**Sample Questions**

Computer Engineering

**Subject Name:** Adhoc Wireless Network **Semester: VIII**

Multiple Choice Questions

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| **Choose the correct option for following questions. All the Questions carry equal marks**  |
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| 1. | Military vehicles on battlefield with no existing infrastructure will deploy ----------- |
| Option A: | LAN |
| Option B: | Wi-Fi |
| Option C: | Cell Network |
| Option D: | MANET |
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| 2. | IEEE 802.11 have three categories of ---------- |
| Option A: | Fields  |
| Option B: | Frames |
| Option C: | Signals |
| Option D: | Sequences |
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| 3. | Each channel in Bluetooth layer is ---- |
| Option A: | 1 MHz |
| Option B: | 2 MHz |
| Option C: | 3 MHz |
| Option D: | 4 MHz |
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| 4. | In IEEE 802,11 frames, To DS and from DS define the value of the two flags in the ------ |
| Option A: | Sequence field |
| Option B: | Data field |
| Option C: | Frame control |
| Option D: | Duration field |
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| 5. | On wireless networks ----- filtering is the security measure. |
| Option A: | OUI |
| Option B: | IP |
| Option C: | NIC |
| Option D: | MAC |
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| 6. | Which multiple access technique is used by IEEE 802.11 standard for wireless LAN? |
| Option A: | CDMA |
| Option B: | CSMA/CA |
| Option C: | ALOHA |
| Option D: | CSMA/CD |
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| 7. | ------------ scheme is used by Bluetooth for multiple access among co located devices in different piconets. |
| Option A: | Frequency hopping TDD Scheme |
| Option B: | Frequency hopping FDD scheme |
| Option C: | DSSS TDD scheme |
| Option D: | DSSS FDD scheme |
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| 8. | Wi-Max provides ---------- |
| Option A: | VoIP |
| Option B: | IPTV |
| Option C: | Both VoIP and IPTV |
| Option D: | No IPTV services |
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| 9. | -------------- provides the connectivity to Wi-Max Networks. |
| Option A: | Subscriber station |
| Option B: | Base station |
| Option C: | Gateway |
| Option D: | Switch Station |
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| 10. | What layer in the TCP/IP stack is equivalent to the Transport layer of the OSI model? |
| Option A: | Application |
| Option B: | Host to host |
| Option C: | Internet |
| Option D: | Network Access |
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| 11. | Which of the following protocols uses both TCP and UDP |
| Option A: | SMTP |
| Option B: | Telnet |
| Option C: | FTP |
| Option D: | DNS |
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| 12. | Which of the following is private IP address? |
| Option A: | 12.0.0.1 |
| Option B: | 168.172.19.39 |
| Option C: | 172.15.14.36 |
| Option D: | 192.168.24.43 |
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| 13. | Split TCP provides \_\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | Congestion control |
| Option B: | Flow Control |
| Option C: | Speedy transmission |
| Option D: | Delay |
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| 14. | The use of ACTP in very large adhoc wireless networks does not provide |
| Option A: | Throughput |
| Option B: | Reliability |
| Option C: | Scalability |
| Option D: | Congestion control mechanism |
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| 15. | Throughput degradation in TCP is due to ------ |
| Option A: | Misinterpretation of packet loss |
| Option B: |  Frequent path breaks |
| Option C: | Decrease of path length |
| Option D: | Misinterpretation of congestion window |
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| 16. | Since Ad-hoc network is already have a limited resources and processing power, to keep a confidentiality w.r.t. connectivity between two nodes which are in range of each other, it uses a simple secure protocol like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | IEEE 802.15 |
| Option B: | IEEE 802.11 WEP protocol |
| Option C: | IEEE 802.11a  |
| Option D: | IEEE 802.17 |
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| 17. | The network-layer security is concerned with securely delivering packets between mobile nodes through----------- |
| Option A: | Single hop forwarding |
| Option B: | No Forwarding |
| Option C: | Multihop ad hoc forwarding |
| Option D: | None of the above |
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| 18. | Which of the following is not a hard real-time application which require QoS guarantees? |
| Option A: | Nuclear reactor control systems |
| Option B: | Air traffic control systems |
| Option C: | Missile control systems |
| Option D: | Online video lecture |
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| 19. | Which of the following is not a resource constraint of the nodes |
| Option A: | battery charge |
| Option B: | Processing power |
| Option C: | Cost |
| Option D: | Memory |
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| 20. | Which one of the following is not a function of network layer? |
| Option A: | Routing |
| Option B: | Inter-networking |
| Option C: | Congestion control |
| Option D: | Error control |
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| 21. | Which of these components is internal to a computer and is required to connect the computer to a network?  |
| Option A: | Wireless Access Point |
| Option B: | Network Interface card |
| Option C: | Switch |
| Option D: | Hub |
| 22. | -------- occurs when both nodes transmit packets at the same time without knowing about the transmission of each other.  |
| Option A: | Intersection |
| Option B: | Collision |
| Option C: | Synchronization |
| Option D: | Error |
| 23. | Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?  |
| Option A: | CDMA |
| Option B: | CSMA/CA |
| Option C: | ALOHA |
| Option D: | CSMA/CD |
| 24. | For centralized routing the decision is made by some designated node called ……  |
| Option A: | designated center |
| Option B: | Control center |
| Option C: | Network center |
| Option D: | Network control center |
| 25. | Route discovery process in AODV protocol is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
| Option A: | Active |
| Option B: | Passive |
| Option C: | On Demand |
| Option D: | Frequent |
| 26. | What layer in the TCP/IP stack is equivalent to the Transport layer of the OSI model?  |
| Option A: | Application |
| Option B: | Host to host |
| Option C: | Internet |
| Option D: | Network Access |
| 27. | User datagram protocol is called connectionless because \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | all UDP packets are treated independently by transport layer |
| Option B: | it sends data as a stream of related packets |
| Option C: | it is received in the same order as sent order |
| Option D: | it sends data very quickly |
| 28. | In ad hoc wireless networks the QoS requirements are more influenced by  |
| Option A: | User specification |
| Option B: | Routing Protocols |
| Option C: | Topology of the network |
| Option D: | Resource constraints of the nodes |
| 29. | Which of the following is not a hard real-time application which require QoS guarantees?  |
| Option A: | Nuclear reactor control systems |
| Option B: | Air traffic control systems |
| Option C: | Missile control systems |
| Option D: | Online video lecture |
| 30. | \_\_\_\_\_\_\_\_specifies the Logical Link Control (LLC) in VANET.  |
| Option A: | IEEE 802.2 |
| Option B: | IEEE 802.5 |
| Option C: | IEEE 802.11 |
| Option D: | IEEE 802.8 |
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| 31. | What is the type of network in which the topology change from time to time? |
| Option A: | Wi-Fi |
| Option B: | Cell network |
| Option C: | LAN |
| Option D: | MANET |
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| 32. | Hidden terminal problem is due to ------------------------- |
| Option A: | Simultaneous transmission of nodes within the transmission range of each other |
| Option B: | Simultaneous reception of by nodes within the transmission range of sender |
| Option C: | Collision of packets at the receiving nodes due to simultaneous transmission of nodes which are not in the transmission range of each other but within the transmission range of the receiver |
| Option D: | The sender and receiver are not in the line of sight or in the transmission range of each other |
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| 33. | Sender initiated protocol is an example for\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | Contention based protocol with scheduling mechanism |
| Option B: | Contention based protocol |
| Option C: | Synchronous protocol |
| Option D: | Asynchronous protocol |
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| 34. | DSR typically imposes a higher routing overhead in bytes than AODV, due to\_\_\_\_\_ |
| Option A: | the cost of carrying destination routes in every packet. |
| Option B: | the cost of carrying source routes in every packet. |
| Option C: | the cost of carrying source routes in every Network. |
| Option D: | the cost of carrying destination routes in every Network. |
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| 35. | A highly adaptive, efficient, loop-free and scalable routing protocol based on link reversal algorithm. |
| Option A: | DSDV |
| Option B: | TORA |
| Option C: | AODV |
| Option D: | ZRP |
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| 36. | In TCP\_BUS upon the detection of a path break, an intermediate node called the\_\_\_\_ |
| Option A: | Pivot node (PN) |
| Option B: | Failure Node(FN) |
| Option C: | Active Node(AN) |
| Option D: | Distributing Node(DN) |
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| 37. | \_\_\_\_\_\_\_\_\_\_\_\_ is sent to TCP-F sender, If the broken links rejoins or intermediate node obtains a new path to destination |
| Option A: | Route reestablishment notification (RRN) |
| Option B: | Route Failure Notification(RFN) |
| Option C: | explicit route disconnection notification (ERDN) |
| Option D: | explicit route successful notification packet (ERSN) |
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| 38. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_attack does not come under active attack |
| Option A: | Snooping |
| Option B: | Jamming |
| Option C: | black hole attack |
| Option D: | gray hole attack |
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| 39. | When fraud access points are created to access information such as passwords.” Which type of Wireless network threat would you classify this under? |
| Option A: | Identity Theft |
| Option B: | Network Injection |
| Option C: | Man in the middle attack |
| Option D: | Malicious Association |
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| 40. | IVC stand for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | Inter Vehicle Communication |
| Option B: | International Vehicle Circulation |
| Option C: | Inter Vehicle Circulation |
| Option D: | International Vehicle Communication |

**Descriptive Questions**

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| Give the classification of outdoor and indoor mobility models in adhoc wireless networks. Explain Random Waypoint Model in detail. |
| What are the main issues that need to be addressed while designing MAC protocol for adhoc networks.? Explain Hidden and exposed terminal problem in detail |
| What are the characteristics of an Ideal Routing Protocols for Adhoc Wireless Network?  |
| How Route maintenance is carried out in AODV protocol? give advantages and disadvantages of AODV  |
| What are common Attacks on Routing Protocols? Explain in details. |
| Explain components of WAVE (Wireless Access for the Vehicular Environment). |
| What are the main issues that need to be addressed while designing MAC protocol for adhoc networks. |
| In which approach the problems of TCP such as throughput degradation with increase in the path length and unfairness among TCP flows can be overcome? Explain with suitable example and mention this approach merits and demerits  |
| What do you mean by Quality of service (QoS) provisioning? Explain with example QoS routing in Adhoc Wireless Networks. |
| Give the difference between cellular networks and adhoc wireless networks. |
| Write short note on IEEE802.15.4(ZigBee).  |
| What are the characteristics of an Ideal Routing Protocols for Adhoc Wireless Network?  |
| Write short note on: Various security attacks in application layer.  |
| Explain components of WAVE (Wireless Access for the Vehicular Environment).  |
| Explain the characteristics that affect QoS provisioning in Ad-hoc wireless networks.  |
| What are the main issues that need to be addressed while designing MAC protocol for adhoc networks?  |
| Explain Temporary ordered routing algorithm (TORA). Also mention its advantages and disadvantages.  |
| What do you mean by Quality of service (QoS) provisioning? Explain with example QoS routing in Adhoc Wireless Networks.  |
| Give classification of transport layer solutions. And explain Split Approach and End-to-End approach. |
| List On-demand (Reactive) routing protocols and Explain TORA.  |
| Explain network security attacks.  |
| Why secure routing protocols are needed? Explain security aware Ad-hoc routing protocol (SAR). |
| Explain Layered architecture for VANETs. |
| Explain any three design issues of routing protocol for adhoc wireless networks. |
| Briefly discuss the network security requirements for adhoc networks. |
| Differentiate between cellular networks and Ad Hoc network |
| Explain characteristics of VANET. |
| Explain issues in designing MAC protocol in adhoc wireless protocol. |
| Explain Power-Aware routing protocol. |
| Describe the working mechanism of MAC protocol using directional antenna. Explain any one protocol of this category. |
| Classify the security attacks in adhoc wireless network. and explain network layer attacks in detailed |
| What do you mean by Quality of service (QoS) provisioning? Explain with example QoS routing in adhoc wireless networks. |
| Explain the Five phase reservation protocol. |
| List and explain the various applications of Ad Hoc Networks. |
| Discuss the operation of Feedback based TCP with suitable example. |
| Explain in detail the receiver initiated MAC protocol (MARCH). Media Access with Reduced Handshake Protocol (MARCH) |
| Explain in detailed Layered architecture for VANETs, DSRC /WAVE standard (IEEE 802.11p ) |