(6 Pages)

Reg. No. : .....

Code No. : 20394 E **Sub. Code : AMZO 62**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Zoology — Core

ANIMAL BIOTECHNOLOGY

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Choose scientist who devised the western blotting technique

   (a) Towbin (b) Darwin

   (c) De vries (d) Lamark

2. Tell the name of the host cell with rDNA

   (a) transformant (b) transformed cell

   (c) recombinant (d) all of these

3. Number of copies of plasmids present in the cell is called as ———

   (a) tedrads (b) copy number

   (c) diploids (d) pentaploids

4. The circular, double, extra chromosomal DNA is ———

   (a) Plasmids (b) RNA

   (c) DNA (d) Phage DNA

5. The ——— pH is maintained in the animal cell culture media.

   (a) 7-7.3 (b) 5.2-5.8

   (c) 10-11.9 (d) 2.2-2.6

6. Select the undifferentiated animal cell capable of proliferation to do specialized function is

   (a) stem cells (b) blood cells

   (c) fertilized cells (d) none

7. Write the gene which is used to treat a genetic disease is ———

   (a) gene drug (b) acethromycin

   (c) isotopes (d) drugs

8. The Dolly is the world's first cloned is ———

   (a) fish (b) mammal

   (c) reptiles (d) aves

9. One of the primary method of sewage treatment is ———

   (a) anaerobic (b) oxidation pond

   (c) sedimentation (d) aerobic process

10. Ethanol prepared from the bioresources are called ———

    (a) methanol (b) bioethanol

    (c) monilia (d) fusarium

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).
Not exceeding 1 page.

11. (a) Examine the restriction enzymes as a tool of biotechnology.

    Or

    (b) Enumerate the gene transfer through electrophoration.

12. (a) Explain the DNA probe.

    Or

    (b) Illustrate the yeast artificial chromosome.

13. (a) Write down embryonic stem cell culture.

    Or

    (b) Interpret the advantages of Organ culture.

14. (a) Explain about Patenting in Biotechnology work.

    Or

    (b) Organize the salient features of Dolly.

15. (a) Role of genetically engineered microbes in bioremediation.

    Or

    (b) Summarize about the micro array.

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 northern blotting technique.

Or

(b) Enumerate the methods of preparation of desired DNA from cell DNA.

17. (a) Discuss the characteristics of plasmid vectors.

Or

(b) Summarize the gene amplification through PCR.

18. (a) Explain the production of monoclonal antibodies.

Or

(b) Illustrate the culture of explants.

19. (a) Order the methods of enzyme immobilization. Explain it.

Or

(b) Illustrate the various methods of gene therapy.

20. (a) Order the steps involved in Human genome project.

Or

(b) Grade the types and applications of bioweapons.

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