

P P SAVANI UNIVERSITY

Fifth Semester of B. Tech. Examination

November 2022

SECV3040 Environmental Engineering

29.11.2022, Tuesday

Time: 10:00 a.m. To 12:30 p.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.

SECTION - I

Q - 1	MCQ (Any Five)	[05]	CO	BTL
(i)	Which industries release particulate air pollutants along with harmless gases, such as nitrogen, oxygen, etc.? a) Oil industry b) Invitro Fertilization clinics c) Plant tissue culture labs d) Thermal power plants and smelters		1	2
(ii)	Which is the most widely used technique for removing particulate matter? a) Loudspeakers b) Growing trees c) Electrostatic precipitator d) Magnets	4		2
(iii)	What amount of noise may damage eardrums thus permanently impairing hearing ability? a) 10 dB b) 150 dB c) 15 dB d) 50 dB	4		1
(iv)	What is the impact of air pollution on plants? a) Infection in the lungs b) Irritation in eyes c) Reduce growth and yield of crops d) Deafening of ears	1		3
(v)	What are the agents that bring about such an undesirable change (pollution) are called? a) Pollutants b) Haptens c) Adjuvants d) Vaccine	1		1
(vi)	Ozone layer above earth's atmosphere:	1		1

	(a) Prevent infra-red radiation from sun			
	(b) Infra-red rays reflected from earth from escaping earth's atmosphere			
	(c) Prevent ultraviolet rays from sun			
	(d) Reflect back radio waves			
(vii)	Which of the following would be a natural pollution	1	2	
	(a) Forest fires			
	(b) Eutrophication			
	(c) Occurrence of smog			
	(d) Occurrence of NO ₂ in atmosphere			
Q - 2	What is Industrial Pollution? Describe the ways to control industrial pollution.	[05]	1	3
(a)				
Q - 2	Define Thermal Pollution and thermal shock. Describe its effects	[05]	1	2
(b)				
	OR			
Q - 2	Explain the sources of Thermal Pollution.	[05]	1	4
(a)				
Q - 2	Explain the different Types of radioactive waste	[05]	1	4
(b)				
Q - 3	Explain four main types of air pollution sources.	[05]	1	4
(a)				
Q - 3	What is biological pollution? how do they affect indoor air quality?	[05]	2	2
(b)				
	OR			
Q - 3	Name some pollutant which effects the tastes. Write few points on problem associated with taste due to Physiological Pollutants.	[05]	2	5
(a)				
Q - 3	Write control measures of water pollution.	[05]	3	3
(b)				
Q - 4	Attempt any one .	[05]		
(i)	List out the contaminant of air pollution. Explain sources and effect of any three pollutant.		2	4
(ii)	Describe the causes and effects of industrial pollution.		2	2
	SECTION - II			
Q - 1	MCQ (Any Five)	[05]		
(i)	Which section of The Environment (Protection) Act, 1986 deals with the Persons handling hazardous substances to comply with procedural safeguards?		2	1
	a) Section 12 of The Environment (Protection) Act, 1986			
	b) Section 9 of The Environment (Protection) Act, 1986			
	c) Section 14 of The Environment (Protection) Act, 1986			
	d) Section 20 of The Environment (Protection) Act, 1986			

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|-------|---|------|-----|
| (ii) | When did Air (Prevention and Control of Pollution) Act, 1981, come into force? | 2 | 1 |
| | a) 01 April 1986 | | |
| | b) 01 March 1986 | | |
| | c) 01 May 1986 | | |
| | d) 29 March 1981 | | |
| (iii) | The 'Municipal Solid Waste' Is the Term Used to Describe Which Kind of Solid Waste? | 1 | 2 |
| | a) Hazardous | | |
| | b) Toxic | | |
| | c) Non-hazardous | | |
| | d) Non-toxic | | |
| (iv) | How Does an Organic Material Decompose in the Buried Solid Waste? | 3 | 2 |
| | a) By the action of microorganisms | | |
| | b) By the action of oxidation | | |
| | c) By the soil particles | | |
| | d) By the flow of water | | |
| (v) | Identify the Wastes That Are Known as the Municipal Solid Waste (MSW) from the Following? | 1 | 3 |
| | a) Wood pieces | | |
| | b) Plastic cans | | |
| | c) Food wastes | | |
| | d) All of the above | | |
| (vi) | Which of the Following Methods is a Good One in Dealing With the Solid Waste Problem? | 1 | 3 |
| | a) Landfilling | | |
| | b) Recycling | | |
| | c) Both a and b | | |
| | d) None of the above | | |
| (vii) | Identify the Incorrect Statement from the Given List for Plastic Wastes? | 1 | 2 |
| | a) Plastic can be used to make compost | | |
| | b) It lasts for a longer time period | | |
| | c) Toxic fumes are produced when plastic is burnt | | |
| | d) All of the above | | |
| Q - 2 | What are effects of pesticides? How do pesticides and fertilizers affect the soil? How do pesticides affect soil? | [05] | 2 4 |
| (a) | | | |
| Q - 2 | Why Does Soil Become Infertile? | [05] | 2 5 |
| (b) | | | |
| | OR | | |
| Q - 2 | Explain causes effects and remediation of ground water. | [05] | 4 3 |
| (a) | | | |

- Q - 2 Write Concentration of Infecting Agents in Soil. [05] 2 1
(b)
- Q - 3 What are the six 6 elements of ISO 14001? [05] 2 1
(a)
- Q - 3 Write a short note on The Water (Prevention and Control of [05] 4 1
(b) Pollution). What is the main objective and feature of Water Act?
Explain the Water (Prevention and Control of Pollution) Cess Act.
OR
- Q - 3 Explain factors affecting waste generation rate. [05] 1 5
(a)
- Q - 3 Write a short note on waste handling and waste separation. [05] 2 2
(b)
- Q - 4 Attempt **any one**. [05]
- (i) What are the elements of solid waste management system. 2 2
- (ii) Explain how the strength and volume of industrial wastewater can be 4 3
reduced.

CO : Course Outcome Number

BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create