

U.G. 2nd Semester Examination - 2022**Molecular Biology & Biotechnology****[PROGRAMME]****Course Code : MBG-201-T-CC-4**

Full Marks : 40

Time : 2½ Hours

*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 : 2×5=10
- What do you mean by chemostat?
 - Write down the name of two physical methods which are used for control of bacteria?
 - What is vibroid?
 - Write down the name of two chemical food preserver.
 - What do you mean by lag phase of bacterial growth?
 - What is the causative agent of Cholera? Write about its pathogenesis.
 - What do you mean by mesophilic and hyperthermophilic bacteria?
 - Write down the Koch's Postulate.

2. Answer any **two** questions: 5×2=10
- Explain the principle of autoclave. What are the precautions needed during use of autoclave? 3+2
 - Differentiate between Gram positive and Gram negative bacteria. During Gram staining, what stain Gram positive and Gram negative bacteria takes and why? 2+3
 - What is total count and viable count of bacteria? What do you mean by binary fission? 2+3
 - Explain the canning process of food preservation. 5
3. Answer any **two** questions: 10×2=20
- Explain the structure and mechanism of flagellar movement. Give proper diagram. 10
 - What do you mean by hard cheese and soft cheese? Explain the cheese production procedure. 3+7
 - What is quorum sensing? How many types of culture media you know for bacterial culture? Explain. A bacterial culture has an initial density 0.5×10^3 cell/mint. It's generation time is 20 mints. What will be the cell density at 1hour 20mints? 3+3+4
 - Write down the structure of bacteriophage with proper diagram. What do you mean by fermentation? Write down some names of fermented milk food. 6+3+1

[Turn over]