



B.E DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2009)

Fifth Semester

CIVIL ENGINEERING

CEE116: Environmental Engineering I

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The design period for water supply project is taken as
 - a) 5 – 10 year
 - b) 20 – 30 year
 - c) 10 – 15 year
 - d) 50 – 60 year
2. A water sample is termed turbid when it _____.
 - a) is rich in suspended solids
 - b) fails to transmit light through it
 - c) is rich in both suspended and colloidal solids
 - d) is rich in total solids
3. _____ is an example for aquifuge
 - a) Sandy clay
 - b) Marble rock
 - c) Clay layer
 - d) Granite rock
4. Slotted pipe screens with prepack filters are called _____.
 - a) Ashim Filter
 - b) Pipe strainer
 - c) Strainer
 - d) Louver type strainer
5. The cast iron water mains are _____.
 - a) Durable
 - b) Liable to corrosion
 - c) Resist high pressure
 - d) Resist low pressure
6. The purpose of stand pipe _____.
 - a) increases storage capacity of water
 - b) helps in intermittent supply system
 - c) helps fire fighting
 - d) boosts pressures in pipes
7. Coagulant is a must before letting water into _____.
 - a) slow sand filter
 - b) rapid sand filter
 - c) pressure filter
 - d) both rapid sand and pressure filter

(OR)

- b) i) Explain dug well and its types. How are dug wells constructed? (8)
- ii) Write short notes on Infiltration wells and Infiltration galleries (6)

23. a) Explain in detail the procedure of laying and testing of water supply pipe lines.

(OR)

- b) i) Discuss the factors to be considered in the selection of a pump. (7)
- ii) Discuss the situation under which following types of pumps may be used? (7)
Centrifugal pump and Air lift pump

24. a) State the theory of sedimentation and list the design criteria for sedimentation tank.

(OR)

- b) Design rapid sand filter for treating 10 million litres of water per day. Assume any other data if necessary and mention the same.

25. a) Explain the Hardy cross method used for pipe network analysis in water distribution systems and state the limitations of Hardy cross method?

(OR)

- b) Discuss in detail about the types of distribution reservoirs with neat sketch.
