1. Which layer of the GSM architecture is responsible for encryption and decryption of user data?
a) Physical Layer
b) Data Link Layer
c) Network Layer
d) Ciphering Layer

Answer: d) Ciphering Layer
Explanation: The Ciphering Layer, located within the GSM's Data Link Layer, is responsible for encrypting and decrypting user data to ensure secure transmission over the air interface.

2. In GSM, which channel is primarily used for carrying user speech and data?
a) Broadcast Control Channel (BCCH)
b) Dedicated Control Channel (DCCH)
c) Traffic Channel (TCH)
d) Common Control Channel (CCCH)

Answer: c) Traffic Channel (TCH)
Explanation: Traffic Channels (TCH) in GSM are used for carrying user speech and data traffic between the mobile device and the base station.

3. What is the primary multiple access scheme used in GSM?
a) Frequency Division Multiple Access (FDMA)
b) Time Division Multiple Access (TDMA)
c) Code Division Multiple Access (CDMA)
d) Space Division Multiple Access (SDMA)

Answer: b) Time Division Multiple Access (TDMA)
Explanation: GSM employs TDMA, where each user is assigned a specific time slot within a frequency channel for transmitting and receiving data.

4. In CDMA systems, what is the term used to describe the process of reducing interference from other users?
a) Spread Spectrum
b) Power Control
c) Frequency Hopping
d) Soft Handoff

Answer: b) Power Control
Explanation: Power Control is a technique used in CDMA systems to adjust the transmission power of mobile devices dynamically, minimizing interference and improving overall system capacity.

5. What modulation characteristic is commonly used in CDMA systems?
a) Frequency Modulation (FM)
b) Amplitude Modulation (AM)
c) Phase Shift Keying (PSK)
d) Direct Sequence Spread Spectrum (DSSS)

Answer: d) Direct Sequence Spread Spectrum (DSSS)
Explanation: CDMA systems typically employ DSSS modulation, where the data signal is spread over a wide frequency band using a pseudorandom noise sequence.

6. Which mobile system is known for its Time Division Duplexing (TDD) scheme?

a) GSM
b) CDMA
c) PDC
d) TETRA

Answer: d) TETRA
Explanation: TETRA (Terrestrial Trunked Radio) utilizes TDD, allowing for the transmission and reception of signals on the same frequency band but at different times.

7. What is the primary access method used in cordless phone systems?
a) FDMA
b) TDMA
c) CDMA
d) Frequency Hopping

Answer: d) Frequency Hopping
Explanation: Cordless phone systems typically employ frequency hopping to mitigate interference and provide secure communication between the handset and base station.

8. Which mobile system is associated with the Personal Digital Cellular (PDC) standard?
a) GSM
b) CDMA
c) PDC
d) PCS

Answer: c) PDC
Explanation: PDC (Personal Digital Cellular) is a mobile communication standard primarily

used in Japan, offering digital voice and data services.

9. In PCS (Personal Communications Service) systems, what frequency range is typically used?
a) 800 MHz
b) 900 MHz
c) 1800 MHz
d) 1900 MHz

Answer: d) 1900 MHz
Explanation: PCS systems operate within the 1900 MHz frequency band and are commonly used for mobile communication services in North America.

10. Which mobile system is an example of a non-cellular system?
a) GSM
b) CDMA
c) Satellite Communication
d) LTE

Answer: c) Satellite Communication
Explanation: Satellite communication systems operate using satellites in orbit to relay signals between mobile devices, making them an example of non-cellular mobile systems.