

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026****Seventh Semester****Biomedical Engineering****OBT352 - BASICS OF MICROBIAL TECHNOLOGY***(Common to Agricultural Engineering)***Regulations - 2021****Duration : 3 Hrs****Maximum : 100 Marks****PART – A(ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	Define microbes.	K1	1	2
2.	Which scientist developed the first vaccine, and for which disease?	K1	1	2
3.	List two methods of microbial preservation.	K1	2	2
4.	What is fermentation, and how is it used in the food industry?	K1	2	2
5.	Identify the type of pathogen that causes each of the following: Dengue, Malaria, and Diarrhea.	K1	3	2
6.	Write the key difference between an endemic and a pandemic.	K2	3	2
7.	Illustrate two key methods used to raise public awareness about Tuberculosis (TB) to promote early detection and prevention.	K2	4	2
8.	Differentiate between bioremediation and bioaugmentation.	K2	4	2
9.	Show the examples of fermented beverages produced by microbes.	K2	5	2
10.	Can you explain what is vermicompost and which microbes are involved?	K2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11. a	Explain the existence of microbes in different habitats with suitable examples.	K2	1	16
	Or			
b	Explain in detail the structure, characteristics, and significance of bacteria, fungi and viruses.	K2	1	16
12. a	i Write a note on radiation methods of sterilization.	K1	2	8
	ii List commonly used chemical agents of sterilization and their applications	K1	2	8
	Or			
b	i Describe the principle and applications of refrigeration and deep freezing in microbial preservation.	K2	2	8
	ii Differentiate between sterilization, disinfection and decontamination with examples.	K2	2	8
13. a	Summarize public health measures for preventing pandemic diseases with special reference to COVID-19 and HIV.	K2	3	16
	Or			
b	Compare and contrast the prevention and control methods of water-borne and vector-borne diseases.	K2	3	16
14. a	i Describe the harmful effects of microbes in food. How can food borne	K2	4	8

diseases be prevented?

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| ii | Discuss the role of microorganisms in composting and organic farming. | K2 | 4 | 8 |
| Or | | | | |
| b | Describe the diversity of microorganisms in marine ecosystems and their ecological significance. | K2 | 4 | 16 |
| Or | | | | |
| 15. a | Develop the role of microorganisms in the production of fermented products and pharmaceutical products. Include examples and applications. | K3 | 5 | 16 |
| Or | | | | |
| b | Analyze the processes involved in microbial production of curd, cheese, mushroom, beverages | K4 | 5 | 16 |
