

**D 1231**

**(Pages 2)**

**Name.....**

**Reg. No.....**

**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, DECEMBER 2009**

**CE 04 703—ENVIRONMENTAL ENGINEERING**

**(2004 admissions)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Part A**

1. Briefly explain the development and protection of ground water sources.
2. Describe the term "evapotranspiration".
3. Explain the factors affecting per capita demand.
4. Briefly explain the factors affecting consumption of water.
5. Describe the uses of activated carbon in the treatment of water.
6. Differentiate between Temporary and Permanent hardness.
7. Explain the methods of detection and prevention of leaks in distribution system.
8. Briefly explain the classification of pumps.

**(8 × 5 = 40 marks)**

**Part B**

9. During a recuperation test, the water level in an open well was depressed by pumping by 2.5 metres and is recuperated by an amount of 1.6 metres in 70 minutes. Determine.

- (i) The yield from a well of 3 m diameter under a depression head of 3.5 metres.
- (ii) The diameter of well to yield 10 litres per second under a depression head of 2.5 metres.

**(15 marks)**

**Or**

10. What is infiltration process ? And explain the measurement using infiltrometer.

**(15 marks)**

11. Explain the physical, Chemical and Bacteriological analysis of water.

**Or**

12. List out the water conservation techniques and explain any two of it.

**(15 marks)**

**Turn over**

13. List out the steps involved in treatment of water and explain it briefly.

(15 marks)

*Or*

14. Write short notes on :

(i) Fluoridation.

(ii) Defluoridation.

(15 marks)

15. Write short notes on "Hardy-cross method".

(15 marks)

*Or*

16. Briefly explain the methods of transmission of water.

(15 marks)