

This question paper contains 3 printed pages.

4666

Your Roll No.

B.Sc. Prog. / III

AS

EL 310 (iii) – BIOTECHNOLOGY

(Admissions of 2005 and onwards)

Time : 2 hours

Maximum Marks : 38

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

Attempt four questions in all.

Q. No. 1 is compulsory.

1. (a) Define any *four* of the following:

(i) Electrophoresis

(ii) Artificial seeds

(iii) Lyophilization

(iv) Phagemid

(v) Cryopreservation.

1×4=4

(b) Differentiate between any *four* of the following:

(i) Biofuels and Biofertilizers

(ii) Southern blot and Northern blot

(iii) Anther culture and Embryo culture

(iv) Incomplete medium and Complete medium

P. T. O.

- (v) Stirred Tank and Air lift fermenters. $2 \times 4 = 8$
- (c) Expand any *four* of the following:
- (i) SCP
 - (ii) PAGE
 - (iii) PEG
 - (iv) HAT
 - (v) ICGEB. $1/2 \times 4 = 2$
2. (a) Define strain improvement and briefly discuss the various approaches used for strain improvement. 4
- (b) Discuss hybridoma. Explain the production of monoclonal antibodies. 4
3. What is fermentation technology? Discuss the different downstream processing operations. 8
4. Enumerate the various vectors used for Gene Therapy and its clinical application, if any. 8
5. (a) What is DNA fingerprinting? Discuss its applications. 4
- (b) Discuss restriction endonucleases and its types in detail. 4
6. Write short notes on any *two* of the following: