

U.G. 4th Semester Examination - 2021
Molecular Biology & Biotechnology
Generic Elective (GE)
Course Code : MB-G-201-T-CC-2
(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
- a) What happens during binary fission in bacteria?
 - b) How is sterilization different from disinfection?
 - c) How can pH change be used to control the microbes?
 - d) What is positive sense RNA virus? Give examples.
 - e) Mention two uses of pasteurization.
 - f) What is asynchronous growth?
 - g) What is the function of capsule and slime layer?
 - h) What are photoautotrophs? Give examples.

2. Answer any **one** question: 5×1=5
- a) Briefly state the production of yoghurt showing a flow diagram. What type of culture is used for yoghurt making? 4+1=5
 - b) Define culture media. Describe about different types of culture media used in microbiology with examples. 1+4=5
 - c) What are siderophores? Briefly discuss about different types of siderophores produced by microorganisms. 1+4=5
3. Answer any **one** question: 10×1=10
- a) Describe the downstream process associated with fermentative production of ethanol. What are the different types of raw materials used for ethanol production? Name the ethanol producing microorganisms. What should be the optimum pH in ethanol fermentation and how is it adjusted? 5+2+2+1=10
 - b) How are viruses classified depending on the shape of their capsid? What are the primary purposes of viral cultivation? Briefly describe various methods of cultivation of animal viruses. 3+2+5=10

c) Write brief notes (any **two**): $5+5=10$

i) Ripening of cheese

ii) Food borne diseases

iii) Gram staining
