1. Which of the following is not a type of flood?
a) Flash flood
b) Coastal flood
c) Tidal flood
d) Soil flood

Answer: d) Soil flood

Explanation: Soil flood is not a recognized type of flood. The other options – flash flood, coastal flood, and tidal flood – are commonly observed types caused by various factors such as heavy rainfall, storm surges, and high tides.

2. Which method is commonly used for estimating floods based on statistical analysis of historical data?
a) Hydrological modeling
b) Empirical equations
c) Frequency analysis
d) Flood routing

Answer: c) Frequency analysis

Explanation: Frequency analysis involves analyzing historical data to determine the probability and magnitude of floods occurring at different intervals. It helps in understanding the frequency of floods of various magnitudes, aiding in flood estimation and risk assessment.

3. Flood routing through reservoirs and channels involves:
a) Diverting floodwaters to urban areas

b) Storing excess water in reservoirs during floods
c) Blocking the natural flow of rivers
d) Increasing the velocity of floodwaters

Answer: b) Storing excess water in reservoirs during floods

Explanation: Flood routing through reservoirs and channels typically involves storing excess water in reservoirs during floods to control the flow downstream, thereby mitigating flood risk in populated areas.

4. Which of the following is a structural flood control measure?
a) Flood zoning
b) Land-use planning
c) Construction of levees
d) Flood forecasting

Answer: c) Construction of levees

Explanation: Levees are physical barriers constructed along riverbanks to contain floodwaters and prevent them from inundating adjacent land areas, making them a structural flood control measure.

5. What aspect of flood control measures considers the cost-effectiveness of different strategies?
a) Flood zoning
b) Land-use planning
c) Economic analysis
d) Flood forecasting

Answer: c) Economic analysis

Explanation: Economic analysis evaluates the costs and benefits of various flood control measures to determine their cost-effectiveness and prioritize investment in flood risk reduction strategies.

6. Which of the following is a non-structural flood control measure?
a) Floodplain mapping
b) Construction of dams
c) Erosion control
d) Flood insurance

Answer: d) Flood insurance

Explanation: Flood insurance is a financial instrument that provides compensation for damages caused by floods and is considered a non-structural flood control measure aimed at reducing the financial burden on affected individuals and communities.

7. Flood routing refers to the process of:
a) Predicting the occurrence of floods
b) Diverting floodwaters to urban areas
c) Managing the flow of floodwaters through channels
d) Mapping flood-prone areas

Answer: c) Managing the flow of floodwaters through channels

Explanation: Flood routing involves managing the movement of floodwaters through natural or artificial channels, reservoirs, or other hydraulic structures to control the timing and

magnitude of downstream flooding.

8. Which factor is essential for flood control measures to be effective in reducing flood risk?
a) Rapid urbanization
b) Climate change
c) Community participation
d) Deforestation

Answer: c) Community participation

Explanation: Community participation and engagement are crucial for the successful implementation of flood control measures, as they foster awareness, cooperation, and ownership among stakeholders, leading to more effective risk reduction strategies.

9. The primary purpose of flood control reservoirs is to:
a) Generate hydroelectric power
b) Store water for agricultural irrigation
c) Regulate river flow and mitigate flood risk
d) Provide recreational activities

Answer: c) Regulate river flow and mitigate flood risk

Explanation: Flood control reservoirs are designed to regulate river flow by storing excess water during periods of high discharge, thereby reducing downstream flood risk by controlling the release of stored water during flood events.

10. What is the primary focus of flood frequency analysis?
a) Predicting the timing of floods

b) Estimating the economic impact of floods
c) Assessing the probability of floods of different magnitudes
d) Designing flood control structures

Answer: c) Assessing the probability of floods of different magnitudes

Explanation: Flood frequency analysis aims to assess the likelihood of floods of various magnitudes occurring over a specified period, providing valuable information for flood risk management and infrastructure planning.