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(20620) Roll No. ....  
B.Sc. (Biotech.) - III Year

**NS-3474(CV)**

**B.Sc. (Biotechnology) Examination,  
June - 2020  
Animal Biotechnology  
(B-302)**

*Time : Two Hours ] [Maximum Marks : 75*

**Note :** Answer any **four** questions. **All**  
~~questions carry equal marks.~~

1. Describe the various steps of embryo transfer in animals with their advantages.
2. Discuss the history and scope of cell and tissue culture in animals. Explain the advantages and disadvantages of animal tissue culture.
- ③ Write short notes on any **three** of the following:
  - (a) Adenoviruses
  - ✓(b) Continuous cell lines
  - ✓(c) Split embryos
  - ✓(d) Organ culture

4. Discuss the various types of growth factors in animal cell culture.
- ⑤ Write notes on the followings :
  - ✓ → (a) Targeted gene therapy
  - ✓ (b) In vitro fertilization
6. Write an essay on transgenic animals mentioning a list of species where transgenic animals have already been produced.
- ⑦ Discuss the cryopreservation techniques with special reference to semen, ovum and embryo.
8. Discuss the recent developments in the use of tissue engineering in therapeutics.
- ⑨ Explain the role of Biotechnology in disease diagnosis.
10. Write notes on any **three** of the following:
  - (a) Cloning
  - (b) Transgenic sheep
  - (c) Retroviruses
  - (d) Micro injection