

S.No. 6

12PBC05

(For the candidates admitted from 2012–2013)

M.Sc. DEGREE EXAMINATION,
NOVEMBER 2017.

Second Semester

Biochemistry

GENETIC ENGINEERING AND FERMENTATION
TECHNOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Write a note on Southern blotting.

Or

(b) Give an account on Restriction enzymes used in Recombinant DNA technology.

2. (a) Comment on strong and regulatable promoters and its uses.

Or

(b) Write a note on Two-gene expression vector.

3. (a) Write short notes on stem cells.
Or

(b) Comment on Micro RNA and its applications.

4. (a) Write short note on the different types of Bioreactors.

Or

(b) Give an account on batch and continuous culture.

5. (a) Write short notes on fermented Dairy products.

Or

(b) Explain the process of production of Bio insecticides.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Explain the process of isolation and purification of Nucleic acid.

Or

(b) Describe YAC and BAC vectors in gene cloning.

7. (a) Give a detailed account on mammalian cell expression vectors.

Or

(b) Explain the steps involved in constructing Genomic Library and its uses.

8. (a) Describe somatic cell gene therapy.

Or

(b) Explain the gene therapy for treatment of cystic fibrosis.

9. (a) Give an account on inoculum preparation cell growth and substrate utilization in fermentation process.

Or

(b) Explain the different methods involved in Recovery and purification of fermented products.

10. (a) Enumerate the production of amino acids by fermentation.

Or

(b) Discuss the merits and demerits of GM foods.