

(3 Hours)

Total Marks-80

- (1) Question No.1 is Compulsory.  
 (2) Solve any three question out of remaining questions.  
 (3) Draw suitable diagram wherever necessary

Q.1 Write short notes on the following ( Attempt any Four)

(5X4= 20M)

- a) Cell Wall of gram -ve bacteria  
 b) Aerobic Microorganism  
 c) Thermal Death Point  
 d) MPN Test  
 e) Turbidostat  
 f) Koch's Postulates

Q.2 a) Discuss about the various types of medias which are used for culturing microorganisms.

(10M)

b) Discuss the effect of solutes, temperature and ion concentration on microbial growth.

(10M)

Q.3 a) What is the difference between continuous culture and batch culture? Explain?

(10M)

b) What are the various chemical methods for controlling microorganisms?

(10M)

Q.4 a) Draw a typical bacterial cell, identify all parts and write function of each part?

(10M)

b) Write various differences between a prokaryote and an eukaryote?

(10M)

Q.5 a) List six ways in which fungi are economically important to us?

(6M)

b) List the difference between Gram positive and Gram negative bacteria?

(6M)

c) Describe the scope of microbiology in genetic engineering &amp; biotechnology?

(8M)

Q.6 a) Both the botulinum toxin and the tetanus toxin are neurotoxins: however they act in entirely different ways. What difference occurs between their mechanisms of action?

(10M)

b) Write a note on microbial nutrition?

(10M)

X