

NKT/KS/17/5213

**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

~~(A)~~ Discuss in detail about different methods used for selection of recombinants

10

**OR**

~~(B)~~ Give a detailed account of PCR and its applications

10

~~(C)~~ Describe in detail production of Salk polio vaccine

10

**OR**

~~(D)~~ Describe the process of production of monoclonal antibody and give its applications

10

~~(E)~~ Describe characteristic features and types of biosensors

5

~~(F)~~ Discuss ethics and hazards of biotechnology

5

**OR**

~~(G)~~ Describe briefly method used for induction of protoplast fusion and its significance in agriculture biotechnology

5

~~(H)~~ Discuss characteristic features and applications of microarrays in biotechnology

5

~~(I)~~ Explain genetically modified foods

2½

~~(J)~~ Write down the steps involved in soya sauce preparation

2½

~~(K)~~ Give an account of Bt genes and mechanism of action of cry proteins

2½

~~(L)~~ Describe production of knockout mice as a significance of targeted gene transfer

2½

**OR**

~~(M)~~ Give the production of miso

2½

~~(N)~~ What is transgenic animal ? Explain with example of Dolly sheep

2½

~~(O)~~ What is oriental food ? Explain with the example of sufu

2½

~~(P)~~ Write a note on milching animal.

2½

(Contd.)

3. Solve any ten questions .

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