

Bachelor of Science (B.Sc.) First Semester (Old)  
**MIC-01 - Microbiology Paper – I (General Microbiology)**

P. Pages : 2

Time : Three Hours



**GUG/W/18/1216**

Max. Marks : 50

Notes : All questions are compulsory and carry equal marks.

1. Describe the contribution of various scientist to solve the controversy over spontaneous generation. **10**

**OR**

Describe the structure and function of Gram Positive cell wall.

2. Explain the term plasmid and give its various types in detail. **10**

**OR**

Describe animal inoculation and Tissue culture method for cultivation of animal viruses.

3. a) Write the contribution of H. G. Khurana and M. S. Swaminathan in the field of microbiology. **2½**  
b) Describe the various cell arrangements in bacteria. **2½**  
c) Describe the structure and function of Nucleoid. **2½**  
d) Explain the Icosahedral Symmetry of viruses. **2½**

**OR**

- e) Describe Koch Postulate. **2½**  
f) Describe Fluid Mosaic model of cell membrane. **2½**  
g) Draw the typical structure of bacterial endospore. **2½**  
h) Write Haemagglutination technique for viral growth detection. **2½**
4. a) Explain the term Medical Microbiology and Industrial Microbiology with example. **2½**  
b) Describe various arrangement of flagella in bacterial cell. **2½**  
c) Describe the two sub units of 70s Ribosome. **2½**  
d) Draw the well labelled diagram of T<sub>4</sub> bacteriophage. **2½**

**OR**

- e) Write the contribution of Edward Jenner in the field of Microbiology. 2½
- f) Describe the typical structure of bacteria. 2½
- g) Describe the structure and function of mesosoma. 2½
- h) Draw Schematic representation of Lysogenic cycle of lambda phage. 2½

**5. Attempt any ten.**

- a) Define Geomicrobiology. 1
- b) Write any two contribution of Louis Pasteur. 1
- c) Write the contribution of Schroder & Von Dusch. 1
- d) Define Prokaryotic Cell. 1
- e) Name the two types of proteins present in bacterial cell membrane. 1
- f) Name the various shapes of Bacteria. 1
- g) Define 'Conjugative Plasmid'. 1
- h) Give the function of Sex Pili. 1
- i) Name any two endospore forming Genera. 1
- j) Give two examples of Helical symmetry of viruses. 1
- k) What is CPE? 1
- l) Give two examples of bacterial viruses. 1

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