

Register No:

B.E. DEGREE EXAMINATIONS: APRIL 2011

Sixth Semester

CIVIL ENGINEERING

U07CE601: Environmental Engineering –II

Time: Three Hours

Maximum Marks: 100

Answer All Questions:

PART A (10 x 1= 10 Marks)

1. Sullage is a term used to indicate the waste water from
(a) Washing places (b) decayed waste (c) Market places (d) rain water
2. The design of sewers is done on the basis of the following hydraulic formulae
(a) Rankin's formula (b) Manning's formula
(c) Arithmetic method (d) estimating method
3. Aerobic decomposition may be caused by
(a) Absence of O₂ (b) presence of air (c) Absence of air (d) absence of O₂ and air
4. DO is the amount of O₂ in the
(a) Dissolved state (b) solid state (c) Semi-solid state (d) discrete form
5. The suspended solids in treated waste water are in part colloidal
(a) Part discrete (b) part dissolved (c) Part solid (d) part liquid
6. Techniques used for reduction of suspended solids concentration are
(a) Micro screening (b) screening (c) Chlorination (d) air stripping
7. The purpose of thickening is to reduce
(a) Waste (b) moisture content (c) Foul gases (d) solid concentration
8. Elutriation is, literally
(a) Washing of the sludge (b) recycling of the sludge
(c) Drying of the sludge (d) heating of the sludge
9. A Floor trap is commonly known as
(a) gully trap (b) nahni trap (c) Intercepting trap (d) grease trap
10. The slope of the drain should be sufficient to develop
(a) air locks (b) self cleansing velocity (c) Friction (d) viscosity

PARTB (10 x 2 = 20 Marks)

11. Define garbage.

12. Which type of sewer is used to collect the sewage from house?
13. How can turbidity determined?
14. What is the function of girt chamber?
15. What is the aim of advanced waste water treatment process?
16. How can the phosphorous contaminant removed?
17. Write the end products of waste water treatment plant?
18. Define lagoon.
19. Define trap.
20. Write the use of ventilating pipe?

PART C (5 x 14 = 70 Marks)

21. (a) Explain in detail the system of sewerage.

(OR)

- (b) What are the factors to be considered while selecting a particular material of a sewer?

22. (a) Explain the characteristics of sewage

(OR)

- (b) Write with a neat sketch about the trickling filters

23. (a) Write the differences between conventional and high rate anaerobic systems.

(OR)

- (b) Write the working principles of anaerobic filters.

24. (a) Explain the sludge treatment techniques.

(OR)

- (b) Explain various sewage farming methods.

25. (a) Explain the sanitary fittings with neat sketches.

(OR)

- (b) Explain one pipe system and two pipe system
