AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

FACULTY OF APPLIED SCIENCES AND MATHEMATICS EDUCATION

DEPARTMENT OF INFORMATION TECHNOLOGY EDUCATION
END OF SECOND SEMESTER EXAMINATIONS, AUGUST, 2021

COURSE CODE/TITLE	ITC 367 MOBILE COMPUTING
DURATION	2 HOURS
LECTURER	PRINCE CLEMENT ADDO
INSTRUCTIONS	**Attempt all questions on the question paper.** **Answer all questions on the question paper**

INDEX NUMBER:

1. **The base station covers a specific area that is called a ——**
   A. Cell
   B. Tessellate
   C. Mobile station
   D. None of the above

2. **Cellular System or having small cells needs ——**
   A. Handover
   B. Infrastructure
   C. Frequency planning
   D. All of the above

3. **Bluetooth Technology supports**
   A. Piconet
   B. Ad hoc piconet
   C. Scatter net
   D. All of the above

4. **Which of the following wireless technology is used for exchanging data between a variety of fixed and mobile devices over a very short diameter?**
   A. Mobile technology
   B. Bluetooth technology
   C. Ad hoc computing
   D. None of the above

5. **In Bluetooth which of the following device decides the hopping sequence?**
   A. Master
   B. Parked
   C. Standby
   D. Slave

6. **Most WLANs are based upon the standard——**
   A. IEEE 802.2
   B. IEEE 802.11
   C. IEEE 802.5
   D. IEEE 802.15

7. **Which of the following is/are the advantages of a wireless LAN?**
   A. Flexibility
   B. Ease of use
   C. Robustness
   D. All of the above

8. **Disadvantages of WLANs include ——**
   A. Interference and noise
   B. Slower than wired
   C. Greater care is needed for encryption
   D. All of the above

9. **TCP is a reliable protocol that incorporates**
   A. congestion control
   B. Flow control mechanisms
   C. guarantees in-order delivery of data
   D. All of the above

10. **Advantages of Indirect TCP includes**
    A. Fast transmission
    B. Congestion control
    C. Error control
    D. All of the above

11. **The main function of snooping TCP is ——**
    A. To buffer data close to the mobile host to perform fast local retransmission in case of packet loss.
    B. Congestion control
    C. Flow control
    D. None of the above

12. **I-TCP and Snooping TCP does not help much if a mobile host gets**
    A. Out of coverage area
    B. Disconnected
    C. Battery power low
    D. None of the above

13. M-TCP wants to improve overall throughput to
    A. To lower the delay
    B. To maintain end-to-end semantics of TCP
    C. To provide a more efficient handover
    D. All of the above

14. Disadvantages of Mobile TCP includes
    A. Assuming low bit error rates
    B. Lack of buffering
    C. Lack of acknowledgment
    D. None of the above

15. A very useful extension of TCP is the use of
    A. Buffering packets
    B. Congestion control
    C. Selective retransmission
    D. All of the above

16. The most important feature/s of mobile computing technology is/are —
    A. Mobility
    B. Portability
    C. Wireless connectivity
    D. All of the above

17. Which of the following is the base of most mobile communications?
    A. GSM
    B. GPRS
    C. CDMA
    D. None of the above

18. In a cellular system, the shape of the cell is generally —
    A. Hexagon
    B. Circular
    C. Square
    D. None of the above

19. Important mobile computing application/s is/are —
    A. Education
    B. Sports
    C. Games
    D. All of the above

20. Challenges of mobile computing include —
    A. Low Security
    B. Ad hoc Networking
    C. Shared medium
    D. All of the above

21. The process of transferring a mobile station from one base station to another is
    A. MSC
    B. Roamer
    C. Hand off
    D. Forward channel

22. 2G CDMA standard – cdma one supports up to
    A. 8 users
    B. 64 users
    C. 32 users
    D. 116 users

23. Frequency division multiple access (FDMA) assigns _____ channels to _____ users.
    A. Individual, individual
    B. Many, individual
    C. Individual, many
    D. Many, many

24. If the FDMA channel is not in use, it can be used by other users.
    A. True
    B. False
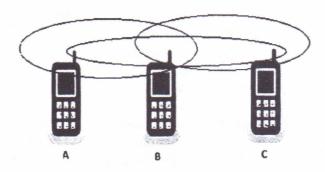
25. The Medium Access Control, is a sub layer of the
    A. Media Access Control
    B. Data Link Layer
    C. Physical layer
    D. Network layer

26. Sensing the carrier before accessing the medium is an improvement to
    A. Basic Aloha
    B. Collision detection
    C. slotted Aloha
    D. demand assigned multiple access

27. The most appropriate schemes used when one station wants to be heard by others with a centralized master station and several slave stations is known as
    A. multiple access
    B. Randomization
    C. Polling
    D. Packet reservation multiple access

28. Bluetooth applications include the following except
    A. File transfer
    B. Device synchronization
    C. Mobile payments
    D. None of the above

29. Creating a general-purpose application environment based mainly on existing technologies and philosophies of the World Wide Web is the main idea behind
    A. Wireless Application Environment
    B. Wireless Markup Language
    C. WMLScript complements
    D. Intermediate systems

30. The most successful digital mobile telecommunication system in the world today
    A. GSM
    B. Mobile Telephony
    C. UMTS
    D. W-CDMA

31. This term defines the current location of the MN from an IP point of view.
    A. Care-of address (COA)
    B. Correspondent node (CN)
    C. Home agent (HA)
    D. Home network

32. In this technique, an outer IP header is inserted before the datagram's existing IP header.
    A. IP-in-IP encapsulation
    B. Minimal encapsulation
    C. Generic Routing Encapsulation (GRE)
    D. None of the above

33. A wireless network interface can work in
    A. Infrastructure mode
    B. Ad hoc mode
    C. Both a and b
    D. None of the above

34. The umbrella term that allows people to access network services anywhere, anytime is referred to us
    A. Ad hoc networks
    B. Mobile computing
    C. MANETs
    D. Wireless cloud computing

35. What level of the OSI model allows the end-to-end connection?
    A. Data link
    B. Network
    C. Transport
    D. Application

36. The following are functions of the network Switching Subsystem (NSS) except
    A. Home location register
    B. Visitor location register
    C. Equipment identity register
    D. Authentication Center

37. The device that handles the radio interface to the mobile station
    A. Base transceiver station (BTS)
    B. Base station Subsystem (BSS)
    C. Base station controllers (BSC)
    D. Radio interface

38. The following figure explain a scenario described as:

A. Far and near terminals
B. Exposed terminals
C. Hidden and exposed terminals
D. Multiple access and duplex

39. **The following are used for allocating a separate space to users in wireless network under Space Division Multiple Access (SDMA) except**
    A. Frequency division multiplexing
    B. Time slot multiplexing
    C. Code division multiplexing
    D. Bandwidth division multiplexing

40. **The tunnel end-point which forwards packets to the mobile nodes is called**
    A. Care-of address
    B. Foreign address
    C. Collocated address
    D. Home agent

41. **If the inter-arrival time is too high to receive a COA, the MN can; send**
    A. Agent solicitation
    B. Agent registration
    C. Registration request
    D. None of the above

42. **The mechanism of taking a packet consisting of packet header and data and putting it into the data part of a new packet is**
    A. Encapsulation
    B. Tunneling
    C. Data-in-data

D. Minimal encapsulation

43. **Problems relating to reverse tunneling includes**
    I. Firewalls filter packets coming from outside the network
    II. Low time-to-leave (TTL)
    III. An MN in foreign network cannot transmit multicast
    IV. Slow start is unavoidable
    A. I, II, IV only
    B. I, III, IV only
    C. II, III, IV only
    D. I, II, III only

44. **Preservation of End-to-end TCP semantic is a disadvantage of snooping TCP**
    A. True
    B. False

45. **The tunnel for packets toward the MN starts at the HA.**
    a. True
    b. False

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