Total No. of Printed Pages: 3

SUBJECT CODE NO:- B-2045
FACULTY OF SCIENCE & TECHNOLOGY
B.Sc. T. Y. (Sem-V)
Examination November/December- 2022
Elective Paper
Botany Paper- XVI
Bio-Technology

[Time: 1:30 Hours]   [Max.Marks:50]

"Please check whether you have got the right question paper."

N.B.   i)   Attempt all questions.
                              ii)   Draw neat and well labelled diagram wherever necessary.

Q.1   Describe structure and replication of DNA.   20

OR

Explain southern and northern blotting technique in recombinant DNA technology.

Q.2   Explain Biotechnology in India and add a note on scope & multidisciplinary nature of   20
         Biotechnology.

OR

Write Short notes on (any four)

a) Vectors
b) Gene mapping
c) Isolation of protoplast
d) Human genome project
e) DBT
f) Application of tissue culture

Q.3   <u>Multiple choice questions</u>.   10

1) Pentose sugar in nucleic acid was discovered by _____.
   a) Jacob
   b) Harison
   c) Levene
   d) Mendel

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2) DNA replication in prokaryotes is _____.
   a) Discontinuous
   b) Continuous
   c) Semicontinuous
   d) Conservative

3) A good vector has at least _____ marker gene.
   a) Two
   b) Three
   c) Four
   d) Five

4) Polymerase chain reaction is concerned with _____.
   a) DNA replication
   b) DNA repairing
   c) DNA proof reading
   d) DNA amplification

5) Which one of the following is known as opal _____.
   a) UGA
   b) GUG
   c) UAA
   d) UAG

6) Z-DNA is _____ bases per turn.
   a) 10
   b) 12
   c) 14
   d) 20

7) In tissue culture, which of the following shows _____ totipotency.
   a) Sieve tube
   b) Collenchyma
   c) Meristem
   d) Xylem vessels

8) Genomics is _____.
   a) Study of chromosome
   b) Study of protein
   c) Study of gene & genome
   d) Study of body cell

9) Electrophoresis is used to match gene with its function _____.
   a) Clone genes
   b) Cut DNA into fragment
   c) Separate fragments of DNA
   d) None of these

10) The first mammal clone 'Dolly was created by _____.
   a) Ian Wilmut
   b) Thomus
   c) Morgan
   d) Hof meister