

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

P. Pages : 2

Time : Three Hours



GUG/W/23/11559

Max. Marks : 50

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1. Describe the working mechanism and application of SEM. **10**
- OR**
- a) Explain the use of oil immersion objective. **2½**
- b) Explain the principle of dark field microscope. **2½**
- c) Write about parts of Bright field Microscope. **2½**
- d) Write short notes on TEM. **2½**
2. Explain the principle and procedure of Gram Staining. **10**
- OR**
- a) Write the classification of stain. **2½**
- b) Explain the method of Acid fast staining. **2½**
- c) Describe the endospore staining. **2½**
- d) Write about negative staining. **2½**
3. Explain the different methods of pure culture isolation. **10**
- OR**
- a) Describe lyophilization method of pure culture preservation. **2½**
- b) Explain different types of media. **2½**
- c) Write about basic nutritional requirement of microorganism. **2½**
- d) Classify the bacteria based on carbon source. **2½**
4. Describe the physical method of microbial control. **10**
- OR**
- a) Give the characteristics of ideal disinfectant. **2½**
- b) Write about gaseous agent to control microbial growth. **2½**
- c) Explain the action of phenol and phenolics compounds. **2½**
- d) Explain the working of Autoclave for sterilization. **2½**

5. Answer **any ten** of following.

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- a) What is resolving power?
- b) What is Numerical Aperture?
- c) What is Focal point and focal length?
- d) What is Mordant? Give example.
- e) Name the stain used in negative staining.
- f) Name the stain used in endospore staining.
- g) What is heterotrophs?
- h) What is selective media? Give example.
- i) Name the stock culture collection centers in India.
- j) What is microbicidal agents?
- k) What is incineration?
- l) What is Germicide?
