Code No: R1632013 **R16** SET - 1

III B. Tech II Semester Supplementary Examinations, November - 2019

ENVIRONMENTAL ENGINEERING – I

(Civil Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A **(14 Marks)**

1. a) What is meant by coincident draft? [2M]
   b) Write the types of water bearing formations. [2M]
   c) What is the objective of water supply system? [2M]
   d) What is the purpose of coagulation? [3M]
   e) What do you mean by disinfection? [3M]
   f) Mention any three pipe appurtenances. [2M]

PART –B **(56 Marks)**

2. Define the term "per capita demand". Write the factors affecting "per capita demand" and state the reasons for variations in demand. [14M]

3. Draw a neat sketch of canal intake and explain the working principle. State its merits and demerits. [14M]

4. What are the factors to be considered in the selection of source for a water supply scheme? How does the quality of groundwater differ from surface water? Explain. [14M]

5. Water has to be purified for a town whose daily demand is 9×10^6 liters/day. Design a suitable sedimentation tank of the water works fitted with sludge remover. Assume the velocity of flow, in the sedimentation tank as 22 cm/min and the detention period as 8 hrs. [14M]

6. a) Describe the applications of Nano filtration. [7M]
   b) Explain in detail about reverse osmosis. [7M]

7. What are the differences between Gravity system of distribution and pumping system of distribution? Explain. [14M]

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