

Bachelor of Science (B.Sc.) (CBCS Pattern) First Semester
BIO-02 - Biotechnology Paper-II (General Microbiology)

P. Pages : 2

Time : Three Hours



GUG/W/18/11563

Max. Marks : 50

- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. Give details about principle, working and Applications of TEM. **10**

OR

- a) Differentiate between optical microscope and electron microscope. **2½**
b) Write a note on Dark field microscopy. **2½**
c) Enlist the contribution of Louis Pasteur. **2½**
d) Describe Resolving power of microscope with example. **2½**

2. What are Endospores? Give detailed account of events involved in Endospore formation. **10**

OR

- a) Draw a well labelled diagram of typical bacterial cell. **2½**
b) Write a note on Gram positive bacterial cell wall. **2½**
c) Give a brief account on types of plasmids. **2½**
d) Describe the salient features of Arehea. **2½**

3. What are stains? Give the principle & procedure of Endospore staining. **10**

OR

- a) Give the General characters of yeast. **2½**
b) Describe Icosahedral symmetry of viruses. **2½**
c) Write general characters of protozoa. **2½**
d) Describe lytic cycle in brief. **2½**

4. What is bacterial growth? Explain the different phases involved in Bacterial growth curve. **10**

OR

- a) Write a note on chemostat. **2½**
b) Describe in brief about physical conditions required for growth. **2½**

- c) Discuss in brief about microbial control by Radiation. 2½
- d) Describe the isolation of pure culture by pour plate method. 2½
- 5.** Solve **any ten** of the followings.
- a) Who proposed Germ theory of disease. 1
- b) Who is father of vaccination"? 1
- c) Define "Numerical aperture" 1
- d) What is peritrichous flagella? 1
- e) What are pili? 1
- f) What are conjugative plasmids? 1
- g) Write the name of any two economically important molds. 1
- h) Define "Simple staining" 1
- i) What is pro-phage? 1
- j) Define generation time. 1
- k) What is "pure culture"? 1
- l) Write the names of any two chemicals used in microbial control. 1
