1. Which of the following best describes the primary purpose of sewerage schemes?

a) To provide clean drinking water
b) To manage wastewater and stormwater
c) To generate electricity
d) To promote agricultural irrigation

Answer: b) To manage wastewater and stormwater

Explanation: Sewerage schemes are designed to collect, convey, and treat wastewater and stormwater to prevent pollution and ensure public health and environmental safety.

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2. What is the main function of sewer appurtenances in a sewerage system?

a) To increase sewage flow rate
b) To reduce the size of sewers
c) To facilitate maintenance and operation
d) To remove pollutants from sewage

Answer: c) To facilitate maintenance and operation

Explanation: Sewer appurtenances such as manholes, cleanouts, and inspection chambers are installed in sewer systems to allow access for maintenance activities like cleaning, inspection, and repair.

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3. Which factor is primarily responsible for fluctuations in sewage flow in a sewerage system?

a) Seasonal changes
b) Industrial discharge
c) Residential water usage
d) Climate change

Answer: a) Seasonal changes

Explanation: Seasonal variations, such as increased water usage during summer months or heavy rainfall during monsoon seasons, can cause fluctuations in sewage flow rates within a sewerage system.

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4. What is the purpose of pumps and pumping stations in sewerage systems?

a) To increase water pressure in pipes
b) To reduce water flow rate
c) To transport sewage uphill
d) To purify wastewater

Answer: c) To transport sewage uphill

Explanation: Pumps and pumping stations are utilized in sewerage systems to overcome elevation differences and transport sewage from lower-lying areas to treatment plants or discharge points, particularly in hilly terrain or urban areas with varying topography.

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5. Which aspect is crucial in the design of sewers to prevent blockages and backups?

a) Narrow diameter
b) Smooth interior surfaces
c) Irregular shapes
d) Limited access points

Answer: b) Smooth interior surfaces

Explanation: Designing sewers with smooth interior surfaces helps prevent the accumulation of debris and sediment, reducing the risk of blockages and backups in the system.

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6. What is the primary function of stormwater collection in a sewerage system?

a) To provide water for irrigation
b) To prevent flooding
c) To increase wastewater flow
d) To generate hydroelectric power

Answer: b) To prevent flooding

Explanation: Stormwater collection in a sewerage system helps mitigate the risk of urban flooding by efficiently channeling rainwater away from streets, buildings, and other infrastructure into drainage systems for proper disposal or treatment.

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7. What is the primary purpose of maintaining sewers in a sewerage system?

a) To increase sewage flow
b) To reduce maintenance costs
c) To ensure system longevity and functionality
d) To decrease wastewater treatment efficiency

Answer: c) To ensure system longevity and functionality

Explanation: Regular maintenance of sewers is essential to preserve their structural integrity, prevent leaks or collapses, and ensure the continued functionality of the sewerage system over time.

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8. In a sewerage system, what is the role of conveyance of sewage?

a) To treat sewage

b) To transport sewage
c) To store sewage
d) To recycle sewage

Answer: b) To transport sewage

Explanation: The conveyance of sewage involves transporting wastewater from its point of origin, such as households or industries, to treatment facilities or disposal points through a network of sewers.

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9. Which factor is NOT typically considered in the design of sewers?

a) Population density
b) Soil composition
c) Sewage color
d) Rainfall patterns

Answer: c) Sewage color

Explanation: Sewage color is not a critical factor in sewer design, whereas population density, soil composition, and rainfall patterns are important considerations for determining sewer size, slope, and capacity.

10. What is the primary purpose of sewerage schemes in urban areas?

a) To increase air pollution
b) To promote groundwater contamination
c) To ensure public health and sanitation
d) To encourage wildlife habitat destruction

Answer: c) To ensure public health and sanitation

Explanation: Sewerage schemes play a vital role in urban areas by managing wastewater and stormwater to prevent environmental pollution, protect public health, and maintain sanitation standards.