PVP 22

Code: 22ECMC2T5D

I M.Tech - II Semester – Regular Examinations - JULY - 2023

WIRELESS SENSOR NETWORKS
(MICROWAVE & COMMUNICATION ENGINEERING)

Duration: 3 hours Max. Marks: 60

Note: 1. This paper contains 4 questions from 4 units of Syllabus. Each unit carries 15 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	With neat diagrams, discuss the various sensor network scenarios.	L3	CO1	8 M
	b)	List the various potential applications of wireless sensor networks and explain any two with an example.	L2	CO1	7 M
OR					
2	a)	Write a short note on TinyOS and nesC.	L4	CO1	8 M
	b)	Summarize the factors that play an important role in optimizing a wireless sensor network.	L5	CO1	7 M

		UNIT-II			
3		List the important classes of MAC protocols and discuss the principle of S-MAC protocol and mediation device protocol with neat sketches.	L2	CO2,CO3	15 M
		OR			
4	a)	Illustrate the design approaches and considerations of physical layer.	L3	CO2,CO3	7 M
	b)	Explain any two low duty cycle protocols.	L3	CO2,CO3	8 M
		UNIT-III			
5	a)	Analyze the localization algorithms with neat sketches.	L4	CO2,CO4	7 M
	b)	Evaluate how the nodes in a sensor network are time synchronized.	L5	CO2,CO4	8 M
		OR			
6	a)	Describe the importance of multi hop clusters.	L2	CO2,CO4	7 M
	b)	Outline the significant roles of sensor nodes and their utilities.	L3	CO2,CO4	8 M
		UNIT-IV			
7	a)	Discuss the Programming challenges in sensor network.	L2	CO5	7 M
	b)	Write short notes on State-centric programming.	L2	CO5	8 M
		OR			

8	a)	Evaluate the Implementation procedure of node level simulators in sensor network.	L5	CO5	8 M
	b)	Illustrate the simulator TOSSIM in sensor network.	L3	CO5	7 M