

(6 pages)

Reg. No. : .....

Code No. : 10457 E Sub. Code : CNCH 32

U.G. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Third Semester

Chemistry

Non Major Elective – WATER MANAGEMENT

(For those who joined in July 2021 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The part of wastewater that is contaminated with feces is known as
  - (a) sewage water
  - (b) industrial water
  - (c) dye pollutants
  - (d) all the above

7. A process that requires the presence of oxygen is known as
  - (a) anaerobic
  - (b) aerobic
  - (c) primary
  - (d) secondary
8. The change in form of materials dissolved in water into solid particles is termed as
  - (a) chemical precipitation
  - (b) coagulation
  - (c) filtration
  - (d) osmosis
9. Ganga action plan was started in
  - (a) 1986
  - (b) 1996
  - (c) 2006
  - (d) 1970
10. To conserve rainwater by collecting, storing is called as
  - (a) Pollution prevention
  - (b) Water prevention
  - (c) Rain water harvesting
  - (d) All the above

Page 3 Code No. : 10457 E

2. Increasing the amount of plant and algae growth to coastal waters leads to
  - (a) pollution
  - (b) hazardous
  - (c) eutrophication
  - (d) detergent pollution
3. Which one of the following is a quality parameter for water?
  - (a) temperature
  - (b) pH
  - (c) dissolved solids
  - (d) all the above
4. Biological parameter of water quality include
  - (a) algae
  - (b) phytoplankton
  - (c) (a) and (b)
  - (d) sewage indication
5. The process of cleaning the water with a chemical, in order to destroy bacteria is called as
  - (a) Filtration
  - (b) Disinfection
  - (c) Coagulation
  - (d) Sedimentation
6. The process of removing salts from seawater is called as
  - (a) filtration
  - (b) disinfection
  - (c) desalination
  - (d) coagulation

Page 2 Code No. : 10457 E

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).  
Each answer should not exceed 250 words.

11. (a) Explain the types of water pollutants.  
Or  
(b) Describe the eutrophication and its effects.
12. (a) Account on the WHO standards for drinking water.  
Or  
(b) How will you determine the pH of drinking water?
13. (a) Discuss on sedimentation.  
Or  
(b) Write a note on reverse osmosis.
14. (a) Explain Chemical precipitation.  
Or  
(b) How the chemical processes are useful in waste water treatment?
15. (a) List out the objectives implementation and drawbacks of ganga action plan.  
Or  
(b) Write a note on water recycling.

Page 4 Code No. : 10457 E

[P.T.O.]

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).  
Each answer should not exceed 600 words.

16. (a) (i) Discuss on the sewage and domestic wastes. (5)  
(ii) Write a note on detergents. (3)

Or

- (b) (i) How the industrial effluents are hazardous to the environment? (6)  
(ii) Define. Pathogens. (2)
17. (a) (i) Illustrate the water quality standards for drinking water. (6)  
(ii) Define. Total hardness. (2)

Or

- (b) Discuss on the following:  
(i) BOD  
(ii) COD.
18. (a) (i) Explain Flocculation. (5)  
(ii) Write a note on filtration. (3)

Or

- (b) (i) How the disinfection process is useful in the process of drinking water? (4)  
(ii) Write a note on water softening. (4)

Page 5 Code No. : 10457 E

19. (a) (i) Explain: Aerobic and anaerobic processes. (5)  
(ii) Discuss shortly on waste water treatment. (3)

Or

- (b) (i) Discuss on evaporation adsorption. (4)  
(ii) Explain. Chemical precipitation. (4)
20. (a) (i) Elaborate the concept of rain water harvesting. (5)  
(ii) Write the significance of rivers. (3)

Or

- (b) (i) Write the water prevention and control of pollution act 1974. (5)  
(ii) Write a short note on drip irrigation. (3)

Page 6 Code No. : 10457 E