1. What is a geostationary orbit?

a) An orbit where satellites move in sync with the Earth’s rotation
b) An orbit where satellites are stationary relative to the Earth’s surface
c) An orbit where satellites are stationary relative to the Sun
d) An orbit with variable satellite speeds

Answer: b) An orbit where satellites are stationary relative to the Earth’s surface

Explanation: Geostationary orbit is a specific type of geosynchronous orbit where satellites orbit at the same speed as the Earth’s rotation, appearing stationary from the Earth’s surface.

2. What are the antenna look angles in satellite communication?

a) Azimuth and elevation
b) Longitude and latitude
c) Pitch and yaw
d) Inclination and eccentricity

Answer: a) Azimuth and elevation

Explanation: Antenna look angles are azimuth (horizontal direction) and elevation (vertical angle) used to point antennas towards satellites in satellite communication.

3. What type of antenna mount is commonly used for tracking geostationary satellites in polar regions?

a) Equatorial mount
b) Azimuth-elevation mount
c) Polar mount
d) Altitude-azimuth mount

Answer: c) Polar mount

Explanation: Polar mount antennas are commonly used in polar regions for tracking geostationary satellites. They rotate around the Earth's axis of rotation.

4. What defines the limits of visibility for a geostationary satellite?

a) Atmospheric conditions
b) Earth's curvature
c) Satellite's altitude
d) Earth's shadow

Answer: d) Earth's shadow

Explanation: The limits of visibility for a geostationary satellite are defined by Earth's shadow, which can cause eclipses when the satellite moves into the Earth's shadow cone.

5. What are near geostationary orbits often referred to as?

a) Geosynchronous orbits
b) Molniya orbits
c) Geostationary transfer orbits
d) Tundra orbits

Answer: a) Geosynchronous orbits

Explanation: Orbits close to geostationary orbits, but not perfectly synchronized with the Earth's rotation, are often referred to as near geostationary or geosynchronous orbits.

6. What causes a satellite to experience an Earth eclipse?

a) Atmospheric interference
b) Lunar eclipse
c) Earth's shadow
d) Solar flare

Answer: c) Earth's shadow

Explanation: A satellite experiences an Earth eclipse when it moves into the Earth's shadow cone, blocking sunlight from reaching its solar panels.

7. What phenomenon causes a temporary loss of satellite signal during the satellite's passage between the Earth and the Sun?

a) Solar storm
b) Sun transit outage
c) Lunar eclipse
d) Solar eclipse

Answer: b) Sun transit outage

Explanation: Sun transit outage is a temporary loss of satellite signal caused by the satellite's

passage between the Earth and the Sun, when the Sun aligns with the satellite and the receiving antenna.

8. In which type of orbit are satellites typically launched before reaching their operational geostationary orbit?

a) Polar orbit
b) Heliocentric orbit
c) Geostationary transfer orbit
d) Low Earth orbit

Answer: c) Geostationary transfer orbit

Explanation: Satellites are typically launched into a geostationary transfer orbit before being maneuvered into their operational geostationary orbit.

9. What term describes the orientation of electromagnetic waves emitted or received by an antenna?

a) Modulation
b) Polarization
c) Frequency
d) Propagation

Answer: b) Polarization

Explanation: Polarization describes the orientation of electromagnetic waves emitted or received by an antenna, such as vertical, horizontal, or circular polarization.

10. What phenomenon reduces the quality of satellite signals due to the interaction of electromagnetic waves with obstacles or particles in the atmosphere?

a) Interference
b) Attenuation
c) Diffraction
d) Depolarization

Answer: d) Depolarization

Explanation: Depolarization refers to the phenomenon where the quality of satellite signals is reduced due to factors like ionospheric effects, rain, or ice, causing changes in the polarization of the signals.