coli
- 6) The role of amylase in paper industry is-
a) To reduce the viscosity of starch by partial hydrolysis.
b) To increase the viscosity of starch.
c) As a desizing agent.
d) None of the above
- 7) Vector that can propagate in two different host species is called as-
a) λ phage b) Shuttle
c) Plasmid d) Cosmid
- 8) The predominant hypersensitivity reaction involving IgE is
a) Type I b) Type II
c) Type III d) Type IV
- 9) Yellow fever virus can be attenuated by serial passage on cultures of
a) Embryonated eggs b) Tissues
c) Chick embryo tissue d) Pig embryo tissue

- 10) The chemical used for conversion of toxin into toxoid is
 - a) Ethanol
 - b) Chloroform
 - c) Formaldehyde
 - d) Hydrochloric acid
- 11) In hybridoma technology, hybrid cells are selected in-----
 - a) MS medium
 - b) HAT medium
 - c) X-gal medium
 - d) Whites medium
- 12) Recombivax is a -----
 - a) Recombinant Hepatitis A Vaccine
 - b) Recombinant Hepatitis B Vaccine
 - c) Recombinant Hepatitis C Vaccine
 - d) Recombinant Hepatitis D Vaccine
- 13) The scientists who won the Nobel prize for physiology for their discovery of Restriction Endonucleases are-
 - a) Jacob & Monad
 - b) Smith, Nathans & Arber
 - c) Watson & Crick
 - d) Alec Jaffreys & Milstein
- 14) All the polymerases are thermostable polymerases except-
 - a) Taq polymerase
 - b) Vent polymerase
 - c) E.Coli DNA polymerase III
 - d) Pfu polymerase
- 15) Applications of southern blotting includes-
 - a) DNA finger printing
 - b) Preparations of RELP maps
 - c) Identification of transferred genes
 - d) All of these
- 16) Which of the following molecule(s) can be detected by ELISA.
 - a) Protein
 - b) Hormones
 - c) Antibodies
 - d) All of the above
- 17) The transfer of genes from one cell to another through bacteriophage is known as-
 - a) Recombination
 - b) Conjugation
 - c) Transduction
 - d) Transformation
- 18) The first engineered plasmid vector is-
 - a) pBR 322
 - b) pUC vector
 - c) pSC 101
 - d) pUC 19
- 19) In which fermentation Vit B12 is obtained as by product?
 - a) Penicillin
 - b) Streptomycin
 - c) Griseofulvin
 - d) Tetracycline
- 20) The shelf life of dried human plasma is
 - a) 1 year
 - b) 2 year
 - c) 15 days
 - d) 5 years

- 2. Solve any two.** **2x10**
=20
- 1) Define fermentation. Give construction & working of typical Bioreactor.
 - 2) Define & Classify Hypersensitivity reaction. Explain Type I reaction in detail.
 - 3) Explain the production of Monoclonal antibodies by hybridoma technology.

- 3. Solve any seven.** **7x5**
=35
- 1) Explain the method of covalent bonding in immobilization.
 - 2) Explain the various components used in biosensor.
 - 3) Briefly discuss the steps involved in PCR.
 - 4) Describe the method of preparation of bacterial vaccine.
 - 5) Describe Frameshift mutation.
 - 6) Classify vector. Add a note on artificial vector.
 - 7) Give account on anticoagulant used in preparation of blood components.
 - 8) Explain method of preparation of insulin by rDNA technology.
 - 9) What do you mean by biotechnology? How it is used in environmental monitoring?
