Code No.: R22CS58242PE | R22 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–M.TECH–II–Semester End Examinations (Regular) – September- 2023
WIRELESS AND SENSOR NETWORKS
(CSE)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1.	a)	How does a MANET differ from a traditional wireless network?	[2M]
	b)	What are the advantages and disadvantages of using flooding for data forwarding?	[2M]
	c)	How is reliability ensured in data transmission across MANETs?	[2M]
	d)	How does multicast routing differ from unicast and broadcast routing?	[2M]
	e)	Explain the key features of TCP.	[2M]
	f)	What is classification the sensor networks.	[2M]
	g)	How does clustering help in managing data transmission in sensor networks?	[2M]
	h)	How is node authentication achieved in ad hoc networks?	[2M]
	i)	Explain the difference between passive attacks and active in ad hoc networks?	[2M]
	j)	List the difficulties in maintaining secure and efficient key distribution in dynamic networks.	[2M]

PART-B **(50 Marks)**

2.	a)	Explain the differences between proactive (table-driven) and reactive (on-demand) routing protocols in MANETs	[5M]
	b)	What are the advantages and disadvantages of using DSR in MANETs?	[5M]
		OR	
3.		Describe how AODV (Ad hoc On-Demand Distance Vector) routing protocol works and explain how route rapier happen in AODV with an example.	[10M]
4.	a)	Discuss potential challenges and opportunities for the MANETs.	[5M]
	b)	How does the maintenance of a stable topology affect the performance of a MANET?	[5M]
		OR	
5.		Discuss the key features and mechanisms of the MCEDAR hybrid routing.	[10M]
6.		Explain how TCP manages flow control during data transmission.	[10M]
		OR	
7.		What mechanisms does TCP use to prevent overwhelming the receiver with data?	[10M]
8.	a)	How can data retrieval in sensor networks be applied in environmental monitoring?	[5M]
	b)	Compare and contrast centralized and distributed data retrieval approaches in sensor networks.	[5M]
		OR	
9.		What research challenges need to be addressed to enhance data retrieval efficiency in large-scale sensor networks?	[10M]
10.		How does the exposure of sensitive information threaten user privacy in ad hoc networks?	[10M]
		OR	
11.		How is data confidentiality and integrity maintained during transmission in ad hoc networks?	[10M]

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