



B.Sc. (Semester – V Examination, October/November 2018

ZOOLOGY

Fundamentals of Animal Biotechnology

Duration : 2 Hours

Max. Marks : 80

Instructions : 1) **All questions are compulsory.**

2) **Figures to the right indicate maximum marks to the question.**

3) **Illustrate your answer wherever necessary.**

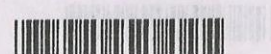
1. Answer briefly **any four** of the following : **16**
 - a) Discuss the history of biotechnology.
 - b) Write an account of a typical bacterial cell.
 - c) Discuss the role of Alkaline Phosphatase in genetic engineering.
 - d) What is a genomic library ?
 - e) Write a note on cosmids.
 - f) Explain lipofection method of gene transfer.
2. Answer briefly **any four** of the following. **16**
 - a) Non-radioactive labels.
 - b) End labelling method.
 - c) Automatic DNA sequencer.
 - d) Applications of PCR.
 - e) Gene replacement therapy.
 - f) Colony hybridization technique.
3. A) Explain the basic steps of gene cloning. **6**

OR

 - A) Write an account on DNA ligases. **6**
 - B) Describe briefly reproduction in bacteria. **6**
4. A) Write a note on shuttle vectors. **6**

OR

 - A) Describe the features of pBR 322. **6**



B) Discuss retroviral approach for gene transfer.

6

5. A) Give an account of Sanger's method of DNA sequencing.

6

OR

A) Describe Western blotting technique.

6

B) Explain random primer method of labelling nucleic acids.

6

6. A) Enlist the steps for chromosome walking.

6

OR

A) Describe plaque hybridization technique.

6

B) Write a note on somatic gene therapy.

6