No. of Printed Pages : **2**

21BSC5C6BTL

Sl. No.

B.Sc. V Semester Degree Examination, April/May - 2024

BIOTECHNOLOGY

Bt - 5.2 : Animal Biotechnology

(NEP)

Time : 2 Hours | Maximum Marks : 60

Note : *(i) Answer **all** sections.*

(ii) Draw the labelled diagrams wherever necessary.

SECTION - A

Answer the following sub-questions in **one** word or **one** sentence each. **10x1=10**

1. (a) What is Stem cell ?

(b) Define Pluripotency.

(c) What do you mean by Biotransformation ?

(d) Mention any two limitations of organ culture.

(e) Define Embryo transfer.

(f) What is recombinant vaccine ?

(g) Name a common retrovirus used in gene transfer in animals.

(h) Define vector.

(i) What is gene transfer ?

(j) Name a common technique involving the injection of foreign DNA into Embryo's.

P.T.O.

SECTION - B

Answer **any four** of the following questions. **4x5=20**

2. Briefly explain Gene knockout technology.

3. What is animal tissue culture ? Briefly explain its advantages and disadvantages.

4. Explain the process of artificial insemination in animals and its application.

5. Write a short note on direct DNA transfer.

6. Explain the concept of targeted gene transfer and its relevants in transgenic animal production.

7. Give the brief account of Embryo transfer and invitro fertilization.

SECTION - C

Answer **any three** of the following questions. **3x10=30**

8. Give the detail account of the suspension and Monolayer culture.

9. Discuss the potential uses of stem cells in regenerative medicine.

10. Explore the use of probiotics for disease control in animals, emphasizing their mechanisms and effectiveness.

11. Explain the future prospects and advancements in vectors for gene transfer in animals.

12. Discuss the molecular techniques used for transgene integration and identification.

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