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Question Paper Code: U3910

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. Compare IEEE 802.15.4 and Zigbee WSN standard. CO1- U
2. State the important characteristics of WSN. CO1- U
3. Differentiate Semantic and Temporal mining. CO1- U
4. What are the components of a Sensor node technology? CO1- U
5. What is Dissemination Protocol? CO1- U
6. List the requirements of a MAC protocol.. CO1- U
7. What are the advantages of clustering? CO1- U
8. Explain how clustering solves the issue of scalability on WSN. CO1- U
9. What do you mean by node level simulation? CO1- U
10. What is centric programming? CO1- U

PART B - (5 x 16 = 80 Marks)

11. (a) Explain the various network architectures of Wireless Sensor Networks. CO1- U (16)
Or
(b) Discuss the application of Wireless Sensor Networks in various fields with example. CO1- U (16)
12. (a) Discuss in brief Sensor taxonomy to be followed in building Wireless Sensor Networks. CO2-App (16)
Or
(b) Explain the Propagation and Propagation impairments of Radio technology. CO2-App (16)

13. (a) Explain the performance requirements and commonly used MAC protocols in wireless sensor networks. CO1- U (16)
- Or
- (b) Write a note on schedule based and Random Access based MAC Protocols. CO1- U (16)
14. (a) Discuss in details any two Localization and Positioning algorithms. CO1- U (16)
- Or
- (b) Discuss the Routing Challenges and Design Issues in Wireless Sensor Networks... CO1- U (16)
15. (a) Discuss the concept of Centric programming and its collaborative groups with relevant examples. CO2- App (16)
- Or
- (b) Explain the various Node level simulators available for Sensor Networks. CO2- App (16)