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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T1- EXAMINATION (Summer Semester – June 2018)
B. Tech. (V- SEM.)

COURSE CODE: 10B11CE514 MAX. MARKS: 50
COURSE NAME: Water Supply Engineering
COURSE CREDIT: 4 MAX. TIME: 2 HRS

Note: Attempt all questions. Assume suitable data if required. Carrying of mobile phone during examinations will be treated as case of unfair means

1. With a neat flow-sheet, discuss how you will plan for setting up a new water treatment scheme for a city. In this context, also discuss the different factors affecting the demand of water. **(5+5)**

2. The following information has been received from a census data **(10)**

Year	Population
1971	84000
1981	115000
1991	160000
2001	205000
2011	250000

Determine the population using (a) arithmetic (b) geometric (c) incremental increase of growth method.

3 For three consecutive decades the population of a town was 1, 00,000; 1, 60,000; and 2, 00,000 respectively. Determine (a) saturation population (b) the population in the next *two* decade using *decreased rate of growth method* **(2+3)**.

4. With a neat sketch briefly explain '*Thermal Stratification in Impounded Reservoirs*' **(5)**

5. With a neat sketch, explain the functioning of a wet intake tower. **(8)**

6. The average population in town is 10, 00,000 with an average consumption of 200lpcd. Using the above information, determine (a) the different kinds of demand and (b) the required capacity of major components of proposed waterworks in city using river as a source. **(5)**

7. Determine the capacity of the reservoir using the following information for a constant draft of 400 Million Liters **(7)**

Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Observed runoff (Million Liters)	1300	1600	700	200	180	130	120	100	120	160	900	1100	1300	800