1. What is a primary factor considered in airport site selection?

a) Proximity to urban areas
b) Availability of cheap land
c) Access to water resources
d) Minimum environmental impact

Answer: d) Minimum environmental impact
Explanation: When selecting a site for an airport, minimizing environmental impact is a primary concern. This includes considerations such as noise pollution, habitat disruption, and air quality.

2. Which factor influences runway alignments the most?

a) Aircraft speed
b) Terrain features
c) Passenger capacity
d) Airport location

Answer: b) Terrain features
Explanation: Terrain features such as hills, mountains, and bodies of water can significantly influence the alignment of runways to ensure safe takeoff and landing procedures.

3. What is the purpose of windrose diagrams in airport planning?

a) To determine the most scenic locations for airport terminals
b) To identify the prevailing wind directions at the airport site
c) To showcase historical flight paths of famous aviators

d) To map out the locations of nearby air traffic control towers

Answer: b) To identify the prevailing wind directions at the airport site
Explanation: Windrose diagrams display the frequency and direction of winds at a specific location, aiding in runway orientation and design to optimize aircraft operations.

4. Which parameter directly affects the basic runway length required for aircraft operations?

a) Passenger seating capacity
b) Aircraft weight
c) Number of engines
d) Wing size

Answer: b) Aircraft weight
Explanation: The weight of an aircraft directly influences the length of the runway required for safe takeoff and landing, as heavier aircraft need more distance to accelerate and decelerate.

5. What determines the classification of an airport?

a) Passenger amenities
b) Number of daily flights
c) Runway length
d) Geographic location

Answer: c) Runway length
Explanation: Airports are classified based on the length of their runways, which determines the types and sizes of aircraft they can accommodate, ranging from small general aviation

airports to large international hubs.

6. Which geometrical element of an airport facilitates aircraft movement between runways and terminals?

a) Aprons
b) Taxiways
c) Gateways
d) Air bridges

Answer: b) Taxiways
Explanation: Taxiways are designated paths for aircraft to move between runways, terminals, and other areas of an airport, allowing for efficient ground operations.

7. What pattern of runway capacity is typically observed during peak hours at busy airports?

a) Decreased capacity due to congestion
b) Constant capacity regardless of traffic volume
c) Increased capacity due to streamlined operations
d) Variable capacity depending on weather conditions

Answer: c) Increased capacity due to streamlined operations
Explanation: Busy airports often experience increased runway capacity during peak hours as operations are optimized to handle high volumes of aircraft movements efficiently.

8. Which factor influences the layout of taxiways and runways at an airport?

a) Aircraft manufacturer preferences

b) Architectural aesthetics
c) Air traffic control procedures
d) Passenger terminal locations

Answer: c) Air traffic control procedures
Explanation: The layout of taxiways and runways is primarily determined by air traffic control procedures to ensure safe and efficient movement of aircraft on the ground.

9. What correction is typically applied to runway length calculations for altitude and temperature?

a) Altitude correction
b) Temperature correction
c) Pressure correction
d) Density correction

Answer: d) Density correction
Explanation: Density altitude correction is applied to runway length calculations to account for variations in air density due to altitude and temperature, which affect aircraft performance during takeoff and landing.

10. What is the primary purpose of airport classification?

a) To determine landing fees
b) To regulate air traffic control procedures
c) To standardize runway markings
d) To facilitate aircraft operations

Answer: d) To facilitate aircraft operations
Explanation: Airport classification helps standardize the capabilities and facilities of airports, enabling efficient and safe aircraft operations by providing guidelines for aircraft size, runway length, and other operational considerations.