

**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. The .....antigen 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     |

== \*\*\* ==