1. City wastewater is commonly known as:
   A. Sludge
   B. Sewage
   C. Effluent
   D. Activated sludge (B)

Explanation : Wastewater released from towns and cities is called sewage. It contains organic matter and microorganisms.

2. The primary treatment of sewage involves:
   A. Chemical oxidation
   B. Biological digestion
   C. Physical removal of particles
   D. Methane production (C)

Explanation : Primary treatment involves physical separation of large and small particles by filtration and sedimentation.

3. Removal of grit (soil and small particles) from sewage is done by:
   A. Aeration
   B. Sedimentation
   C. Chlorination
   D. Fermentation (B)

Explanation : During primary treatment, sedimentation removes grit such as soil and small particles.

4. Flocs formed during secondary sewage treatment are:
   A. Viruses attached to bacteria
   B. Bacteria attached to fungal filaments
   C. Algae attached to protozoa
   D. Dead organic particles (B)

Explanation : Flocs are web-like structures formed by bacteria attached to fungal filaments.

5. Secondary treatment of sewage is also called:
   A. Physical treatment
   B. Chemical treatment
   C. Biological treatment
   D. Mechanical treatment (C)

Explanation : Secondary treatment uses microorganisms to degrade organic matter and is therefore called biological treatment.

6. The major purpose of aeration in secondary treatment is to:
   A. Remove grit
   B. Increase growth of aerobic microorganisms
   C. Kill all bacteria
   D. Produce methane (B)

Explanation : Air is pumped into aeration tanks to promote the growth of beneficial aerobic microorganisms forming flocs.

7. BOD stands for:
   A. Biological Oxygen Difference
   B. Biochemical Oxygen Demand
   C. Bacterial Oxygen Density
   D. Biological Organic Degradation (B)

Explanation : BOD represents the amount of oxygen required by bacteria to consume and oxidize organic matter present in one litre of water.

8. Higher BOD of wastewater indicates:
   A. Lower pollution level
   B. Higher pollution potential
   C. Absence of microorganisms
   D. Pure water quality (B)

Explanation : High BOD means more organic matter is present, indicating greater pollution potential.

9. Activated sludge is formed when:
   A. Sewage is filtered through screens
   B. Bacterial flocs settle after secondary treatment
   C. Methane is produced
   D. Chemicals are added to sewage (B)

Explanation : After reduction of BOD, bacterial flocs are allowed to settle, and this sediment is called activated sludge.

10. Anaerobic sludge digesters produce gases like:
    A. Oxygen and nitrogen
    B. Methane, hydrogen sulphide and carbon dioxide
    C. Hydrogen and oxygen
    D. Carbon monoxide and oxygen (B)

Explanation : Anaerobic bacteria digest sludge and produce biogas containing methane, hydrogen sulphide and carbon dioxide.