

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025  
(Second Semester)

Branch - ENVIRONMENTAL SCIENCE

**WATER POLLUTION AND MANAGEMENT**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	An aquiclude can a) absorb water                      b) Repels water c) be impermeable to water      d) be a rock system	K1	CO1
	2	The 'C' Henry's law equation is associated with a) Constant temperature b) Concentration of water molecules c) Concentration of dissolved gases d) Universal gas constant	K2	CO1
2	3	The method of dissolved oxygen identification is _____. a) Walkey Black method              b) EDTA method c) Fenton reagent method            d) Winkler's method	K1	CO2
	4	In the thermally stratified lake, Hypolimnion is a) Top layer                              b) Middle layer c) Bottom layer                          d) Aphotic layer	K2	CO2
3	5	Fluoridation is a process done to prevent a) Bone damage                          b) Skin damage c) Skin irritation                          d) Tooth decay	K1	CO3
	6	What is the threshold of BIS standard for faecal coliforms in potable water ? a) <100 cells in 100 ml                  b) <10 cells in 100 L c) <10 cells in 100 ml                  d) <50 cells in 100 ml	K2	CO3
4	7	Reverse osmosis technique removes ____ from water. a) Pathogens                              b) Dissolved salts c) Dissolved gases                      d) Grits	K1	CO4
	8	Biogas is produced through a) Aerobic process                          b) Pyrolysis c) Incineration                              d) Anaerobic process	K2	CO4
5	9	The term carbon footprint refers to _____. a) Sequestered carbon b) Amount of greenhouse gases generated c) Organic carbon available d) Total amount of carbon on earth	K1	CO5
	10	The biofilm reactors employ the use of a) Nanofiltration membrane              b) Microorganisms c) Filtration Membranes                  d) Reverse osmosis	K2	CO5

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**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Write a short note on the distribution of water on earth.	K2	CO1
		(OR)		
	11.b.	Give an account on the water table and types of aquifers.		
2	12.a.	Briefly demonstrate the stratification in lakes.	K2	CO2
		(OR)		
	12.b.	Outline the salient features of water quality parameters and analysis techniques.		
3	13.a.	Describe the primary water treatment technologies.	K3	CO3
		(OR)		
	13.b.	Enumerate the chemical methods of water purification.		
4	14.a.	Explain the biogas production and applications.	K3	CO4
		(OR)		
	14.b.	Examine the membrane filtration techniques and potable water safety.		
5	15.a.	Discuss on carbon footprint in water treatment plants.	K4	CO5
		(OR)		
	15.b.	Explain the different types and criteria involved in water audits.		

**SECTION - C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Explain the various water conservation strategies in India.	K3	CO1
2	17	What is meant by thermal pollution? How do they affect aquatic life?	K3	CO2
3	18	Evaluate the drinking water standards and optimum ranges.	K4	CO3
4	19	Explain the various stages of sludge management and treatment methods.	K4	CO4
5	20	Can wastewater be treated and reused? Explain the methods and the challenges involved in waste water treatment.	K5	CO5

Z-Z-Z

END