

Bachelor of Science (B.Sc.) Semester—VI (C.B.S.) Examination
BIOTECHNOLOGY
(Microbiology)
Paper—2

Time : Three Hours]

[Maximum Marks : 50]

N.B. :— (1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagrams wherever necessary.

1. Discuss in detail about different methods used for selection of recombinants. 10

OR

Give a detailed account of PCR and its applications. 10

2. Describe in detail production of Salk polio vaccine. 10

OR

Describe the process of production of monoclonal antibody and give its applications. 10

3. (A) Describe characteristic features and types of biosensors. 5
(B) Discuss ethics and hazards of biotechnology. 5

OR

(C) Describe briefly method used for induction of protoplast fusion and its significance in agriculture biotechnology. 5

(D) Discuss characteristic features and applications of microarrays in biotechnology. 5

4. (A) Explain genetically modified foods. 2½
(B) Write down the steps involved in soya sauce preparation. 2½
(C) Give an account of Bt genes and mechanism of action of cry proteins. 2½
(D) Describe production of knockout mice as a significance of targeted gene transfer. 2½

OR

(E) Give the production of miso. 2½

(F) What is transgenic animal ? Explain with example of Dolly sheep. 2½

(G) What is oriental food ? Explain with the example of sufu. 2½

(H) Write a note on milching animal. 2½

5. Solve any **ten** questions :

(i) What are restriction endonucleases ?	1
(ii) What is cosmid ?	1
(iii) What is cDNA library ?	1
(iv) What is interferon ?	1
(v) What are edible vaccines ?	1
(vi) What is ATS ?	1
(vii) What are biochips ?	1
(viii) What is the significance of phosphate solubilising bacteria in soil fertility ?	1
(ix) What is the advantage of proteinase inhibitor ?	1
(x) What is meant by transfection ?	1
(xi) What is a clone ?	1
(xii) What is the significance of golden rice ?	1