



SELF-ASSESSMENT TEST

LESSON 2

Answers

1. True

Homogenization is used to overcome the operational problems caused by flow-rate, constituent and mass loading variations of wastewater, equalizing flow and minimizing variation in water quality enhances primary and secondary treatments.

2. True

Fats removal is brought by introducing air bubbles whose buoyant forces are great enough to cause the fat and oil particles to rise to the surface to form a scum.

3. False

Primary treatment is designed to remove suspended solids by lowering the velocity and letting Suspended Solids (SS) to settle out due to gravity. This process is known as settling, sedimentation or clarification.

4. False

Coagulation is the addition of chemical coagulants for destabilizing colloids so that particles come close together. Aggregation of those particles is called flocculation.

5. False

In trickling filters microorganisms are maintained within a packing material. Wastewater is sprayed over this packing material.

In activated sludge systems microorganisms are maintained in suspension within the liquid by mixing methods

6. False

The two overall biological reactions by which nitrogen can be removed from water are nitrification and denitrification. In nitrification ammonium (NH_4^+) is oxidized to intermediate nitrite (NO_2^-), that is further converted to nitrate (NO_3^-); and, in denitrification, denitrifying microorganisms convert nitrate to nitrogen gas (N_2).



7. False

Secondary treatment consists of the transformation of biodegradable organic matter, both in solution and in suspension, into acceptable end products by taking advantage of biological processes.

8. False

The production of Trihalomethanes (THM) is one of the disadvantages of chlorination. Chlorine reacts with the organic constituents in wastewater to produce THM. One of the advantages of ozonization is that no unwanted by-products like THM are produced.

9. True

In this process, Ca^{2+} and Mg^{2+} cations in the water are exchanged by Na^{+} cations.

10. True

The activated carbon is a broad spectrum adsorbent and it is affordable.