

**B.Tech Sixth Semester End Term Examination- 2021****Name of Subject: Mobile Computing****Paper Code: UCS06E03****Full Marks: 50****Time: 2 Hours**

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**Answer all the questions****1x50=50**

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1. Bluetooth is a \_\_\_\_\_ technology that connects devices in a small area.
  - (i) VLAN,
  - (ii) Wireless LAN,
  - (iii) Wired LAN,
  - (iv) None of the above.
2. The data packets which are transmitted by IP is called
  - (i) Segments,
  - (ii) Frames,
  - (iii) Datagrams,
  - (iv) Encapsulated Segments
3. Synchronization is not necessary in \_\_\_\_\_ multiplexing
  - (i) Time division,
  - (ii) Code division
  - (iii) Both (i) and (ii)
  - (iv) None of these
4. Paging systems could be used to
  - (i) Send numeric messages
  - (ii) Send alphanumeric messages
  - (iii) Send voice messages
  - (iv) All of the above
5. Which of these defines the current location of the mobile node ?
  - (i) Care-of address
  - (ii) Correspondent node address
  - (iii) Home address
  - (iv) Home network
6. When an outer IP header is inserted before the datagram's existing IP header, it is called
  - (a) IP-in-IP encapsulation
  - (b) Minimal encapsulation
  - (c) Generic Routing Encapsulation
  - (d) None of the above
7. The devices connected with the master in piconet is called
  - (i) Parked
  - (ii) Standby
  - (iii) Slaves
  - (iv) None of the above
8. The most WLANs are based upon —

- (i) IEEE 802.11
  - (ii) WiFi
  - (iii) Both a and b
  - (iv) None of these
9. IEEE 802.11a, has a data rate of \_\_\_\_\_Mbps.
- (i) 1,
  - (ii) 2,
  - (iii) 6,
  - (iv) None of the above.
10. Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?
- (i) CDMA,
  - (ii) CSMA/CA,
  - (iii) ALOHA,
  - (iv) None of the mentioned.
11. Distributed coordination function is having lower priority than
- (i) PCF,
  - (ii) RTS,
  - (iii) CTS,
  - (iv) PIFS.
12. The time in which the Request to Send(RTS) and Clear to Send(CTS) control frames are in transition is called
- (i) Hand shaking period,
  - (ii) Backoff –time,
  - (iii) Frame exchange time,
  - (iv) None of the above.
13. The contention free end frame is used to allow the contention-based stations to use the
- (i) Signals,
  - (ii) Data,
  - (iii) Medium,
  - (iv) All of the above.
14. A set that makes stationary or mobile wireless station and also have optional central base station is known as
- (i) Basic service set,
  - (ii) Extended service set,
  - (iii) Network point set,
  - (iv) Access point.
15. The special control frame that is used in the repetition interval is called
- (i) Network frame,
  - (ii) Beacon frame,
  - (iii) Request frame,
  - (iv) Send frame.
16. \_\_\_\_\_ is responsible for tunneling multicast packets to the mobile node's currently subscribed Foreign Agent.
- (i) Multicast home agent,
  - (ii) Mobile multicast,

- (iii) Mobile station,
- (iv) Base station.

17. What is a cluster in a cellular system?

- (i) Group of frequencies
- (ii) Group of cells
- (iii) Group of subscribers
- (iv) Group of mobile systems

18. How much time it takes for handoff in digital cellular systems like GSM?

- (i) 1 second
- (ii) 10 seconds
- (iii) 1 minute
- (iv) 10 milliseconds

19. An efficient behavior of non optimized mobile IP is called

- (i) Efficient routing ,
- (ii) Triangle routing ,
- (iii) Circle routing ,
- (iv) Fixed routing.

20. Foreign agents and home agents advertise their presence periodically using special \_\_\_\_\_ messages.

- (i) Foreign agent advertisement,
- (ii) Agent advertisement,
- (iii) Home agent advertisement,
- (iv) None of the above

21. Slow frequency hopping refers to

- (i) One or more symbols transmitted in time interval between frequency hops
- (ii) More than one frequency hop during each symbol
- (iii) Hopping rate greater than or equal to information symbol rate
- (iv) Both i. and iii. are correct

22. Direct sequence spread spectrum demodulation uses

- (i) DPSK
- (ii) FSK
- (iii) ASK
- (iv) QPSK

23. Fast hopping is

- (i) More than one frequency hop during each symbol
- (ii) Hopping rate greater than or equal to information symbol rate
- (iii) One or more symbols transmitted between frequency hops
- (iv) Both i and ii
- (v) Both b and c

24. Advantage of using Spread Spectrum modulation is/are

1. Interference rejection capability
2. Frequency planning is not required
3. Resistance to multipath fading
4. ISI is lesser

- (i) 1 and 2 are correct
- (ii) 1, 2 and 3 are correct
- (iii) 2 and 3 are correct
- (iv) All the four are correct

25. The techniques used to improve the capacity of cellular systems are

- (i) Splitting
- (ii) Sectoring
- (iii) Coverage zone approach
- (iv) All of the above

26. Distributed antenna systems are used at

- (i) Transmitters of mobile systems
- (ii) Transmitters of base stations
- (iii) Inputs and outputs of repeaters
- (iv) Receivers of mobile stations

27. Increase in Co- channel reuse ratio indicates

- (i) Better transmission quality
- (ii) Larger capacity
- (iii) Low co-channel interference
- (iv) Both i and iii
- (v) Both a and b

28. Interference in frequency bands may lead to

- (i) Cross talk
- (ii) Missed calls
- (iii) Blocked calls
- (iv) All of the above

29. Trunking in a cellular network refers to

- (i) Termination of a call
- (ii) Spectrum unavailability
- (iii) Accommodating large number of users in limited spectrum
- (iv) All of the above

30. When a fraction of assigned channel is reserved for handoffs, it is

- (i) Guard channel concept
- (ii) Fixed channel assignment
- (iii) Dynamic channel assignment
- (iv) None of the above

31. While handoffs, the termination of call may be avoided by

- (i) Providing Guard channel
- (ii) Queuing of handoffs
- (iii) Both i&ii
- (iv) None of the above

32. Delay in handoffs is caused due to

- (i) Weak signal conditions
- (ii) High traffic conditions
- (iii) Un availability of the channel
- (iv) All of the above

33. Disadvantage of using Dynamic channel assignment is

- (i) More storage required
- (ii) Calculations and analysis is increased
- (iii) Both i&ii
- (iv) None of the above

34. Centre excited hexagonal cells use

- (i) Sectorized directional antennas
- (ii) Omni directional antennas
- (iii) Yagi uda antennas
- (iv) None of the above

35. Radio capacity may be increased in cellular concept by

- (i) Increase in radio spectrum
- (ii) Increasing the number of base stations & reusing the channels
- (iii) Both i&ii
- (iv) None of the above

36. CDMA2000 1xEV provides high speed data access with channel allocation of

- (i) 5 MHz
- (ii) 50 MHz
- (iii) 1.25 MHz
- (iv) 4 MHz

37. The 2G GSM technology uses a carrier separation of

- (i) 1.25 MHz
- (ii) 200 KHz
- (iii) 30 KHz
- (iv) 300 KHz

38. 2G CDMA standard – cdma one supports up to

- (i) 8 users
- (ii) 64 users
- (iii) 32 users
- (iv) 116 users

39. Carrier frequency of a TV remote control is in the range

- (i) of Infra red
- (ii) < 100 MHz
- (iii) < 1 GHz
- (iv) < 2 GHz

40. Which One Is An Example Of Connectionless Protocols?

- (i) TCP
- (ii) UDP
- (iii) IPX/SPX
- (iv) Frame Relay

41. Which among these are NOT a part of Android's native libraries?

- (I) Webkit
- (ii) Dalvik
- (iii) OpenGL
- (iv) SQLite

42. The first completely 64-bit compatible version of Android was

- (i) Android 3.0 Honeycomb
- (ii) Android 5.0 Lollipop
- (iii) Android 2.3 Gingerbread
- (iv) Android 4.0 Ice Cream Sandwich

43. How many satellites does GPS need to work

- (I) 2

- (ii) 4
- (iii) 6
- (iv) 8

44. What is the interface between a Mobile Station and a BTS in a GPRS network?

- A) Ui
- B) Um
- C) Uu
- D) Uk

45. Power control feature in a GSM network works on the \_\_\_\_\_ side?

- A) Mobile side
- B) BTS side
- C) Both Mobile side and BTS side
- D) None

46. What is a Downlink in a GSM network?

- A) Sending of data from Mobile to the Base Station.
- B) Sending of data from Base station to the Mobile
- C) Sending of data from Base Station Controller to the Mobile
- D) None of the above

47. Which technique of GSM Architecture tells the mobile to advance its transmission bursts (data) so that overlap with other bursts may be avoided at channel?

- A) DTX
- B) TA - Timing Advance
- C) Power Control
- D) None

48. Which one of the following enables us to use the entire bandwidth simultaneously?

- 1. TDMA
- 2. CDMA
- 3. FDMA
- 4. All of the above

49. Which of the following can be considered as the primary function of snooping TCP?

- (i) To buffer data close to the mobile host to perform fast local retransmission in case of packet loss.
- (ii) Congestion control
- (iii) Flow control
- (iv) None of the above

50. How does Google check for malicious software in the Android Market/Play Store?

- (i) Every new app is scanned by a virus scanner
- (ii) Users report malicious software to Google
- (iii) A separate company monitors it
- (iv) Google team verify each new app

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