B.Pharm. (CBCS Pattern) Semester-VI

BP605T - Pharmaceutical Biotechnology

P. Pages : 3 **GUG/S/25/14141**

Time : Three Hours * 2 4 3 3 * Max. Marks : 75

Notes : 1. All questions are compulsory.
2. All questions carry equal marks.
3. Diagrams and Chemical equation should be given wherever necessary.
4. Illustrate your answers wherever necessary with the help of neat sketches.

1. A) Multiple choice questions. **1x20 =20**

1) The enzyme not used in genetic engineering.
   a) Ligase b) Polymerase
   c) Phosphatase d) Lipase

2) --------- is the method of covalent bonding.
   a) Adsorption b) Diazotation
   c) Phase separation d) Polymerization

3) ---------- biosensors are based on the principle of sound vibrations.
   a) Piezoelectric b) Optical
   c) Calorimetric d) Potentiometric

4) Site directed mutagenesis can be achieved by --------
   a) RAS b) LCR
   c) PCR d) RT-PCR

5) Which one of the following is restriction endonuclease?
   a) Tag Pol b) Bam HI
   c) Eac HII d) Sta PII

6) An enzyme that cleaves DNA at specific site is called -------
   a) Trypsin b) Restrictive ribonuclease
   c) Restriction endonuclease d) All of the above

7) The PBR322 is the first artificial vector developed from----------.
   a) B. Subtilis b) S. Cerevisiae
   c) E. coli d) Hepatitis B. Virus

8) Insulin is made up of -------- amino acids.
   a) 119 b) 51
   c) 86 d) 35

9) A technique used for amplifying RNA in-vitro is known as-------.
   a) Western blotting b) Transcription
   c) ELISA d) RT-PCR

10) β – lymphocytes are processed in ---------.
   a) Bone marrow b) Liver
   c) Lung d) Brain

11) Heavy chains in immunoglobulin are composed of -------- amino acid residues.
a) 50000 b) 20,000
c) 446 d) 214

12) The immunoglobulin most of ten associated with immediate type (Type-I) allergic reaction ---------.
a) IgA b) IgE
c) IgM d) IgD

13) Killed bacterial vaccine is --------.
a) MMR b) Small pox
c) Rabies d) Pertusis

14) ---------- medium is use for selection of hybrid cells in production of monoclonal antibody.
a) PEG b) HGPRT
c) FTM d) HAT

15) Western blotting method is used for identification of ---------.
a) DNA b) RNA
c) Protein d) DNA & RNA

16) The protein associated with DNA is----------.
a) Glycoprotein b) Histone
c) Lipoprotein d) None

17) The highest rate of conjugation and recombination is associated with the ------- plasmid.
a) F b) R
c) C d) M

18) Steroidal transformation mainly occurs at --------- phase.
a) Growth b) Transformation
c) Death d) None

19) The size of inoculum is normally --------% added into a production tank.
a) 0.1-1 b) 1-10
c) 10-20 d) 20-30

20) --------- is used in industrial production of glutamic acid.
a) Pseudomonas b) Corynebacterium
c) Mycobacterium d) Bacillus

2. Long answer question solve **any two**. **2x10 =20**

a) Explain different types of Hypersensitivity reaction.

b) Give an detail account on cloning vectors.

c) Describe methods of enzyme immobilization.

3. Short answer questions solve **any seven**. **7x5 =35**

a) Write a short note on dried human plasma.

b) Write in short method of production of glutamic acid.

c) Write a note on submerged fermenter.

d) Write a note on mutation.

e) Give note on southern blotting.

f) Write method of production of monoclonal antibody.

g) Write general method of preparation of vaccine.

h) Explain structure of Immunoglobulins.

i) Give in detail polymerase chain reaction.

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