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**Question Paper Code: 49402**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2018

Elective

Electronics and Communication Engineering

14UEC902- MOBILE AD-HOC NETWORKS

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

1. Which of the following is not the characteristic of the wireless channel? CO1- R
  - (a) Path loss
  - (b) Reflection
  - (c) Fading
  - (d) Interference
  
2. The main reason for jamming in wireless network CO1- R
  - (a) disruption caused by stronger signal
  - (b) disruption caused by electromagnetic emissions of electronic devices
  - (c) disruption caused by internal sources ,such as cross talk
  - (d) disruption caused by the message is reflected by solid objects
  
3. In MAC protocol, \_\_\_\_\_ is not required for bandwidth reservation by nodes. CO2- R
  - (a) Central coordination
  - (b) Bandwidth efficiency
  - (c) Quality of service
  - (d) synchronization
  
4. \_\_\_\_\_ is a single-channel TDMA based broadcast scheduling protocol. CO2 -R
  - (a) MARCH
  - (b) PRMA
  - (c) SRMA
  - (d) FPRP
  
5. The routing protocol based on the utilization of specific resources is called as CO3- R
  - (a) table driven routing protocol
  - (b) flat topology routing protocol
  - (c) power aware routing protocol
  - (d) on demand routing protocol

6. The main characteristics of an ideal routing protocol for Ad Hoc wireless networks is CO3 -R
- (a) it must maximize the use of resources such as bandwidth, memory and computing power
  - (b) it must be loop free and free from stale routes
  - (c) it must not converge to optimal routes once network topology becomes stable.
  - (d) quality of service should be poor as demanded by the application
7. One of the design goal of transport layer protocol for Adhoc wireless network is CO4- R
- (a) the transport should have mechanisms for congestion control and flow control
  - (b) the protocol should minimize throughput
  - (c) the protocol should not be able to adapt to the dynamics of the network
  - (d) the protocol should not maintain end to end semantics
8. Network layer attack is called as CO4- R
- (a) worm hole attack
  - (b) snooping
  - (c) jamming
  - (d) session hijacking
9. Cross layer feedback means \_\_\_\_\_ among the layers in the protocol stack. CO5 -R
- (a) delay
  - (b) loss
  - (c) interaction
  - (d) priority
10. The abbreviation for MIPMANET is? CO5 -R
- (a) Movable Internet protocol for Mobile Ad hoc Networks
  - (b) Mobile Internet protocol for Mobile Ad hoc Networks
  - (c) Mobile Intelligent protocol for Mobile Ad hoc Networks
  - (d) Microwave Internet protocol for Mobile Ad hoc Networks

PART – B (5 x 2= 10Marks)

11. Examine the transmission rate constraints of the wireless channel. CO1- R
12. Mention the several advantages of MAC protocols that use directional antennas for transmissions. CO2 -R
13. Why is the routing in multi hop adhoc networks complicated? CO3- R
14. What are the fundamental requirements of secure routing for Adhoc wireless networks? CO4 -R

15. Classify the integrating routing solutions based on gateway discovery. CO5-R

PART – C (5 x 16= 80Marks)

16. (a) Examine the differences between cellular networks and adhoc wireless networks and also identify the applications of adhoc wireless networks. CO1 -U (16)

Or

(b) (i) Give the characteristics of wireless channel. CO1 -U (8)

(ii) What are the Characteristics features and applications of Adhoc system CO1 -U (8)

17. (a) Compare the features of HIPERLAN 1 and HIPERLAN 2 standards. CO2 -U (16)

Or

(b) Illustrate and explain the radiation pattern and packet transmission of MAC protocol using directional antennas. CO2- Ana (16)

18. (a) Explain the mechanism of route establishment and route maintenance in Destination sequenced Distance vector routing protocol (DSDV) with an example. CO3 -U (16)

Or

(b) Illustrate the multilayer clustering defined by the HSR protocol and explain the same. CO3- Ana (16)

19. (a) Why does TCP not perform well in adhoc wireless networks? What are the changes made to traditional networks to suit adhoc environment? CO4- U (16)

Or

(b) Briefly describe the attacks pertaining to the network layer with Neat diagram. CO4- U (16)

20. (a) Recall the design goals of ÉCLAIR architecture and explain the functioning of its cross layer optimization. CO5 -U (16)

Or

(b) What is the need to integrate adhoc networks with mobile IP? explain. CO5- U (16)

