Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: T.Y B.tech	**School of Technology**	**Department: Civil Engineering**
Course Code: CET310R1	**Course Title: Water Supply Engineering**	**Semester : VI**
Day and Date: 09.06.2021,Wednesday	**End Semester Examination**	**Time:2 Hrs. Max Marks:50**

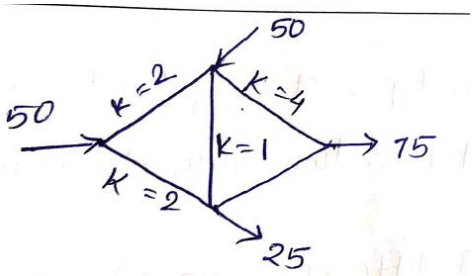
Instructions: 1) All Questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Answer/Solve the following (any Two)**			
a)	The population of the city obtained from service report is given below	8	L3	CO1

Year	1911	1921	1931	1941	1951	1961	1971	1981	1991
Pop.	20000	22000	25000	27500	34100	41500	47050	54500	61000

Estimate the population of city for the year of 2021 by Arithmetic increase method and geometric increase method.

b)	Explain the various factors which directly affect the per capita demand of city also explain the fluctuation of water demand	8	L2	CO1
c)	What are the types of intake structures for water supply? Explain one intake structure in brief.	8	L2	CO2
Q.2	**Answer/Solve the following (any two)**			
a)	Describe the various types of coagulants commonly used in water treatment. Explain the practical procedure of finding coagulant dose.	8	L3	CO3
b)	Write the difference between rapid sand filter and slow sand filter	8	L2	CO4
c)	Enlist various methods of water softening process. Explain Lime-soda process.	8	L1,L2	CO4
Q.3	**Answer/Solve the following (any two)**			
a)	Explain the method of distributing water	9	L2	CO5
b)	Determine the distribution of flow in the pipe network shown in fig. the headloss h_L may be assumed as $K.Q^n$. the flow is turbulent and pipes are rough. The value of K for each pipe is indicated in the fig. Use Hardy-cross method.	9	L4	CO5



c) Draw a neat sketch of service connection and mention the function of various components. 9 L3 CO6

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