Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code: 31487

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electronics and Communication Engineering

01UEC906 - WIRELESS SENSOR NETWORKS

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Bring out the difference between Adhoc networks and wireless sensor networks.

2. What are the enabling technologies for WSN?

3. Give the hardware components in sensor node architecture.

4. State the use of gateways.

5. Differentiate between active and passive sensors.

6. Define energy efficient routing.

7. What are the characteristics of transceiver?

8. What is time synchronization?

9. Mention the various types of motes.

10. List out the node-level simulators.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Describe the challenges for designing a wireless sensor networks. (8)

    (ii) Explain the collaborative processing in WSN. (8)

Or

(b) Brief note on the home control and industrial control applications of WSN. (16)

12. (a) Explain about energy consumption of sensor nodes in detail. (16)

Or

(b) Explain the optimization goals and figure of merit of WSN. (16)

13. (a) Discuss the principle of SMAC protocol. (16)

Or

(b) Describe in details about the Geographic routing with and without positions. (16)

14. (a) Illustrate the design and structure of transceiver in WSN. (16)

Or

(b) Briefly explain the localization algorithms in wireless sensor network. (16)

15. (a) Elaborate the various examples of operating systems in sensor network. (16)

Or

(b) (i) Write short notes on node-level software platforms. (8)

    (ii) Explain state-centric programming. (8)

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