

Reg.No.:

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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 50008

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Seventh Semester

Information Technology

U19CSV11– MOBILE ADHOC NETWORKS

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	List the challenging issues in ad hoc network maintenance.	2	K2	CO1
2.	Differentiate an ad hoc network and a cellular network.	2	K2	CO1
3.	How BTMA channel is separated?	2	K2	CO2
4.	Define HIPERLAN.	2	K1	CO2
5.	Give advantages and disadvantages of DSDV routing protocols.	2	K1	CO3
6.	Mention the main goal of energy aware routing protocol.	2	K2	CO3
7.	How TCP-F adapts to packet loss in ad hoc networks?	2	K2	CO4
8.	Define secure routing.	2	K1	CO4
9.	Write advantages of cross layer optimization.	2	K1	CO5
10.	State the features offered by Cellular IP.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Elaborate the path loss and fading in mobile ad hoc networks.	13	K2	CO1

- (OR)
- b) Explain the Indoor and Outdoor models in ad hoc mobility models with examples. 13 K2 CO1
12. a) Describe the working of contention based protocols with reservation. Include examples. 13 K2 CO2
- (OR)
- b) Illustrate IEEE Standards 802.15 in detail. 13 K2 CO2
13. a) Discuss in detail about Unicast routing Algorithm. 13 K3 CO3
- (OR)
- b) Describe the routing table construction and update process in Fisheye State Routing protocol. 13 K3 CO3
14. a) Discuss the common security attacks at the network and transport layers in ad hoc networks. 13 K2 CO4
- (OR)
- b) Identify and explain the factors affecting transport layer design in ad hoc wireless networks. 13 K2 CO4
15. a) Illustrate cross layer optimization with examples from ad hoc network protocols. 13 K3 CO5
- (OR)
- b) Describe the process and benefits of combining ad hoc routing with Mobile IP. 13 K3 CO5

PART – C

(1 x 15 = 15 Marks)

- | Q.No. | Questions | Marks | KL | CO |
|--------|---|-------|----|-----|
| 16. a) | Evaluate the performance of MAC protocols for Wireless Sensor Networks and estimate the duty cycle. | 15 | K3 | CO2 |
| (OR) | | | | |
| b) | Assess the detail in the following table, draw network based on the data available and explain DSDV protocol with the framed network. | 15 | K4 | CO3 |

Destination	Next hop	Metric	Sequence No.
A	A	0	A-550
B	B	1	B-102
C	B	3	C-588
D	B	4	D-312