

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

Time : Three Hours]

[Maximum Marks : 50

Note :—(1) All questions are compulsory and carry equal marks.

(2) Draw diagram wherever necessary.

1. (a) Write note on p^{BR-322} . 2½
- (b) Describe restriction endonuclease. 2½
- (c) Explain the principle of PCR technology. 2½
- (d) Write note on microinjection. 2½

OR

- (e) Explain colony hybridization technique with diagram. 2½
- (f) What is gene library ? 2½
- (g) What is shuttle vector ? 2½
- (h) Give the role of Reverse transcriptase in r-DNA technology. 2½
2. Explain production of insulin by r-DNA technology. 10

OR

- Explain production of interferon by r-DNA technology. 10
3. (a) Explain protoplast fusion with suitable example. 5
- (b) Describe biofertilizers with examples. 5

OR

- (c) Explain biosensors and write its applications. 5
- (d) Discuss hazards of r-DNA technology. 5
4. Explain the production of soya sauce. 10

OR

- Explain the concept of transgenic animal and add a note on knockout mice. 10
5. Answer any **TEN** :—
- (i) What is the role of DNA ligase ?
- (ii) What is meant by sticky ends ?
- (iii) Give two applications of DNA fingerprinting.
- (iv) What does BCG stand for ?
- (v) What is the significance of ATS ?
- (vi) Define hybridoma.
- (vii) Define biopesticide.
- (viii) Give one application of nanobiotechnology.
- (ix) What is biochip ?
- (x) Name one genetically modified food and give its significance.
- (xi) What is meant by transgenic plant ? Give one example.
- (xii) What is the important feature of milching animals ? 10×1=10