

TKN/KS/16 – 5926

**Final Sixth Semester B. Sc. Examination**

**MICROBIOLOGY**

**Paper - II**

**(Biotechnology)**

Time : Three Hours ] [ Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Describe different types of vectors used in biotechnology.

**OR**

What is PCR technique ? Discuss its applications. 10

2. Describe in detail production of Salk vaccine.

**OR**

Describe in detail the production of insulin. 10

3. (a) Enlist different types of biosensors and describe any one. 5

(b) Describe the types of biopesticides and their applications. 5

**OR**

(c) Discuss the technique of protoplast fusion. 5

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Contd.

(d) Write a note on Nano-biotechnology. 5

4. Write a note on :—

(a) Genetically modified food.

(b) BT cotton.

(c) Production of Soya sauce.

(d) Miso. 4x $\frac{1}{2}$

**OR**

Write a note on :—

(a) Knock out mice.

(b) Milching animals.

(c) Dolly sheep.

(d) Sufu. 4x $\frac{1}{2}$

5. Solve any **ten** :—

(i) What is blunt end ligation ?

(ii) What is gene library ?

(iii) Give any two applications of DNA fingerprinting.

(iv) What are edible vaccines ?

(v) What is ATS ?

(vi) Define monoclonal antibody.

(vii) What are biochips ?

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Contd.

- (viii) Give any two examples of biofertilizer.
- (ix) Give any two ethical objections against biotechnology.
- (x) Define transgenic plant.
- (xi) Define transgenic animal.
- (xii) Why certain food items are called oriental. Fermented food ?