

**B.Sc. BIOTECHNOLOGY
THIRD SEMESTER (REPEAT)
MOLECULAR DIAGNOSTICS
BBT-304
[USE OMR SHEET FOR OBJECTIVE PART]**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. Technique of detecting the activity by using radioisotope is.....
 - a. ELISA
 - b. PCR
 - c. RIA
 - d. RAPD
2. The antibodies mainly used for diagnosis is.....
 - a. Monoclonal
 - b. Polyclonal
 - c. Decamer
 - d. All are correct
3. AIDS can be detected by.....
 - a. Microarray
 - b. Microscopy
 - c. ELISA
 - d. Microdilution
4. The substrate for HRP is used?
 - a. Calcium peroxide
 - b. Magnesium peroxide
 - c. Hydrogen peroxide
 - d. Iron peroxide
5. PCR is.....technique.
 - a. In vitro
 - b. In vivo
 - c. Mixture of both
 - d. Primer independent technique
6. RAPD needs.....
 - a. Taq polymerase
 - b. Probe
 - c. Radioactivity
 - d. Radioisotope
7. Micro dilution can be used for determining.....
 - a. MIC
 - b. Type I
 - c. Type III
 - d. All are equally used
8. The most authentic marker is.....
 - a. Morphological
 - b. Biochemical
 - c. Cytological
 - d. Genetic
9. SNP is detection of.....change.
 - a. DNA
 - b. Nucleotides
 - c. RNA
 - d. Nucleotide
10. AFLP is the combination of.....
 - a. PCR and RAPD
 - b. RFLP and RAPD
 - c. RE and RFLP
 - d. PCR and Primer

11. RIA stands for.....
 - a. Radio immuno assay
 - b. Restriction immuno assay
 - c. Repair immuno assay
 - d. Recombination immuno assay
12. Theantigen is most effective.
 - a. Carbohydrate
 - b. DNA and RNA
 - c. Lipid
 - d. Protein
13. Idiotypes are the alternative forms of.....
 - a. Antibody
 - b. Monoclonal bodies
 - c. Antigen
 - d. Polyclonal bodies
14. The correct statement for antibody is.....
 - a. 2 H and 1L chains
 - b. 1 H and 2L chains
 - c. 1 H and 1L chains
 - d. 2 H and 2L chains
15. For visualization in blotting.....can be used.
 - a. Autoradiography
 - b. X-Ray
 - c. Both are correct
 - d. Optional
16. Cell sorting can be done by.....
 - a. Flow cytometer
 - b. Microscopy
 - c. HPLC
 - d. All are correct
17. The sample injected in HPLC in the form of.....
 - a. Liquid
 - b. Solid
 - c. Gas
 - d. Any form
18. Fluidics is the part of.....
 - a. Microscopy
 - b. Flow cytometer
 - c. HPLC
 - d. None
19. Choose the correct option.
 - a. Staining is used in PCR
 - b. Staining is used in RFPL
 - c. Staining is used in RAPD
 - d. Staining is used in microscopy
20. In, PCR two different size DNAs can be amplified.
 - a. Nested
 - b. Asymmetric
 - c. Anchored
 - d. Real time

-- --- --

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

- | | |
|--|--------|
| 1. What is PCR? Explain the reactions of PCR. | 2+8=10 |
| 2. What is ELISA? Give an account on different types of ELISA. | 3+7=10 |
| 3. a) What do understand by chromatography? | 3 |
| b) Write short notes on flow cytometer. | 7 |
| 4. a) What do you understand by idiotype? | 2 |
| b) Write a note on antibody structure and function. | 8 |
| 5. Explain the process of micro dilution and its significance. | 10 |
| 6. What is microbial susceptibility test? Write about disc diffusion method. | 2+8=10 |
| 7. Differentiate RAPD and RFLP with suitable diagram. | 10 |
| 8. Write a note on RIA and its procedure. | 10 |

== *** ==