GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT
2020-2021
AD-HOC NETWORK
MCE302B

TIME ALLOTTED:3HOURS   **FULL MARKS:70**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

GROUP – A
(Multiple Choice Type Questions)

Answer any *ten* from the following, choosing the correct alternative of each question: 10×1=10

		Marks	CO No.
1(i)	Data communication system within a building or campus is	01	CO2
	a) WAN		
	b) MAN		
	c) None of the mentioned		
	d) LAN		
1(ii)	Which multiplexing technique transmits digital signals ?	01	CO1
	a) TDM		
	b) WDM		
	c) FDM		
	d) None of the mentioned		
	This is not a application layer protocol	01	CO4
	a) HTTP		
1(iii)	b) FTP		
	c) TCP		
	d) SMTP		
1(iv)	In wireless ad-hoc network	01	CO1
	a) access point is not required		
	b) access point is must		
	c) nodes are not required		
	d) none of the mentioned		
1(v)	The DoS attack is which the attacker sends deluge of packets to the targeted host		CO3
	a) Vulnerability attack		
	b) Bandwidth flooding		
	c) Connection flooding		
	d) All of the mentioned		
1(vi)	In a network, If P is the only packet being transmitted and there was no earlier transmission, which of the following delays could be zero	01	CO1
	a) Propagation delay		
	b) Processing delay		
	c) Transmission delay		
	d) Queuing delay		

1(vii)	The invalid operation of the Ad Hoc Network initiated by Ad Network is called
	  a) Trust attack
	  b) Byzantine failure
	  c) Spoofing Attack
		01	CO2

1(viii)	Grid Location Service Routing has the structure of
	  a) Flat
	  b) Hierarchical
	  c) Reversible
	  d) Both a and b
		01	CO3

1(ix)	Reactive Location Service Routing adopts the strategy of
	  a) Reactive
	  b) Proactive
	  c) Combined
	  d) None of the above
		01	CO2

1(x)	Hidden terminal arises when two sender nodes
	  a) Out of transmission range
	  b) Within the transmission range
	  c) Independent of the range
		01	CO1

1(xi)	Which is true related to Exposed node
	  a) over-utilization of bandwidth resources.
	  b) under-utilization of bandwidth resources.
	  c) uses the exact bandwidth
	  d) have no effect on bandwidth
		01	CO1

1(xii)	Mobile Ad Hoc Network supports
	  a) DCF of 802.11
	  b) PCF of 802.11
	  c) Both of the above
	  d) None of the above
		01	CO1

GROUP – B
(Short Answer Type Questions)
(Answer any *three* of the following)   3 x 5 = 15

		Marks	CO No.
2	Define the term dynamic topology change in Ad Hoc Network routing.	5	CO2
3	Explain how Distributed Contention Control (DCC) implemented between MAC layer and Physical layer is used to save the battery power.	5	CO3
4	Discuss briefly how the routes are established in Ad Hoc On-Demand Distance Vector (AODV) with suitable diagram.	5	CO2
5.a)	Explain with suitable diagram the Cross-layer design in Ad Hoc Network.	3	CO4
5.b)	List the advantages of Cross-layer design in Ad Hoc Network.	2	CO4
6	Hidden terminal and exposed terminal problem in wireless networks	5	CO3

GROUP – C
(Long Answer Type Questions)
(Answer any *three* of the following)   3 x 15 = 45

		Marks	CO No.
7.a)	Discuss the features of Dynamic Source Routing.	8	CO5
7.b)	Give an example of routing propagation with routing table using RREQ and RREP route records.	7	CO5
8.a)	Discuss Ad Hoc On Demand Link Reversal Routing (LLR).	8	CO4
8.b)	Explain Temporally-Ordered Routing Algorithm (TORA) for LLR	7	CO5
9.a)	Write down the security issues in Ad Hoc Network.	9	CO3
9.b)	What do you mean by active and passive attack?	6	CO4
10.a)	Discuss TCP window management and its related Problem problems	8	CO4
10.b)	Explain the extended TCP related to connection segment to manage communication overhead.	7	CO4
11	Write short notes on any three		
11.a)	TCP/IP Window Scaling	5	CO2
11.b)	Black hole Attack	5	CO2
11.c)	Byzantine attack	5	CO2
11.d)	Spoofing Attack	5	CO2