PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(Third Semester)

Branch – ZOOLOGY

APPLIED BIOTECHNOLOGY

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   RFLP is a _____
     (i)   Molecular scissor   (ii) PCR technique
     (iii) Method of producing GMOs (iv) Molecular marker

2   A vector that can clone only a small DNA fragment is
     (i)   Cosmid   (ii) Plasmid
     (iii) YAC   (iv) BAC

3   What kind of disease can be cured with the help of gene therapy?
     (i)   Hereditary   (ii) Infectious
     (iii) Physiological   (iv) Acute

4   Fermentation occurs in the
     (i)   presence of oxygen   (ii) presence of nitrogen
     (iii) absence of oxygen   (iv) presence of carbon

5   Bioaugmentation involves
     (i)   eliminating sludge
     (ii) plants usage for bioremediation
     (iii) addition of microbes to a cleanup site
     (iv) bioventing

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6 a Organize the basic steps involved in genomic library.
                        OR
   b Explain molecular finger printing.

7 a Differentiate the YAC and BAC.
                        OR
   b Comment on PBR322.

8 a Elucidate the cryobiology and its application.
                        OR
      ˙ technology.

Cont...

9   a   Enumerate the stages of fermentation process.

OR

    b   List out the biopolymers and its uses.

10   a   Explain the application of biotechnology in agriculture.

OR

    b   Discuss the role of IPR in biotechnology research.

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

11 a   Describe about Southern blotting with neat sketch.

OR

   b   Elucidate hybridization techniques and their application.

12 a   Explain about *Agrobacterium tumefactions* and its role in biotechnology.

OR

   b   Describe Gene transfer technologies with suitable examples.

13 a   Discuss on the merits and demerits of Dolly.

OR

   b   Summarize the current status of stem cell technology and its application.

14 a   Describe enzyme technology with suitable examples.

OR

   b   Assess the application of Biopesticides and biochips.

15   a   Define Bioremediation? Describe its types and application.

OR

   b   Explain about Genetically modified organisms with suitable examples and its application.

Z-Z-Z   END