* M C A - 0 0 3 - 1 1 8 2 0 0 2 - 5 0 - 2 *

MCA-003-1182002 Seat No. _____

M. Sc. (Zoology) (W.E.F. 2016) (Sem. II) (CBCS) Examination

April / May - 2018

Zoo - 208 : Biotechnology & Immunology

Faculty Code : 003

Subject Code : 1182002

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer the following very briefly : (Any **Seven**) **2×7=14**

(a) Define enzyme immobilization.

(b) What is gene targeting?

(c) Define plasmid.

(d) Define restriction enzymes.

(e) Name few types of plant tissue culture.

(f) Define immunofluorescence.

(g) What are xenobiotic compounds? Give examples.

(h) Define opsonization.

(i) Name few factors affecting immunogenicity.

(j) Define autoimmunity.

2 Answer of the following : (Any **Two**) **7+7=14**

(a) Briefly describe the application of immobilized enzymes and cells.

(b) Explain the steps of plant tissue culture.

(c) Write a note on restriction enzymes and gene targeting.

3 Answer the following : **7+7=14**

(a) Discuss the bacterial characteristics useful for their commercial applications.

(b) Describe the basic structure of antibody. Add a note on antibody mediated effector functions.

OR

3 Answer the following : **7+7=14**

(a) Describe the basic steps of the antigen-antibody reaction.

(b) Write a note on the types of plant tissue culture.

4 Answer the following : **7+7=14**

(a) Write a short note on the cells of the immune system.

(b) Write a short note on the applications of animal tissue culture.

5 Answer the following : (Any **Two**) **7+7=14**

(a) Write a short note on the host vector system.

(b) Write a short note on the innate Immunity.

(c) Write a note on the delayed hypersensitivity.

(d) Describe DNA isolation techniques in brief.