

**U.G. 2nd Semester Examination - 2021****Molecular Biology & Biotechnology****[HONOURS]****Generic Elective (GE)****Course Code : MBG-201-T-CC-4****(Microbiology)**

Full Marks : 20

Time : 1 Hour

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** questions : 1×5=5
- What is diauxic growth of bacteria?
  - Name one example of Halophile and one example of Thermophile.
  - Write one method of food preservation.
  - What is 'nucleocapsid'?
  - Which organism spoils pasteurized milk?
  - What is the difference between synchronous growth and asynchronous growth?
  - What are Chemolithotrophs? Give example.
  - Name one plant virus and one animal virus.

*[Turn over]*

2. Answer any **one** question: 5×1=5
- Why is pure culture of microorganisms required in the laboratory? Discuss how you isolate a pure culture of bacteria in your laboratory. 2+3=5
  - What are flagella? Briefly describe a flagella with proper diagram. 1+4=5
  - Define growth curve. How generation time is calculated from the growth curve? 1+4=5
3. Answer any **one** question: 10×1=10
- How bacterial growth can be controlled using chemical agents? Define endospore. Write a detailed note on endospore formation. 5+1+4=10
  - What is cheese? What are the basic requirements for cheese fermentation? Briefly outline the industrial method for cheese production. Name the suitable microorganisms used for this. 2+3+4+1=10
  - Briefly describe about the molecular structure of one plant virus. Differentiate between the lytic and lysogenic cycle of viral replication. 5+5=10