Reg. No.															

B.Tech. DEGREE EXAMINATION, MAY 2024

Sixth & Seventh Semester

18CEO405T – WATER POLLUTION AND ITS MANAGEMENT

(For the candidates admitted during the academic year 2018-2019 to 2021-2022)

Note:

(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours | Max. Marks: 100

PART – A (20 × 1 = 20 Marks)

Answer **ALL** Questions

	Marks	BL	CO	PO
1. In India, responsibility for monitoring water quality of surface water sources primarily lies with (A) Central Water Commission (CWC) (B) Central Pollution Control Board (CPCB) (C) Central Ground Water Board (CGWB) (D) Central Public Health and Environmental Engineering Organization (CPHEEO)	1	1	1	1
2. The waste water generated from kitchens, bathrooms and washbasins alone is known as (A) Sewage (B) Sanitary sewage (C) Sullage (D) Night soil	1	1	1	1
3. Bacteria in water causes _____. (A) Dengue (B) Typhoid (C) Hepatitis B (D) Chicken guinea	1	1	1	1
4. Eutrophication is caused by (A) Sewage and detergents (B) Petrochemicals and fertilizers (C) NO-11 and SO-24 present in acids (D) Mine effluents	1	1	1	1
5. If the concentration of dissolved oxygen is zero in natural drainage, it indicates the zone of (A) Active decomposition (B) Degradation (C) Recovery (D) Cleaner water	1	1	2	1
6. The range of pH suitable for fishers is considered to be (A) 5-9 (B) 6-9 (C) 6.5-8.5 (D) 7-8	1	1	2	1
7. Excess fluoride in drinking water leads to (A) Typhoid problems (B) Kidney and liver damage (C) Methemoglobinemia (D) Mental retardation	1	1	2	1

8. Biochemical oxygen demand in drinking water should be 1 1 2 1
   (A) 5 (B) 2
   (C) 0 (D) 1

9. Which type of solids floats in sewage? 1 1 3 1
   (A) Suspended solids (B) Settleable solids
   (C) Dissolved solids (D) Total solids

10. Which is the most common coagulant widely used for treatment of textile waste? 1 1 3 1
   (A) Ferric sulphate (B) Coal
   (C) Lime stone (D) Alum

11. Which one among the following is considered as major source of thermal pollution? 1 1 3 1
   (A) Effluents from treatment plant (B) Discharge from power plant
   (C) Waste-water from sugar industry (D) Oil spill from industries

12. Screening is the _____ treatment adopted in wastewater treatment. 1 1 3 1
   (A) Primacy (B) Secondary
   (C) Tertiary (D) Addition

13. The Water Cess Act was established on 1 1 4 1
   (A) December 7, 1977 (B) December 10, 1977
   (C) November 7, 1977 (D) November 10, 1977

14. The Environmental Protection Act was formulated in the year 1 1 4 1
   (A) 1984 (B) 1986
   (C) 1988 (D) 1990

15. Which among the following index reflects the quality of both stream and stream process? 1 1 4 1
   (A) Water quality index (B) Environmental indices
   (C) Public indices (D) Statistical indices

16. The total number of sections in chapter VII in the Water Act (Prevention and control of pollution) 1974 is 1 1 4 1
   (A) 7 (B) 14
   (C) 3 (D) 10

17. The condition where the available unpolluted water within a region is lesser than that of the region's demand? 1 1 5 1
   (A) Water crisis (B) Day zero
   (C) Eco day (D) Water deficit

18. Rainwater harvesting helps to increase 1 1 5 1
   (A) Precipitation (B) Surface water
   (C) Evaporation (D) Ground water

19.	Which of the following can be identified as the objective of water supply scheme? (A) Chlorination of water (B) Treatment of water (C) Ionization of water (D) Safe water supply	1	1	5	1
20.	The development that meets the needs of the present without comprising the ability of future generations to meet their own needs is called (A) Sustainable development (B) Economic development (C) Community development (D) Political development	1	1	5	1

PART – B (5 × 4 = 20 Marks)
Answer **ANY FIVE** Questions

		Marks	BL	CO	PO
21.	List out the causes and issues in light and thermal pollution.	4	2	1	1
22.	Write short note about hardness and dissolved oxygen.	4	2	2	1
23.	Describe briefly about thermal pollution and its adverse effects.	4	2	3	1
24.	List out the various software used in water quality modelling, with neat sketch.	4	2	4	1
25.	Briefly discuss the role of pollution control board.	4	3	4	1
26.	Why public awareness is essential to reduce water pollution?	4	3	1	1
27.	Write short note about micro and macro level rainwater harvesting.	4	3	5	1

PART – C (5 × 12 = 60 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
28. a.	Explain in detail about eutrophication and its process with neat sketch.	12	3	1	1
	(OR)				
b.	Explain in detail about various water sampling methods.	12	3	1	1
29. a.	Write in detail about and chemical and biological characteristics of waste water.	12	2	2	3
	(OR)				
b.	Explain in detail about ground water pollution and write the impact of effluent in ground water quality.	12	2	2	3
30. a.	Write in detail about mitigation measure for water pollution contamination due to industries.	12	3	3	12
	(OR)				
b.	Explain in detail about the water quality monitoring and its significance.	12	3	3	12

31. a.	Explain in detail about various types of water quality index.	12	2	4	12
	(OR)				
b.	Examine in detail about management strategy used for water conservation.	12	2	4	12
32. a.	Explain in detail about rain water harvesting methods and its importance.	12	3	5	7
	(OR)				
b.	Describe in detail about water management challenges in India.	12	3	5	7

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