1. What is the primary function of formwork in construction?

a) To provide structural support to the building
b) To shape and support freshly poured concrete until it sets
c) To decorate the exterior of the building
d) To facilitate easy demolition after construction

Answer: b) To shape and support freshly poured concrete until it sets

Explanation: Formwork is used to create molds into which concrete is poured. It supports the weight of the concrete until it hardens, ensuring that the concrete takes the desired shape and structure.

2. Which technique involves continuously moving formwork upwards as concrete is poured, resulting in a seamless structure?

a) Stationary formwork
b) Slip formwork
c) Climbing formwork
d) Vertical formwork

Answer: b) Slip formwork

Explanation: Slip formwork is a construction method where formwork is gradually moved upward as concrete is poured, allowing for the continuous construction of tall structures without joints.

3. What is a key advantage of slip formwork over traditional formwork methods?

a) Faster construction speed
b) Lower material cost
c) Greater flexibility in design
d) Higher structural integrity

Answer: a) Faster construction speed

Explanation: Slip formwork allows for continuous construction without the need for pausing between pouring concrete and moving formwork, resulting in faster construction compared to traditional methods.

4. What is the process of removing formwork after concrete has set called?

a) Stripping
b) Demolding
c) Disassembly
d) Deformulation

Answer: a) Stripping

Explanation: Stripping is the term used to describe the removal of formwork after the concrete has sufficiently hardened to support its weight independently.

5. Which type of formwork is commonly used for constructing curved or uniquely shaped structures like shells and bridges?

a) Climbing formwork
b) Tunnel formwork

c) Special formwork
d) Flexible formwork

Answer: c) Special formwork

Explanation: Special formwork is customized for specific construction projects, such as those involving curved or uniquely shaped structures like shells and bridges.

6. What is the purpose of in-situ construction?

a) To assemble prefabricated components on-site
b) To construct a building entirely off-site
c) To construct a building in its final location
d) To transport completed structures to their destination

Answer: c) To construct a building in its final location

Explanation: In-situ construction refers to the process of constructing a building or structure on-site, in its intended location, as opposed to prefabricating components off-site and assembling them later.

7. Which formwork technique involves constructing a portion of the formwork, pouring concrete, then moving the formwork up to repeat the process?

a) Climbing formwork
b) Slip formwork
c) Jump formwork
d) Tunnel formwork

Answer: c) Jump formwork

Explanation: Jump formwork is a method where formwork is constructed for a section of the structure, concrete is poured, then the formwork is raised or jumped to the next level to repeat the process.

8. Which of the following is NOT a consideration when designing formwork for special structures like towers?

a) Structural stability
b) Aesthetics
c) Weather resistance
d) Material availability

Answer: d) Material availability

Explanation: When designing formwork for special structures like towers, considerations typically include structural stability, aesthetics, and weather resistance. Material availability is a consideration for any construction project but may not be as critical in the design of formwork for special structures.

9. What is the primary advantage of stationary formwork over other methods?

a) Greater flexibility
b) Lower cost
c) Higher precision
d) Simplicity in design

Answer: c) Higher precision

Explanation: Stationary formwork allows for precise shaping and molding of concrete due to its fixed position during pouring and setting.

10. Which formwork technique is often used for constructing tall buildings with a repetitive floor plan?

a) Slip formwork
b) Climbing formwork
c) Tunnel formwork
d) Special formwork

Answer: b) Climbing formwork

Explanation: Climbing formwork is frequently used for constructing tall buildings with a repetitive floor plan, as it allows for continuous upward construction while supporting the weight of the structure.