

Reg. No.:



Name:

University of Kerala

U9177

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

MICROBIOLOGY

UK2DSCMBY103 - Applied 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	Name the fungi involved in penicillin production	RE	4
2	Name any two bacteria that are used as biopesticides	RE	1
3	Expand BOD	UN	2
4	What is leavening	UN	3
5	Mention the primary function of biopesticides	UN	1
6	Which chemical is commonly used to disinfect drinking water	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	Describe the nutritional value of edible mushrooms	UN	3
8	What is the role of fermentation in lysine production	UN	4
9	How can COD measurements be used to evaluate the efficiency of wastewater treatment in an industrial plant	AP	2
10	A farmer wants to manage pest outbreaks in an eco-friendly way. How can viral pesticides help in this situation	AP	1

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) Demonstrate the production of Cyanocobalamin using a suitable organism OR B) Demonstrate the production of an antibiotic using a suitable microorganism	AP	4, 4
12	A) Analyse the process of fermentation in sauerkraut production, highlighting the key microorganisms involved and its health benefits	AN	3, 3

Qn No.	Question	CL	CO
	OR B) Analyze the nutritional and functional benefits of edible mushrooms in human diets		
13	A) Evaluate the differences between bacterial, viral and fungal pesticides based on their mechanisms of action. Which type is most effective for pest control and why? OR B) Evaluate the differences between symbiotic and non-symbiotic microorganisms in nitrogen fixation for plant growth promotion.	EV	1, 1
14	A) Create a plan to control diseases caused by pathogens in untreated sewage. Explain how your plan will protect public health. OR B) Design a monitoring plan using indicator organisms to assess water quality in a rural water supply system.	CR	2, 2