

(6 pages)

Reg. No. : .....

Code No. : 7452

Sub. Code : ZZOM 32

M.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023

Third Semester

Zoology – Core

ANIMAL BIOTECHNOLOGY

(For those who joined in July 2021-2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Select the material which is used to maintain pH in PCR.  
(a) Tris HCL  
(b) magnesium chloride  
(c) calcium chloride  
(d) peptone
  
7. Choose the metabolites which is produced during an active growth phase of microbe.  
(a) secondary metabolite  
(b) primary metabolite  
(c) tertiary metabolite  
(d) methane
  
8. Name the methyl esters of Vegetable oil.  
(a) ethanol (b) biodiesel  
(c) bioleaching (d) biomining
  
9. Name the bacterium which is used to degrade hydrocarbons in Petroleum.  
(a) Pseudomonas putida  
(b) Bacillus  
(c) penicillium  
(d) aspergillus
  
10. Tell the name given to vaccines produced by rDNA technique.  
(a) Recombinant Vaccines  
(b) BCG  
(c) Polio vaccine  
(d) cloning

2. Tell the enzyme which recognizes Palindromic sequence to cut the DNA.  
(a) Type II restriction enzyme  
(b) Type I restriction enzyme  
(c) Type III restriction enzyme  
(d) Type IV restriction enzyme
  
3. Tell the another name of Genetic marker.  
(a) adapters (b) molecular markers  
(c) linkers (d) stem cells
  
4. Name given to a small piece of labeled single stranded DNA is.  
(a) plasmid (b) probe  
(c) template (d) Barr bodies
  
5. Name the process of replacement of functional genes with homologous defective gene.  
(a) gene repair (b) gene knockout  
(c) cloning (d) none
  
6. Tell the name of the first cloned sheep.  
(a) shaffola (b) Dolly  
(c) dorset (d) leghorn

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Enumerate the linkers and adapter.  
Or  
(b) Describe the Hybridization techniques.
  
12. (a) Explain the characteristics of Stem cells.  
Or  
(b) Discuss in detail about DNA probe.
  
13. (a) Write a note on organ culture.  
Or  
(b) Explain the various Methods of Gene Therapy.
  
14. (a) Explain the advantages of Biopolymers.  
Or  
(b) Explain in detail about the IPR.

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[P.T.O.]

15. (a) Order the application of Biotechnology in Medicine.

Or

- (b) Summaries about Pharmacogenomics.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Enumerate the steps involved in the Selection of Recombinants.

Or

- (b) Describe the chemical synthesis of Oligosaccharides.

17. (a) Discuss in detail about the Human genome project.

Or

- (b) Summarizes the construction of DNA libraries.

18. (a) Write a note on the following; (i) Transgenic Animals (ii) Knock Out.

Or

- (b) Explain the steps involved in IVF technique.

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19. (a) Analyze the bioremediation of Xenobiotics.

Or

- (b) Explain the various methods of enzyme Immobilization. Add a note on its uses.

20. (a) Grade the various methods of Biomining.

Or

- (b) Summarize the various steps involved in Drug Designing.
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