



# Chettinad

## College of Engineering & Technology

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

**Department of Electronics and Communication Engineering**

**EC8004 WIRELESS NETWORKS**

**Multiple Choice Questions Bank**

**Unit –III 3G Overview**

1. What is the full form of UMTS?
  - a) **Universal Mobile Telecommunications System**
  - b) Ubiquitous Mobile Telephone System
  - c) Ubiquitous Mobile Telemetry System
  - d) Universal Machine Telemedicine System

Answer: (a)
  
2. UMTS use which multiple access technique?
  - a) **CDMA**
  - b) TDMA
  - c) FDMA
  - d) SDMA

Answer: (a)
  
3. What is the name of BSC equivalent part in a 3G mobile network?
  - a) Controller
  - b) Radio Switch Controller
  - c) **Radio Network Controller**
  - d) Radio Command Center

Answer: (c)
  
4. What is the equivalent interface Um (Air interface) in a 3G network?
  - a) Un
  - b) Us
  - c) **Uu**
  - d) Uc

Answer: (c)

5. UMTS is also known as \_\_\_\_\_

- a) IS-95
- b) GPRS
- c) **W-CDMA**

**Answer: (c)**

6. A UMTS network is a \_\_\_\_\_ network

- a) First Generation
- b) Second Generation
- c) **Third Generation**
- d) Fourth Generation

**Answer: (c)**

7. How much packet data rate per user is supported by W-CDMA if the user is stationary?

- a) 1.048 Kbps
- b) 100 Mbps
- c) **2.048 Mbps**
- d) 1 Gbps

**Answer: (c)**

8. What is the minimum spectrum allocation required by W-CDMA?

- a) **5 MHz**
- b) 20MHz
- c) 1.25 MHz
- d) 200 KHz

**Answer: (a)**

9. Which organization is responsible for developing LTE standards?

- a) UMTS
- b) **3GPP**
- c) 3GPP2
- d) ISO

**Answer: (b)**

10. Which UE category supports 64 QAM on the uplink?

- a) **Only category 5**
- b) Only category 4
- c) Only category 3
- d) Category 3,4 and 5

**Answer: (a)**

11. What type of handovers is supported by LTE?

- a) **Hard handover only**
- b) Soft handover only
- c) Hard and soft handover
- d) Hard, soft and softest handover

Answer: (a)

12. What is the minimum amount of RF spectrum needed for an FDD LTE radio channel?

- a) 1.4 MHz
- b) **2.8 MHz**
- c) 5 MHz
- d) 20Hz

Answer: (b)

13. What is the name of a BTS in a 3G mobile network?

- a) Structure
- b) **Node-B**
- c) Node-N
- d) None

Answer: (b)

14. What is the largest channel bandwidth a UE is required to support in LTE?

- a) 10 MHz
- b) **20 MHz**
- c) 32 MHz

Answer: (b)

15. In LTE, what is the benefit of PAPR reduction in the uplink?

- a) Improved uplink coverage
- b) Lower UE power consumption
- c) Reduced equalizer complexity
- d) **Improved uplink coverage, lower UE power consumption and reduced equalizer**

Answer: (d)

16. Which RLC mode adds the least amount of delay to user traffic?

- a) Unacknowledged mode (UM)
- b) Acknowledged mode (AM)
- c) Low latency mode (LM)
- d) **Transparent mode (TM)**

Answer: (d)

17. How much bandwidth is required to transmit the primary and secondary synchronization signals?

- a) **1.08 MHz**
- b) 1.4 MHz
- c) 930 kHz
- d) 20 MHz

Answer: (a)

18. \_\_\_\_\_ is a digital multiple access system in which carrier frequencies are varied in pseudorandom order.

- a) CDMA
- b) FCDMA
- c) **FHMA**

Answer: (c)

19. All users in CDMA system use \_\_\_\_\_ carrier frequency.

- a) Different
- b) Ten
- c) **Same**

Answer: (c)

20. In CDMA, symbol duration is \_\_\_\_\_ than channel delay spread.

- a) Equal
- b) Greater
- c) Slightly greater
- d) **Much less**

Answer: (d)

21. PN sequence converts \_\_\_\_\_ signal to \_\_\_\_\_ signal.

- a) **Narrowband, wideband**
- b) Wideband, narrowband
- c) Unmodulated, modulated
- d) Low frequency, high frequency

Answer: (a)

22. DHCP provides \_\_\_\_\_ to the client.

- a) **IP address**
- b) MAC address
- c) URL
- d) None of the mentioned

Answer: (a)

23. DHCP is used for \_\_\_\_\_
- a) IPv6
  - b) IPv4
  - c) **Both IPv6 and IPv4**
  - d) None of the mentioned

**Answer: (c)**

24. SIM in a 3G network is called \_\_\_\_\_?

- a) Micro SIM
- b) Nano SIM
- c) **USIM**

**Answer: (c)**

25. What are the parts of 3G network architecture?

- a) User Equipment (UE)
- b) Radio Access Network (RAN)
- c) Core Network
- d) **All the above. UE, RAN and Core network**

**Answer: (d)**