

- NB: (1) Question No.1 is compulsory
(2) Attempt any three questions out of remaining five questions
(3) Each question carries equal marks
(4) Illustrate answers with sketches wherever required

- Q1. Write short note on the following 20M
a) Algae
b) Kinetics of Growth
c) Hot-air Oven
d) Differential media.
- Q2. a) Write a note on nutritional requirements of microorganisms with an example of media. 10M
b) Describe the characteristics of fungi, molds and yeasts with suitable diagram 10M
- Q3. Write a note on the following
a) Growth of Industrial fermentation 6M
b) Bacterial invasion and colonization 6M
c) Classification of bacterial species. 8M
- Q4. a) Explain the effect of oxygen and hydrostatic pressure on microbial growth. 6M
b) Discuss Continuous culture, Batch culture & Measurement of growth 8M
c) Differentiate between chemostat and turbostat. 6M
- Q5 a) Explain the role of aldehydes & hypochlorites in sterilization. 5M
b) Radiations can be used to control the growth of microorganisms. Justify 5M
b) What is meant by epidemiology of any disease. Discuss giving examples 10M
- Q6 a) Describe ANY 2 techniques for isolation of pure cultures. 10M
(b) Microbes in the soil are viewed as key 'engines' that drive the Earth's biogeochemical cycles. Justify 10M
