

B.Sc. (CBCS Pattern) Sem-I
MIC-02 - Microbiology Paper-II : Microbial Techniques

P. Pages : 2

Time : Three Hours



GUG/W/22/11559

Max. Marks : 50

1. Write in detail principal and working phase contrast microscope. **10**

OR

- a) Explain the use of oil immersion objective. **2½**
- b) Write about Numerical Aperture. **2½**
- c) Write the principle of electron microscope. **2½**
- d) Write about different types of objective lens. **2½**

2. Describe in detail capsule and endospore staining method. **10**

OR

- a) Give the classification of stains. **2½**
- b) Describe the theory of staining. **2½**
- c) Write about cell wall of Gram's positive and negative bacteria. **2½**
- d) Explain Acid fast staining method. **2½**

3. Write about different method of isolation of pure culture. **10**

OR

- a) Write about differential media with example. **2½**
- b) Explain the use of peptone and NaCl in nutrient media. **2½**
- c) Classify bacteria based on carbon source. **2½**
- d) Explain cultivation of anaerobic bacteria. **2½**

4. Describe the different physical agents in control of microbial growth. **10**

OR

- a) Write about phenol and phenolic compounds. **2½**
- b) Give the characteristics of ideal disinfectant. **2½**

- c) Explain the oligodynamic action. 2½
- d) Describe phenol coefficient experiment. 2½

5. Write any ten.

- a) What is resolving power? 1
- b) Name different types of condenser. 1
- c) What is focal point and focal length. 1
- d) What is auxochrome? 1
- e) What is peptidoglycan? 1
- f) Name the stain used in flagella staining. 1
- g) What is photoautotrophus? 1
- h) What is selective media? Give example. 1
- i) Give the example of solid and semisolid media. 1
- j) Give names of quaternary ammonium compounds. 1
- k) Give examples of gaseous sterilizers. 1
- l) What is microbistatic and microbicidal. 1
