

- 11) ----- Medium is used for selection of hybrid cells in production of monoclonal antibody.
 - a) PEG
 - b) HGPRT
 - c) FTM
 - d) HAT
- 12) Western blotting method is used for identification of -----
 - a) DNA
 - b) RNA
 - c) Protein
 - d) DNA & RNA
- 13) The structure of typical eukaryotic genome describes as -----
 - a) Singular
 - b) Linear
 - c) Diploid
 - d) Double stranded
- 14) The transfer of foreign gene in to another cell is done by the following method -----
 - a) Transduction
 - b) Microinjection
 - c) Transformation
 - d) All of the above
- 15) Steroidal transformation mainly occurs at ----- phase.
 - a) Growth
 - b) Transformation
 - c) Death
 - d) None of the above
- 16) The size of the inoculum is normally ----- % added into production tank.
 - a) 0.1 – 1
 - b) 1 – 10
 - c) 10 – 20
 - d) 20 – 30
- 17) Raw material mainly used for commercial production of penicillin
 - a) Peptone
 - b) Corn steep liquor
 - c) Soya meal
 - d) Glucose
- 18) Whole Human blood contains not less than -----% w/v of Hemoglobin.
 - a) 2.7
 - b) 5.7
 - c) 7.7
 - d) 9.7
- 19) B-lymphocytes are processed in -----
 - a) Bone marrow
 - b) Liver
 - c) Lung
 - d) Brain
- 20) Killed bacterial vaccine is -----
 - a) MMR
 - b) Small Pox
 - c) Rabies
 - d) Pertussis

2. Long Answer questions solve **any two**.

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- 1) Explain different type of Hypersensitivity reaction with suitable example.
- 2) Define and classify Immunological products and describe general method of preparation of vaccine.
- 3) List different type of fermenters. Explain surface fermenters.

3. Short answer questions solve any seven.

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- 1) Enlist blood product and explain Dried Human plasma.
- 2) Write note on production of enzymes.
- 3) Enlist types of biosensors, explain any one.
- 4) Give detail about plasmid vector.
- 5) Write short note on polymerase chain reaction.
- 6) Differentiate MHC class- I and MHC class – II.
- 7) Give note on monoclonal antibody.
- 8) Give detail about ELISA.
- 9) Write a note on mutation.
