

1. While testing for COD of wastewater organic matter is oxidized by $K_2Cr_2O_7$ in the presence of:

A. H_2SO_4

2. Quantity of solids removed by screening depends on the:

A. Screen opening size

3. Temperature variations affect the: viscosity of waste water solubility of gases in waste water biological activity of bacteria in waste water all of the above

A. All of the above

4. The term sludge age associated with: sedimentation aeration sludge drying none of these

A. Aeration

5. The following reactions takes place during anaerobic digestion of organics 1. Methane Production 2. Alkaline fermentation 3. Acid fermentation 4. Acid regression

A. 3 4 2 1

6. The residue left after burning the solids to $500^\circ C$, is known as Total volatile dissolved solids Fixed suspended solids Volatile suspended solids "Fixed dissolved solids"

A. Fixed Suspended Solid

7. Maximum DO of water at temperature of $20^\circ C$ is: 6 mg/L 8mg/L 9mg/L 12 mg/L

A. 9 mg/l

8. Which chemical is used as an indicator for COD titration? Ferrous Ammonium Sulphate Starch Metacresol purple Phenolphthalein

A. Ferrous Ammonium Sulphate

9. What is the relationship between COD and BOD values? COD is lower than BOD COD is higher than BOD There is no relation COD is equal to BOD

A. COD is higher than BOD

10. Screening and grit chamber are preliminary treatment processes. True False

A. True

11. What is the most common used coagulant? Alum Ferric Sulphate "Limestone Coal

A. Alum

12. ___ is a process which involves further removal of the nitrogen Denitrification Ammonification Reduction Nitrification

A. Denitrification

13. Sedimentation is a process using gravity to remove suspended solids from water True False

A. True

14. The tanks built with mechanical means for continuous removal of solids being deposited by sedimentation are called _ settling basins sedimentation tanks Clarifiers "Eco-ponds

A. Clarifiers

15. What is the accumulated layer at the bottom of the tank, a part of which is reused in ASP, called as? Floccs Sediment Sewage Sludge

A. Sludge

16. ___ is provided after activated sludge process. Primary sedimentation tank Flocculation tank Secondary sedimentation tank Sand Filter

A. Secondary sedimentation tank

17. What is the growth of huge amounts of algae and other aquatic plants leading to the deterioration of the water quality called? Eutrophication Algae Growth Nitrification Denitrification

A. Eutrophication

18. At higher temperatures, the amount of Dissolved Oxygen decreases. True False

A. True

19. Activated sludge process degrade organics and _ Increase nutrients Remove Nutrients Remove Odour Remove taste

A. Remove nutrients

20. _ provides the dual purpose of providing DO and mixing of the mixed liquor. Flocculation Clarification Aeration Sedimentation

A. Aeration

21. What is the first step in clarification? Sedimentation Flocculation Coagulation Screening

A. Coagulation

22. The agglomeration of destabilized particles into large particles, using organic polymers, is called _ Sedimentation flocculation Coagulation disinfection

A. Flocculation

23. What is the one disadvantage of adding chemicals to bring about precipitation? TSS increases TDS increases BOD increases It imparts Colour

A. TDS increases

24. When alum is added to the waste water containing calcium ions which compound is formed as a precipitate? $\text{Al}(\text{OH})_3$ $\text{Al}_2(\text{SO}_4)_3$ $\text{Ca}(\text{OH})_2$ CaCO_3

A. $\text{Al}(\text{OH})_3$

25. For biological treatment, trickling filter is very effective process. Point out which of the following statements hold true of trickling filter sludge?

(A) It has a comparatively low sludge volume index

(B) it is more difficult to dewater than activated sludge.

(C) It has a comparatively low concentration of sludge solids

(D) It is bulky

A and C is true" B and C true A is true D is true

A. Only A is true

26. The incomplete oxidation of sewage contains Nitrites and Nitrates Nitrates and sulfur "Sulfates and nitrates" Nitrites and sulfur

A. Nitrites and sulfur

27. "The anaerobic decomposition of sewage takes places in same options as above

A. sulphates and nitrates

28. Increase in the concentration of Algae in lakes is due the increase in the concentration of Iodine Phosphorous Iron Aluminium

A. Phosphorus

29. A water having 1 unit lesser pH will be 0.1 times more acidic 1 times more acidic 10 times more acidic 100 times more acidic

A. 10 times

30. Which of the following type of sludge is free from pathogenic bacteria: Undigested Sludge Digested Sludge primary sludge Supernatant liquor

A. Digested sludge