

Reg. No.:



Name:

University of Kerala

U9081

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

FOOD TECHNOLOGY

UK2DSCFDT102 - Introduction to Microbiology

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	Identify the principles of atomic force microscopy (AFM).	RE	4
2	Name the different phases of the microbial growth curve.	RE	5
3	Illustrate the different types of viral classification.	UN	3
4	Identify the contributions of Louis Pasteur to microbiology.	UN	1
5	Give the factors that affect resolving power.	UN	4
6	Identify the characteristics of different types of fungi, such as yeasts and molds.	UN	2

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Differentiate between the cell wall of gram-positive and gram-negative bacteria.	UN	1
8	Differentiate between magnification and resolution in microscopy.	UN	4
9	Explain the significance of Antonie van Leeuwenhoek's discovery of microorganisms.	AP	1
10	Explain the principles of bright field microscopy.	AP	4

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) Describe the structure and	AP	3, 3

Qn No.	Question	CL	CO
	function of the T4 bacteriophage. OR B) Explain the unique characteristics of viruses that distinguish them from other microorganisms.		
12	A) Distinguish between prokaryotic and eukaryotic microorganisms, providing examples of each. OR B) Distinguish between the different branches of microbiology and their areas of focus.	AN	1, 1
13	A) Describe the process of asexual reproduction in fungi, including budding, fragmentation. OR B) Evaluate the factors that affect resolving power and limits of resolution, including wavelength of light, numerical aperture, and specimen preparation.	EV	2, 4
14	A) Explain the difference between gram-positive and gram-negative bacteria.	CR	1, 2

Qn No.	Question	CL	CO
	OR B) Explain the structure and function of the different parts of a fungus, including the hyphae, mycelium, and fruiting body.		