

F.Y.B.Sc.(With Credits)-Regular-Semester 2012 Sem II
2SBC-T2-Biochemistry-II : Paper-II (Microbial Physiology and Immunology)

P. Pages : 2

Time : Three Hours



GUG/W/16/5563

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagrams wherever necessary.

1. What is growth curve? Give detailed account on growth curve and its various phases. 10

OR

What are pure cultures? Describe various methods of obtaining pure cultures.

2. Describe various primary organs and types of T cells involved in immune system. 10

OR

Describe hybridoma technology for obtaining monoclonal antibodies. Add a note on applications of monoclonal antibodies.

3. a) Give classification of bacteria on the basis of gaseous requirement. 2½

b) Write a note on streak plate method. 2½

c) Write a short note on basic structure of immunoglobulin. 2½

d) Write a short note on cellular immunity. 2½

OR

e) Describe turbidostat. 2½

f) Write a short note on enrichment culture. 2½

g) Write short note on general properties of antibodies. 2½

h) Write a brief note on non-cellular immunity. 2½

4. a) Write a note on dialysis technique. 2½

b) Write a note on serial dilution technique. 2½

c) Give differentiation between active and passive immune system. 2½

d) Give brief idea about alternate pathway of complement system. 2½

OR

e) Describe measurement of growth with respect to viable cell count. 2½

- f) Write a short note on phototrophs. 2½
- g) Write a short note on IgA. 2½
- h) Explain classical pathway of complement system. 2½

5. Solve **any ten** of the following. **10**

- a) What is growth rate?
- b) What is generation time?
- c) Define synchronous culture.
- d) Write any two basic nutritional requirements of bacteria.
- e) What do you mean by culture of bacteria.
- f) What is the source of carbon in nutritional media.
- g) What is immunogen?
- h) Write any one antigen-antibody reaction.
- i) How many antigens bind with single molecule of IgG.
- j) What is MHC?
- k) What are plasma cells?
- l) What are mammary cells?
