



**UNIT - III**

7. Enlist major physical, chemical and biological characteristics of water and give their acceptable limits and cause of rejection limits as per W.H.O. standards. 10
8. What is the source of hardness in water ? What are its ill effects ? What is permissible limit ? 10
9. Describe the principle and procedure of determination of MPN value. 10

**UNIT - IV**

10. Compare the general treatment technology required for surface and ground water. 10
11. What is Stoke's law of sedimentation ? Write its equation, assumption and applications. 10
12. Explain surface over flow rate and Weir Loading concept for sedimentation tank ? 10

**UNIT - V**

13. a) What are the characteristic requirements of sand to be used in filters ? 5
- b) Explain back washing of filters. 5
14. Compare design, operation and applications of slow sand filters and rapid sand filters. 10
15. a) Why super chlorination is done ? 5
- b) What are the bad effects of chlorination ? 5

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