1. What is the significance of impurities in water?

a) They improve water taste and odor
b) They enhance water clarity
c) They can pose health risks and affect usability
d) They have no effect on water quality

Answer: c) They can pose health risks and affect usability

Explanation: Impurities in water, such as pathogens, chemicals, and suspended solids, can compromise its safety for consumption and other uses, leading to various health risks and rendering it unsuitable for certain applications.

2. Which of the following is a water-borne disease caused by microbial contamination?

a) Influenza
b) Malaria
c) Cholera
d) Diabetes

Answer: c) Cholera

Explanation: Cholera is a water-borne disease caused by the bacterium Vibrio cholerae, typically spread through contaminated water sources.

3. Which type of analysis is concerned with the detection of microorganisms in water?

a) Physical analysis

b) Chemical analysis
c) Bacteriological analysis
d) Radiological analysis

Answer: c) Bacteriological analysis

Explanation: Bacteriological analysis focuses on the detection and enumeration of microorganisms, such as bacteria, in water samples to assess its safety for consumption and other purposes.

4. What parameter of water quality is assessed through the measurement of pH, turbidity, and dissolved oxygen?

a) Physical analysis
b) Chemical analysis
c) Bacteriological analysis
d) Radiological analysis

Answer: b) Chemical analysis

Explanation: Chemical analysis of water involves the examination of various chemical parameters such as pH, turbidity, dissolved oxygen, and the presence of specific contaminants to determine its quality and suitability for different uses.

5. Which organization sets standards for drinking water quality in the United States?

a) WHO (World Health Organization)
b) EPA (Environmental Protection Agency)

c) CDC (Centers for Disease Control and Prevention)
d) FDA (Food and Drug Administration)

Answer: b) EPA (Environmental Protection Agency)

Explanation: The Environmental Protection Agency (EPA) establishes and enforces standards for drinking water quality in the United States through regulations like the Safe Drinking Water Act.

6. What is the primary function of an intake structure in a water supply system?

a) To treat water
b) To store water
c) To convey water to the treatment plant
d) To extract water from its source

Answer: d) To extract water from its source

Explanation: The intake structure is designed to extract water from its natural source, such as a river, lake, or groundwater, for further treatment and distribution in a water supply system.

7. Which material is commonly used for conveying water in underground pipelines due to its durability and corrosion resistance?

a) Cast iron
b) PVC (Polyvinyl Chloride)
c) Copper
d) Galvanized steel

Answer: b) PVC (Polyvinyl Chloride)

Explanation: PVC (Polyvinyl Chloride) pipes are commonly used for conveying water in underground pipelines due to their durability, corrosion resistance, and cost-effectiveness.

8. What is the primary purpose of pumps in a water supply system?

a) To purify water
b) To store water
c) To pressurize and transport water
d) To measure water flow

Answer: c) To pressurize and transport water

Explanation: Pumps are utilized in water supply systems to pressurize and transport water from the source (such as a reservoir or treatment plant) to distribution points or storage tanks for eventual use by consumers.

9. In pumping stations, what is the term for the vertical distance between the water source and the pump’s discharge point?

a) Head
b) Flow rate
c) Pressure
d) Lift

Answer: d) Lift

Explanation: In pumping stations, the term “lift” refers to the vertical distance between the water source (e.g., a well or reservoir) and the discharge point of the pump, indicating the height the pump must lift the water to reach its destination.

10. Which factor primarily determines the operational efficiency of a pump in a water supply system?

a) Pump size
b) Pipe material
c) Water temperature
d) Electricity voltage

Answer: a) Pump size

Explanation: The operational efficiency of a pump in a water supply system is primarily determined by its size, which relates to factors such as flow rate, pressure requirements, and the specific demands of the system it serves.