



*R18 Regulation* *Subject code: 2P6AA*  
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
 (Autonomous, Accredited by NAAC with 'A+' Grade)

**B.Tech VI Semester Supplementary Examinations, July 2024**

**Environmental Engineering  
(CE)**

**Maximum Marks: 70**

Date:19.07.2024 Duration: 3 hours

- Note: 1. This question paper contains two parts A and B.  
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.  
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.  
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

**Part-A**

All the following questions carry equal marks		(10X2M=20 Marks)	CO	Bloom Tx
1	Mention various types of water born deceases.		1	L1
2	What are types of intakes?		1	L1
3	List out types of coagulants		2	L1
4	Mention various types of screens		2	L1
5	What are the factors influence anaerobic digestion		3	L1
6	List out types valves and pipe fittings		3	L1
7	Define flocculation and theory of filtration		4	L1
8	What are the types trickling filter and mention its working		4	L1
9	List out various air pollution issues on environment		5	L1
10	What are the air pollution control equipments		5	L1

**Part-B**

Answer All the following questions.		(5X10M=50Marks)														
11	Explain with neat sketch mention its parts of various types of intakes. (10)		1	L2												
OR																
12	Estimate the future population of a town in 2040AD for the given below. Also mention the different methods of population forecast and state for which type of growing city geometrical increase method is useful. By using incremental increase method (10)		1	L2												
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>1980</th> <th>1990</th> <th>2000</th> <th>2010</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>population</td> <td>45000</td> <td>54000</td> <td>65000</td> <td>83000</td> <td>200000</td> </tr> </tbody> </table>	Year	1980	1990	2000	2010	2020	population	45000	54000	65000	83000	200000			
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population	45000	54000	65000	83000	200000											
13	Elaborate the different tests methods and explain how to determine PH, Hardness, Chlorides for determining the suitability of drinking water. (10)		2	L2												
OR																
14	Explain with the help of neat sketch the construction and working of rapid sand filter (10)		2	L2												
15	Explain with a neat sketch principle operation of oxidation pond. (10)		3	L2												
OR																
16	Explain with neat sketch of various types of plumbing system adopted in houses. (10)		3	L2												

17	Discuss in detail with neat sketch of any one biological treatment units and its process (10)	4	L2
	OR		
18	Explain design and working principle of septic tank. (10)	4	L2
19	Discuss in detail various Control of gaseous pollutants, automobile pollution and control. (10)	5	L2
	OR		
20	Discuss in detail Gravity settlers, cyclone filters, ESPs. (10)	5	L2