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 : 2x5

(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?
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. 2½+2½

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.