



**MCA-003-1142002** Seat No. \_\_\_\_\_

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

**April / May - 2018**

**BOT - 208 : Biotechnology And Immunology**

**Faculty Code : 003**

**Subject Code : 1142002**

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

[Total Marks : 70

**1 Answer the following : (Any Seven) 14**

- (a) What is immobilization of enzyme?
- (b) Enlist bacterial characteristics important for fermentation industry.
- (c) State the difference between static and dynamic methods of immobilizing enzyme by adsorption.
- (d) What are the types of culture media?
- (e) What is protoplast culture?
- (f) What is gene vector?
- (g) What is dot blot technique?
- (h) Define Antigen.
- (i) What are heterodimers?
- (j) What is transcytosis?

**2 Answer the following : (Any Two) 14**

- (a) Describe any one method of enzyme immobilization and its applications.
- (b) Give an account of strategies used for immobilization of cells.
- (c) Discuss advantages of immobilized cells over enzymes in commercial biotransformations.

- 3** Answer the following : (Compulsory Questions) **14**  
(a) What are the RENS? Explain its role in biotechnology  
(b) Discuss various techniques of screening of recombinant DNA

**OR**

- 3** Answer the following : (Compulsory Questions) **14**  
(a) Define totipotency and explain its concept in tissue culture technique  
(b) Applications of plant tissue culture techniques in Biotechnology
- 4** Answer the following : **14**  
(a) What is hypersensitivity? Describe IgE mediated hypersensitivity.  
(b) Write a note on Inflammation.
- 5** Answer the following : (Any **Two**) **14**  
(a) Discuss various techniques of encapsulation for enzyme immobilization.  
(b) Write short note on Gene library.  
(c) Write note on : Callus and its importance.
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