

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

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

Third Semester

Environmental Engineering

EV4017 - Fate and Remediation of Emerging Contaminants

Regulations - 2021

Duration : 3 Hrs

Maximum: 100 Marks

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

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Differentiate between priority and emerging contaminants.	UN	1	2
2.	What is the policy of aquaculture in India?	RE	1	2
3.	What are the sample preparation methods in pharmaceuticals?	RE	2	2
4.	Write the effects of brominated fire retardants in health.	UN	2	2
5.	Define volatilization with example.	RE	3	2
6.	What do you mean by environmental fate modelling frameworks?	AP	3	2
7.	What are the types of multi-phase extraction in remediation technologies?	RE	4	2
8.	Explain the bioaugmentation.	UN	4	2
9.	What are the objectives of environmental chemical fate and transport?	RE	5	2
10.	Write the emerging pollutants with examples.	UN	5	2

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

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain the sources and types of emerging contaminants in detail.	UN	1	8
	ii What is the occurrence for distribution in soils?	UN	1	5
	Or			
	b Describe the global regulatory frameworks and policies in remediation of emerging contaminants.	UN	1	13
12.	a Explain the analytical protocols for detection of personal care products.	UN	2	13
	Or			
	b What are the instruments used to characterize nanoparticles and explain any two methods in detail?	UN	2	13
13.	a Explain the leaching environmental assessment framework (LEAF) in detail.	UN	3	13
	Or			
	b i Describe the environmental fate models with neat sketches.	UN	3	7
	ii Write a short note on bio monitoring and biosensors.	UN	3	6

14.	a	Elaborate the incineration process in remediation of emerging contaminants.	UN	4	13
Or					
	b	Explain the bio augmentation strategy of industrial wastewater treatment technologies.	UN	4	13
15.	a i	Describe the environmental impacts and challenges in oil spills industry.	UN	5	8
	ii	What are the different environmental compartments in emerging contaminants?	UN	5	5
Or					
	b i	Explain the technological and policy approaches to emerging contaminants in detail.	UN	5	7
	ii	What are the main types of contaminants?	UN	5	6

*PART - C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Identify the risk assessment tools with examples.	AP	5	15
Or					
	b	Explain briefly emerging contaminants in food and food products with neat sketches.	AP	1	15