



PAR-003-1142002

Seat No. _____

M. Sc. (Botany) (Sem. II) (CBCS) Examination

August / September - 2020

Biotechnology and Immunology : Paper - 208

Faculty Code : 003

Subject Code : 1142002

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instruction : All questions are compulsory and carry equal marks

1 Answer any **seven** questions from the following : **14**

- (a) Why do properties of enzymes change upon immobilization?
- (b) What are recalcitrant compounds?
- (c) What are xenobiotic compounds?
- (d) Explain cohesive and blunt end cutting site by RE
- (e) What is the function of RE inside the cell?
- (f) What is the role of Vector in Genetic engineering?
- (g) What is the role of micronutrients in tissue culture?
- (h) How plant material is sterilized in tissue culture?
- (i) What are the hormones routinely used in plant tissue culture?
- (j) Give a brief account on enzymatic digestion of Antibodies

2 Write notes on any **two** of the following : **14**

- (a) Give an account of bacterial characteristics useful for their commercial applications.
- (b) Describe any one method of enzyme immobilization and its applications.
- (c) Give an account of strategies used for immobilization of cells.

- 3** Write notes on the following : **14**
(a) pBR322
(b) pUC
- OR**
- 3** Write notes on the following : **14**
(a) DNA isolation
(b) Basic steps of gene cloning
- 4** Write notes on the following : **14**
(a) Callus culture and its applications
(b) Multiple shoot culture
- 5** Write notes on any **two** of the following : **14**
(a) Monoclonal Antibody.
(b) ELISA.
(c) Autoimmunity
(d) Immunoglobulin
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