TKN/KS/16 – 5879

Fourth Semester B. Sc. Examination

BIOTECHNOLOGY

Paper - I

(Immunology)

Time : Three Hours] [Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagram wherever necessary.

1. Explain the mechanism of Innate immunity. 10

OR

What is Acquired immunity ? Describe active and passive immunity. 10

2. Give the general structure of Immunoglobin and explain its classes.

OR

Describe NK cell mediated immunity. 10

3. (a) Give general features of hypersensitivity. 5

(b) Explain type I hypersensitivity. 5

OR

(c) Give the importance of vaccination. 5

(d) Explain concept of autoimmunity. 5

4. (a) Give the principle of precipitation reaction. $2\frac{1}{2}$

(b) What are the applications of monoclonal antibodies? $2\frac{1}{2}$

(c) Explain the mechanism of sandwich ELISA Test. $2\frac{1}{2}$

(d) Give the principle of immuno–diffusion technique. $2\frac{1}{2}$

OR

(e) Explain monoclonal antibody production. $2\frac{1}{2}$

(f) Describe direct ELISA Test. $2\frac{1}{2}$

(g) Explain CFT. $2\frac{1}{2}$

(h) Give the principle of agglutination test. $2\frac{1}{2}$

5. Solve any **ten** :—

(i) Define Antigen.

(ii) What is antigen determinant ?

(iii) What is hapten ?

(iv) What is ADCC ?

(v) What is MHC ?

(vi) What is the role of cytokines ?

(vii) Name any one autoimmune disease.

(viii) Give two examples of recombinant vaccines.

(ix) What are killed vaccines ?

(x) What is antibody titre ?

(xi) What is immunodiagnosis ?

(xii) What is slide agglutination test ? 1x10