

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

First Semester

Environmental Engineering

PEVT2402 - Environmental Microbiology

Regulations - 2024

Duration : 3 Hrs

Maximum : 100 Marks

PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	What is the basis on which microorganisms are classified? Give an example.	RE	1	2
2.	Define the term RNA.	RE	1	2
3.	What is meant by diversity of microorganisms?	RE	2	2
4.	Outline about an arche bacteria.	UN	2	2
5.	Differentiate between aerobic and anaerobic-fermentation.	UN	3	2
6.	What is the disruption in metabolism?	RE	3	2
7.	Describe α -oxidation.	UN	4	2
8.	Write about bioleaching.	RE	4	2
9.	Mention any two factors influencing toxicity of a chemical.	RE	5	2
10.	Define the term biomagnifications.	RE	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

Q.No	Questions	BLT	CO	Marks
11.	a i Classify microorganism and explain their characteristics.	UN	1	6
	ii Explain the effects of parasites on human health.	UN	1	7
	Or			
	b i Write a note on recombinant DNA technology.	UN	1	6
	ii Explain about the preservation technique of microorganisms.	UN	1	7
12.	a i What are the factors consider for distribution of microorganisms in different environments?	UN	2	9
	ii Describe about bio safety in laboratory.	UN	2	4
	Or			
	b i What is the bio chemical cycles?	UN	2	4
	ii Explain the components of nitrogen cycle.	UN	2	9
13.	a i Write in detail about the nutrition metabolism and growth phases in microorganisms.	UN	3	7
	ii Discuss about Kerdb's cycles.	UN	3	6

Or

	b	i	Discuss about oxidative phosphorylation.	UN	3	6
		ii	What are the factors considered for biodegradation of organic pollutants?	UN	3	7
14.	a	i	Explain about microbiology of biological treatment processes.	UN	4	7
		ii	Discuss about denitrification and eutrophication in waste water treatment systems.	UN	4	6
Or						
	b	i	Write in detail about various methods followed in biological methods in treatment of waste water.	UN	4	7
		ii	Explain about E-coli and streptococcus in waste water treatment systems.	UN	4	6
15.	a	i	What is meant by ecotoxicology?	UN	5	4
		ii	Discuss about factors influencing toxicity.	UN	5	9
Or						
	b	i	Explain in detail about bioconcentration.	UN	5	4
		ii	What is the significance of bio monitoring?	UN	5	9

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>	<i>Questions</i>			<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	i	Explain about control of microorganisms and also preservation of microorganisms.	UN	1	10
		ii	What is the role of microorganism in nutrient cycle?	UN	2	5
Or						
	b	i	Explain in detail about biodegradation of organic pollutants.	UN	3	5
		ii	Explain about microbiology of wastewater treatment systems.	UN	4	10