Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U3910

M.E. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Computer Science and Engineering

21PCS510 - WIRELESS SENSOR NETWORKS

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	List any four applications of WSN.	CO1- U
2.	State about the Event Detection application.	CO1- U
3.	List various modes of a Sensor node.	CO1- U
4.	What are the types of Radio Propagation	CO1- U
5.	List the requirements of a MAC protocol	CO1- U
6.	Define Multi access with signaling of MAC protocol.	CO1- U
7.	List various services offered by localization.	CO1- U
8.	Discuss on the parameters defined by the homogenous topology control.	CO1- U
9.	What is Sensor node hardware?	CO1- U
10.	Classify sensor node hardware.	CO1- U

PART B - (5 x 16 = 80 Marks)

11.	(a)	Write in brief various standards used and applications of Wireless Sensor Networks.	CO1- U	(16)
		Or		
	(b)	Discuss the Challenges and Hurdles faced in Wireless Sensor Networks with IEEE 802.15.4, Zigbee standards.	CO1- U	(16)

12.	(a)	Explain with sensor node technology of Wireless Sensor Networks for Habitat Monitoring..	CO2-App	(16)
		Or		
	(b)	Explain the node deployment in Wireless Sensor Networks and necessary measures to reduce security hacks and threats.	CO2-App	(16)
13.	(a)	Explain the following (i) Periodic Listen and Sleep Operations (ii) Schedule Selection and Coordination (iii) Schedule Synchronization	CO1- U	(16)
		Or		
	(b)	Discuss the working procedure of IEEE802.15.4 in Wireless Sensor Networks.	CO1- U	(16)
14.	(a)	Briefly discuss the Target Tracking in Wireless Sensor Network for a roaming object.	CO2- App	(16)
		Or		
	(b)	Elaborate the Strategies for Data Dissemination to Mobile Sinks in Wireless Sensor Networks..	CO2- App	(16)
15.	(a)	Write detailed notes on any one Node-level software platforms..	CO1- U	(16)
		Or		
	(b)	Explain in detail the programming challenges and State-centric programming in sensor networks.	CO1- U	(16)