

Registration No :

--	--	--	--	--	--	--	--	--	--

Total Number of Pages : 01

B.Tech
PCE5H001

5th Semester Regular / Back Examination 2019-20

BIOTECHNOLOGY

BRANCH : CHEM

Max Marks : 100

Time : 3 Hours

Q.CODE : HRB282

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Write a commonly used method for isolation of pure culture of bacterium.
- Name two gram negative Bacteria?
- What is sewage purification?
- Write the function flagella in bacteria?
- What is Antibiotic? Enlist the name of two antibiotic.
- Give the application of microbiology in agriculture.
- What is generation time?
- What do you understand by sanitary examination of water?
- What is differential staining?
- Draw and label properly bacterial growth curve.

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Explain briefly the structure and functions of bacterial cellwall.
- Explain the types of bacteria in water?
- Describe nutritional classification of bacteria?
- What is selective media? Elaborate with suitable examples?
- Describe the structure & chemical composition of gram -ve bacterial cell wall.
- Write notes on microbial associations and interactions?
- Define Pure Culture, Enlist the methods for of pure culture.
- Explain the various types of bacterial reproduction.
- Discuss the structure and properties exhibited by bacterial endospore.
- Describe the structure & functions of pili & fimbriae.
- Explain the role of Mac conkey's agar as selective and differential medium.
- Give the methods for growth determination by cell count.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Discuss about the Fundamentals of microbial ecology and ecosystems?

Q4 Explain in detail about the Classification and Identification criteria for bacteria? (16)

Q5 What is bioinoculants? Discuss the role of bacteria in agriculture? (16)

Q6 Discuss the role of microbes in food & dairy industries. (16)