

MIC-02 - Microbiology Paper-II (Microscopy And Microbial Techniques)

P. Pages : 2

Time : Three Hours



GUG/S/19/1217

Max. Marks : 50

1. Write detail about the phase contrast microscope. **10**

OR

Write about **10**

a) Acid fast staining

b) Flagella staining

2. Write about different methods of maintenance and preservation of pure culture. **10**

OR

Describe the mechanism of cell injury. **10**

3. a) Explain the principle of dark field microscope. **2½**

b) Describe the process of Negative staining. **2½**

c) Write about streak plate method. **2½**

d) Write a short note on a Radiation as a physical sterilization. **2½**

OR

e) Write the working principle of electron microscope. **2½**

f) Explain the principle of Gram staining. **2½**

g) Describe any one methods of preservation of pure culture. **2½**

h) Explain oligodynamic action. **2½**

4. a) Draw a ray diagram of Fluorescent microscope. **2½**

b) Describe staining of Fungi **2½**

c) Write a short notes on serial dilution. **2½**

d) Write the characteristic of ideal disinfectant. **2½**

OR

- e) Write about optical part of compound microscope. 2½
- f) Describe classification of stain. 2½
- g) Describe methods of isolation of pure culture by using selective media. 2½
- h) Explain phenol coefficient experiment. 2½
5. a) Define Numerical aperture. 1
- b) What is Refractive index. 1
- c) Write the use of phase contrast microscope. 1
- d) What is mordant? Give example. 1
- e) Give two example of acidic and basic dye respectively. 1
- f) Define chromophore. 1
- g) What is lyophilization. 1
- h) Which instrument is used for isolation of single cell. 1
- i) Explain mixed culture and axenic culture. 1
- j) Explain disinfectant. 1
- k) Write any two gaseous agent used for sterilization. 1
- l) Write the source of radiation for microbial control. 1
