NCC-003-1192002 Seat No. _____

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

April / May - 2017

MICRO-208 : Biotechnology & Immunology

Faculty Code : 003
Subject Code : 1192002

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

Instruction : All questions are compulsory. Support your answers with suitable illustrations where required.

1 Answer the following very briefly : (any **seven**) **2×7=14**

(a) What are the basic properties of plasmids?

(b) What is the correlation of restriction enzymes and rDNA Technology?

(c) What is the plant tissue culture ?

(d) What is immunity?

(e) What are the environmental concerns of the xenobiotic compounds?

(f) What are different types of vaccine?

(g) What is enzyme immobilization?

(h) What are genes?

(i) What is immunoblotting?

(j) What is genome ?

2 Answer any **two** of the followings : **7+7=14**

(a) Discuss the principle and applications of enzyme and cell immobilization.

(b) Discuss various applications of microbes.

(c) Discuss microbes with respect to their usefulness in environmental pollution.

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

(a) Discuss the basic structure of antibody

(b) Discuss implications of the plant tissue culture, as green technology.

OR

3 Write notes on : **7+7=14**

(a) Successful commercial applications of plant tissue culture.

(b) Detection and implications of antigen-antibody reaction.

4 Write comments on the following : **7+7=14**

(a) Implications of the animal tissue culture.

(b) Immunity and immune system.

5 Write comments on any **two** of the followings : **7+7=14**

(a) Autoimmunity

(b) ELISA

(c) Innate Immunity

(d) Plants as Expression system.