

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 T₄ bacteriophage. **2½**

OR

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| 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.

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| 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 |
