Roll No .....

CE - 603

B.E. VI Semester

Examination, December 2015

Environmental Engineering - I

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What do you understand by fire demand?
   b) What are the various types of water demands?
   c) What do you understand by per capita demand?
   d) Mention and discuss the factors that influence per capita demand?

   OR

   Compute the population of the year 2000 and 2006 for a city whose population in the year 1930 was 25,000 and in the year 1970 was 47,000. Make use of geometric increase method?

2. a) What are the common impurities found in natural sources of water?
   b) What do you understand by turbidity?
   c) Why are some diseases called water borne?

   d) Enumerate and discuss in brief the various physical, chemical and bacterial characteristics of testing of raw water supplies?

   OR

   State the permissible limits for fluorides in water to be supplied for domestic consumption. Mention the ill-effects when they are not in the permissible limits?

3. a) What do you understand by detention period in a sedimentation basin?
   b) What do you understand by break point chlorination?
   c) Explain water aeration.
   d) Describe briefly the various constituents of a coagulation sedimentation plant.

   OR

   Discuss how a slow sand filter differ from rapid sand filter.

4. a) What do you understand by stand pipes?
   b) What do you understand by distribution reservoirs?
   c) Write a note on metering in distribution systems.
   d) Explain Hardy Cross Method.

   OR

   State the functions of a service reservoir?

5. a) What do you understand by check valve?
   b) What do you understand by pressure release valve?
   c) Explain water pollution control act.
   d) Describe the methods for financing and management of water supply project.

   OR

   Explain water carriage system in detail.

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