5. Explain in brief gene therapy.

OR

Describe industrial production of Insulin in detail. 12

6. Describe Industrial productions of vit.B_{12}.

OR

Discuss secondary metabolites produced by Actinomycetes and give industrial production of growth promoters. 12

7. (a) What is kefir ? Give its applications. 4

(b) Explain in brief preparation of yoghurt. 4

(c) Explain the importance of probiotics on human health. 4

OR

(d) What is Tofu ? Give its importance. 4

(e) Explain various probiotic products and its importance for human health. 4

(f) Explain in brief preparation of Miso. 4

AR – 598

Fifth Semester B.Sc. (Part – III) Examination

5S – INDUSTRIAL MICROBIOLOGY

(Industrial Biotechnology)

P. Pages : 4

Time : Three Hours] [Max. Marks : 80

Note : (1) All question are compulsory.
(2) Draw well labelled diagrams wherever necessary.

1. (a) Fill in the blanks.

(i) Plasmids are —— genetic material.

(ii) One of the termination codon is ——.

(iii) Thymine is absent in ——.

(iv) Transduction was discovered by —. 2

(b) Choose the correct alternative.

(i) Microorganism used as single cell protein

(a) Viruses (b) Protozoa

(c) Citric acid (d) Algae.

(ii) The long form of PCR is ——.

(a) Poly Chain Reaction.

(b) Physical Chemical Reaction.

(c) Polymerase Chain Reaction.

(d) Polite Chemical Reaction.

(iii) Select a prebiotic product ——.

(a) Acetic acid (b) DNA chips

(c) Tofu (d) None

(iv) Anticodons are present on ——.

(a) t–RNA (b) m–RNA

(c) d–RNA (d) r–RNA 2

(c) Answer in **one** sentence :—

(1) Conjugation.

(2) Gene bank.

(3) Define Mutation.

(4) Plasmids. 4

2. (a) Discuss DNA manipulating. 4

(b) Explain DNA polymerases. 4

(c) Describe southern blotting technique. 4

OR

(d) Explain the preparation of pure samples of DNA. 4

(e) Explain the analysis of DNA fragment. 4

(f) Discuss Bacteriophages as cloning vehicles. 4

3. (a) Explain Lederberg and Tatum experiment. 4

(b) Explain colony hybridization. 4

(c) Discus any one technique in DNA sequencing. 4

OR

(d) Describe DNA chips. 4

(e) Explain c DNA library. 4

(f) Explain in brief mechanism of transduction. 4

4. (a) Discuss Auxotrophic Mutants. 4

(b) Describe antibiotic resistant mutants. 4

(c) Explain Ames test. 4

OR

(d) Explain in brief chemical mutagenes. 4

(e) Describe analogue resistant mutants. 4

(f) Explain mutants resistant to feed back effect. 4