

Total No. of Printed Pages: 3

SUBJECT CODE NO:- 2258
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-V)
Examination March/April-2022 (To Be Held In June/July-2022)
Bio-Technology Paper- XVI
(Recombinant DNA Technology)

[Time: 1:53 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B.

- i) Attempt all Questions.
- ii) Draw a diagram Wherever Necessary.

Q.1 Explain the techniques of introducing DNA into cell. 20

OR

Define the term Vector. Enlist and Describe vectors used in Eukaryotic cell. 20

Q.2 What is blotting? Describe the principle and application of southern blotting. 20

OR

Write note on : (any Four) 20

- a) Artificial chromosome
- b) Restriction endonuclease
- c) Phage vectors
- d) Transgenic Animals
- e) Protein engineering
- f) Cloning from genomic DNA.

Q.3 Multiple Choice Questions. 10

1. What is probe?
 - a) Labelled nucleotide
 - b) Unlabelled nucleoside
 - c) Both a and b
 - d) None of these.
2. Southern blotting is used to detect
 - a) DNA
 - b) RNA
 - c) Protein
 - d) All of these.

3. Which of the following is not involved in PCR.
 - a) Primer extension
 - b) Denaturation
 - c) Annealing
 - d) Renaturation

4. BAC Which can be used to clone large DNA fragment is derived from
 - a) Col E plasmid
 - b) Mu phage
 - c) F plasmid
 - d) 2u plasmid.

5. PBR322 Which is frighently used as a vector for cloning gene in E.coli is
 - a) an original bacterial plasmid
 - b) a modified bacterial plasmid
 - c) a viral genome
 - d) a transposon.

6. What is approximate length of DNA between two cos sites that can be packed by a lambda paking extract?
 - a) 10 Kb
 - b) 15 Kb
 - c) 25 Kb
 - d) 45 Kb

7. A plant genetic engineer wishes to transfer and express a gene from Sunflower into beans which of the following would be the vector of choice.
 - a) Lambda phage
 - b) PBR 322
 - c) Ti plasmid
 - d) All of these

8. Which of the following enzyme involved in removal of Phosphate group.
 - a) Polymerase
 - b) Nuclease
 - c) Phosphatase
 - d) None of these.

9. Calcium chloride is used in _____ technique.
 - a) Blotting
 - b) Transformation
 - c) Hybridization
 - d) Restriction mapping.

10. Which of the following technique is used to detect DNA protein interaction

- a) Primer extension
- b) Transformation
- c) Foot printing
- d) Electroporation.