Bachelor of Science (B.Sc.)-I Second Semester Old

2SBC-T2 - Biochemistry Paper-II (Microbial Physiology and Immunology)

P. Pages : 2 **GUG/W/18/1229**

Time : Three Hours * 0 9 4 2 * Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Discuss in details growth curve. **10**

OR

a) Discuss in detail classification of bacteria based on nutritional requirement. **5**

b) Discuss in short the term pure culture. **5**

2. Discuss in details basic structure of immunoglobulin. **10**

OR

What is monoclonal antibodies? How will you synthesised monoclonal antibody and give its function.

3. a) What is growth rate? How will you calculate generation time. **2½**

b) Discuss basic nutritional requirements of micro-organism. **2½**

c) Distinguish between active and passive immunity. **2½**

d) Discuss classical pathway of complement system. **2½**

OR

e) Write a note on chemostat. **2½**

f) What are phototrophs & chemotrophs? Give examples of each. **2½**

g) Enlist cells & organs of immune system and give one function of each. **2½**

h) Discuss clonal selection theory. **2½**

4. a) Give classification of bacteria based on gaseous requirement. **2½**

b) Discuss pour plate method of isolation of micro-organism. **2½**

c) Discuss development of B-cells. **2½**

d) Discuss humoral immunity. **2½**

OR

e) What is synchronous culture. **2½**

f) Discuss streak plate method of isolation of micro-organism. **2½**

g) Give the structure of T-cell. **2½**

h) What is complement system? Discuss alternate pathway. **2½**

5. Attempt **any ten** of following. **10**

a) What is turbidostat.

b) Draw the diagram of chemostat.

c) Define thermophiles.

d) Define culture.

e) Define enrichment culture.

f) Give the example of growth factor.

g) Define antigen.

h) Define helpten

i) What is paratope

j) Define polyclonal antibody.

k) Who discovered complement.

l) Define hybridoma.

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