

2013

M.Sc.

2nd Semester Examination

BIOTECHNOLOGY

PAPER—BIT-203

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group — A

1. Answer any *five* questions from the following : 2×5
- (a) What is TLR?
 - (b) Differentiate epitope, paratope and aggretope.
 - (c) What do you mean by antibody diversity?
 - (d) What are anaphylatoxin?
 - (e) What is poly Ig receptor? State its importance.
 - (f) What is clonal anergy?
 - (g) What is One-turn - Two-turn joining rule?
 - (h) What is ISCOM?

(Turn Over)

Group — B

Answer any *two* questions from the following : 5×2

2. Describe the primary and secondary immune response with suitable diagram. 5
3. What are the effector molecules secreted by activate Tc cell? State their mechanism of action. 2+3
4. What is endogenous antigen? Briefly describe how endogenous antigen are processed and presented on the cell surface. 1+4
5. What are pharmacological mediators? Describe their importance in human.

$$2\frac{1}{2}+2\frac{1}{2}$$

Group — C

Answer any *two* questions from the following : 10×2

6. Differentiate agglutination and precipitation. Briefly describe different immunological techniques based on precipitation reaction. 3+7
7. Describe alternative pathway of complement activation. What are the proteins involved in regulation of complement pathway? 4+6
8. Describe the principle of HAT selection. What is the difference between HACA and HAMA? Describe a method for production of Humanized monoclonal antibody. 3+2+5
9. Write the mechanism of signal transduction of β -cell with suitable diagram.