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**END SEMESTER EXAMINATION(ESE) 2020**

**SEMESTER : SIXTH (6 th)**

**SUBJECT : ENVIRONMENTAL ENGINEERING & POLLUTION CONTROL**

**SUBJECT CODE : CV-603**

**NEW SYLLABUS.**

**TOTAL MARKS: 56 (FIFTY SIX)**

**TIME : 2 hrs. 30 minutes**

**ALL QUESTIONS ARE COMPULSORY.**

**PART-A (1X10=10 MARKS)**

**(Choose the right answer : question no 1 to 4)**

1. The location of a well is considered to be good ,if it is suck into  
(a) coarse gravel (b) silt (c) clay (d) sand
2. Pollutants in air can be in the form of  
(a) particulates matter (b) gases (c) micro organism (d) any one of the above.
3. The minimum depth of water seal in a good traps is  
(a) 2.5 to 7.5 cm (b) 10 to 15 cm (c) 15 to 20 cm (d) 30 to40 cm
4. For removal of temporary hardness of water  
(a) water is boiled (b) water is filtered (c) lime is added (d) chlorination is done

**(FILL UP THE BLANKS :QUESTION NO 5 TO 7)**

5. Maximum acidity will occur at P<sup>H</sup> value \_\_\_\_\_.
6. The water of river has an important property called \_\_\_\_\_.
7. Trickling filter is a ----- process of sewage treatment.

**WRITE TRUE OR FALSE.( QUESTION NO 8 TO 10)**

8. The aim of disinfection is to kill all the microorganisms in water.
9. Particulate matter cause air pollution.
10. The period of cleaning for slow sand filter is 2 to 3 month.

**PART-B.(46 MARKS)**

**(All question are compulsory)**

11. Define the term sewer, sewage and sewerage. 3
12. How coagulants are helping in treatment of water ? Name few common coagulants used in water. 2+1=3

or

Write the names of the three principal system of plumbing. 3

13. What is intake work ? Write names of different intake works.  $2+1=3$

14. What is chlorination ? What are different form of chlorination ?  $2+3=5$

or

(a) What is wholesome water? 2

(b) Write the name of chemical compound that causes permanent hardness and Temporary hardness of water. 3

15. How coagulants are help in treatment of water ? Name few common coagulants used in water.  $2+2=4$

16. Differentiate between shallow well and deep well with sketches. 4

17. What is air pollution ? What are the different causes of air pollution ?  $2+3=5$

18. What is traps ? What are its different types ?  $2\frac{1}{2}+1\frac{1}{2}=4$

19. define the following term.

i. Per capita demand. ii. Manhole. iii. Grease and oil trap. iv. Septic tank.  $1\frac{1}{2} \times 4=6$

or

**Give reasons:**

(a) The climate of locality affects its water requirements. 2

(b) The excess hardness of water is undesirable. 2

(c) The demand of water changes hour to hour. 2

20. write short notes on: (any three)  $3 \times 3=9$

(a) oxidation pond. (b) Activated sludge process. (c) P<sup>H</sup> value

(d) jar test. (e) Free residual chlorine.

or

(a) What is residual chlorine ? Write down the name of method for determining residual chlorine . 3

(b) Draw the line diagram to show different stages of a water treatment plant. 6