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Question Paper Code: 1065260

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024

Fifth Semester

Electronics and Communication Engineering
U20EC504 – ADHOC AND SENSOR NETWORKS
(Regulation 2020)

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions

PART – A

(10 x 2 = 20 Marks)

1. List the characteristic requirements of wireless sensor network.
2. Point out the characteristics of wireless Channel.
3. Give the operational states of transceivers.
4. What is multi-hop communication?
5. List out the factors to be considered in selection of modulation scheme.
6. Differentiate Wakeup period and listen period.
7. What are the techniques used to establish infrastructure?
8. List the services provided by operating system.
9. Write about node level software platforms.
10. Summarize the groups available in state centric programming.

PART – B

(5 x 16 = 80 Marks)

11. (a) Discuss about the various applications of wireless sensor networks with suitable examples. (16)

(OR)

- (b) (i) Compare the sensor network with adhoc network. (8)
(ii) Discuss about the Enabling technologies to build up WSN. (8)

12. (a) Illustrate and describe the architecture of sensor node hardware components. (16)

(OR)

- (b) Demonstrate and describe an optimization goals and figure of merit of WSN. (16)

13. (a) Discuss about physical layer and transceiver design considerations. (16)

(OR)

- (b) Discuss about Sensor - MAC mechanism used in idle listening and overhearing. (16)

14. (a) (i) How is topology control used in distributed computing to alter the underlying network? (8)
(ii) Explain in detail about Time synchronization in sensor network management. (8)

(OR)

- (b) Explain in detail about various Sensor Network Simulator. (16)

15. (a) Discuss about sensor node architecture and apply modern tools to access the performance. (16)

(OR)

- (b) Briefly discuss about node level design methodology to simulate the behavior of a sensor network on a peer-node basis. (16)