Sub Code: CST-304 **ROLL NO……..……..**

FIRST SEMESTER EXAMINATION, 2022 – 23
M.Tech. II Year: Computer Science & Engineering
WIRELESS SENSOR NETWORKS

Duration: 3:00 hrs **Max Marks: 100**

Note: - Attempt all questions. All Questions carry equal marks. In case of any ambiguity or missing data, the same may be assumed and state the assumption made in the answer.

Q 1.	Answer any four parts of the following. a) What are the unique challenges & constraints in wireless sensor networks? b) What are the various applications of wireless sensor network in different fields? Explain in details. c) Explain & distinguish about physical layer evaluation technologies. d) Explain the sensor network architecture with diagram. e) What are design goals of a MAC protocol for Ad Hoc Wireless Networks? f) What is the wireless sensor network?	5x4=20
Q 2.	Answer any four parts of the following. a) What is the Anatomy of Sensor Node? b) What is the routing Protocol? Explain some routing protocol in WSN. c) What are the Possible attacks in Wireless Sensor Network? d) What do you understand by Cross Layer Architecture? e) Explain the Types of Sensors. How we can Detect the Errors in sensor network? f) What is the WSN Deployments?	5x4=20
Q 3.	Answer any two parts of the following. a) What is the principle behind scheduled based protocol? Explain any one schedule based protocol with example. b) Discuss the requirements for wireless MAC protocols. Discuss following main issues of designing a MAC protocol. i) Quality of services (QoS) ii) Hidden and exposed node problem. c) Which are the Performance Metrics that are used for evaluating the Performance of WSN? Explain each of them briefly	10x2= 20
Q 4.	Answer any two parts of the following. a) What are the design issues in designing a routing protocol for ad hoc Wireless networks? Describe about various types of hybrid routing protocols. b) What is the Rumor Routing? Discuss in detail the design principles for WSN c) What is the LEACH Protocol in wireless sensor network? Explain the Energy Efficient Weight-Clustering Algorithm in WSN.	10x2= 20
Q 5.	Answer any two parts of the following. a) List and explain the different types of network layer attack possible in wireless networks. b) What is range-based localization? Explain with an example how triangulation works. c) What are the Protocols and Mechanisms for Security? Explain the Static and dynamic key distribution.	10x2= 20

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