

**1127****Code : 15CE32T***Register  
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**III Semester Diploma Examination, Nov./Dec.-2018****WATER SUPPLY ENGINEERING****Time : 3 Hours |****| Max. Marks : 100**

- Note :** (i) Answer any **six** questions from Part – A.  
(ii) Answer any **seven** questions from Part – B.

**PART – A**

1. Define Ecology and Ecosystem. Name the Biotic and Abiotic components of an ecosystem. 5
2. Explain necessity and objectives of water supply system. 5
3. List the different types of test conducted on water. 5
4. Write a short note on water-borne diseases. 5
5. Mention the requirements of good distribution system. 5
6. What are the advantages of dead end method of distribution system ? 5
7. Explain with a neat sketch water meter. 5
8. Explain the term conservation of rain water. 5
9. Define water pollution. State the effects of water pollution. 5

## PART - B

10. What is an intake ? Explain river intake with a neat sketch. 10
11. The following data have been observed from census records of a city. 10

Sl. No.	Year	Population
1	1960	26000
2	1970	34500
3	1980	41500
4	1990	53000
5	2000	62500
6	2010	81000

Estimate the population of the year 2020, 2030, 2040 & 2050 by Geometrical increase method.

12. Explain with a neat sketch different types of pipe joints. 10
13. Explain with a neat sketch the construction and working of rapid sand filter. 10
14. (a) What is turbidity ? Explain how turbidity test is conducted on water. 5  
(b) Draw the flow diagram of different units of treatment of water. 5
15. (a) Explain the methods of disinfection of water. 5  
(b) Estimate the quantity of Alum required by 15 MLD of water at treatment plants, when 15 mg/L of Alum required. 5
16. (a) What is the necessity of pipe Appurtenances ? Explain the function of fire hydrant. 5  
(b) What is surface reservoir ? Draw the neat sketch of a surface reservoir. 5
17. (a) Draw a neat sketch, the connection of water supply arrangements for a single story building. 5  
(b) Write a short note on supply pipe, distribution pipe and solar water heater. 5
18. (a) List the various methods of recharging Ground water aquifer. 3  
(b) What are the advantages of ground water recharge through Rain water Harvesting ? 7
19. (a) Explain the sources of water pollution. 5  
(b) Write a short note on Water Pollution Control Acts. 5