

Bankura University
B.Sc 4th Semester (Honours) Theory Examination,2021
SUB: Microbiology

Course ID: 42211

Course Code: SHMCB/401/C-8

Course Title: Microbial Genetics

Full Marks: 25

Time:1h.15min

The figures in the margin indicate full marks

Answer all the questions.

UNIT I

1. Answer *any five* of the following questions: 1 x 5 =5
- a) What is plasmid incompatibility?
 - b) What is the function of Ti plasmid?
 - c) What is transversion?
 - d) What is lysogenic conversion?
 - e) Give example of a chemical mutagen.
 - f) What is point mutation?
 - g) What is plasmid curing?
 - h) Name a bacterium that possess linear chromosome.

UNIT II

2. Answer *any 2*. of the following questions: 5 x 2=10
- a) How does plasmid differ from episome ? Characterize F plasmid. 2+3=5
 - b) Mention the proteins that are associated to bacterial chromosomes. How do they bring folding in the bacterial chromosome? 2+3=5
 - c) What are IS elements? What is transposon tagging? 2+3=5
 - d) Describe the process of Ame's test used to screen carcinogenic substances.

UNIT III

3. Answer *any one* of the following questions: 10 x 1=10
- a) What are Hfr strains? What will be the result of a cross between Hfr^+ and F^- cells? Explain with suitable sketch. 2+8=10
 - b) What is replica plating? How can you isolate auxotrophic mutants with the help of replica plating? 2+8=10