

2018

CBCS

1st Semester

ZOOLOGY

PAPER—GE1T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Animal Cell Biotechnology

Answer all questions.

Answer five questions of the following :

5×2

- (a) What do you mean by T-A Cloning ?
- (b) State the function of DNA ligase.
- (c) Name two restriction enzyme causing one blunt cut and one stagger cut.

(Turn Over)

(d) When BAC vector is used ?

(e) What do you mean by downstream Processing ?

(f) State two advantages of phage vector over plasmid vector.

(g) Why myeloma cells are used in hybridoma technology ?

(h) Why Type-II restriction endonucleases are useful in recombinant DNA technology ?

2. Answer any four questions :

4x5

(a) Write a short note on Sanger method of DNA sequencing. 5

(b) State the use of DNA fingerprinting. 5

(c) Pictorially describe different parts of stirred tank fermenter. 5

(d) Design the Procedure of cloning of gene X into PBR322 5

- (e) State the characteristics of expression vector.
- (f) Write a note on the application of recombinant DNA technology in the production of recombinant growth hormone.

5

3. Answer any one question : 1×10

(a) Define ex-vivo and in-vivo gene Therapy. Describe how a faulty gene can be corrected by ex-vivo gene Therapy. Add a short note on different vectors used in gene therapy. 2 + 6 + 2

(b) (i) Write the Principle of Polymerase Chain Reaction (PCR)

(ii) What is Competent cell? State its use in RDT.

(iii) Write the applications of Monoclonal Antibody (MAb). 4 + (2 + 2) + 2