Hall Ticket Number:

Code No. : 18231 N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade
B.E. (C.S.E.) VIII-Semester Main & Backlog Examinations, May-2023
Adhoc and Sensor Networks (PE-V)

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	State any two important characteristics of a Mobile Ad hoc Network (MANET).	2	1	1	1,2
2.	State the advantage of AODV over DSDV protocol.	2	1	1	1,2
3.	What is meant by Broadcast Storm Problem?	2	1	2	1,2
4.	Write the motivation behind the hybrid multicasting protocols.	2	4	2	1,2
5.	Illustrate the Cognitive Radio Concept.	2	2	3	1,2
6.	Discuss design issues of TCP over Ad hoc Networks?	2	1	3	1,2
7.	Why traditional MAC protocols perform poorly in Wireless sensor networks?	2	1	4	1,2
8.	What is the architecture of sensor networks used in controlled or extreme-environment applications?	2	1	4	1,2
9.	State the objective of Diffie-Hellman protocol in Ad hoc networks.	2	1	5	1,2
10.	List the best practices of implementing security in Ad hoc Networks.	2	1	5	1,2

Part-B (5×8 = 40 Marks)

		M	L	CO	PO
11. a)	Illustrate the working of DSR protocol for Mobile ad hoc networks (Manets)	5	2	1	1,2
b)	Explain the spatial and temporal resolutions of DREAM protocol for Location Service	3	2	1	1,2
12. a)	Compare and contrast the two broadcast protocols-MPR and AHBP.	6	3	2	1,2
b)	Explain how jitter and RDT can be used in any broadcast protocol for mitigating the broadcast storm problem?	2	4	2	1,2
13. a)	What are the key features of cognitive radio?	4	3	3	1,2
b)	Explain any two mobility-based protocols for TCP over ad hoc links.	4	3	3	1,2

			M	L	CO	PO
14.	a)	Compare and contrast the two MAC protocols for sensor networks-SMAC and EAR.	4	3	4	1,2
	b)	Explain the network architecture used in Great Duck Island application of sensor networks.	4	3	4	1,2
15.	a)	What is meant by Intrusion? Giving a neat sketch, explain the architecture of IDS in ad hoc environment.	6	2	5	1,2
	b)	Write the concept of CONFIDANT protocol for node cooperation.	2	3	5	1,2
16.	a)	Explain the typical applications of Manets.	4	3	1	1,2
	b)	Give the taxonomy of multicasting protocols for Manets.	4	2	2	1,2
17.		Answer any *two* of the following:				
	a)	Explain the key challenges of cognitive radio.	4	3	4	1,2
	b)	Explain the terms with respect sensor networks-Data centric approach, attribute addressing, data aggregation and in-network processing.	4	2	4	1,2
	c)	What are the ingredients of heterogeneous network architecture. Explain any two.	4	3	5	1,2

M : Marks;   L: Bloom's Taxonomy Level;   CO; Course Outcome;   PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	30%
iii)	Blooms Taxonomy Level – 3 & 4	50%

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