Reg. No. :

Question Paper Code : 50365

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Seventh/Eighth Semester

Computer Science and Engineering

CS6003 – ADHOC AND SENSOR NETWORKS

Common to Biomedical Engineering, Electronics and Communication Engineering/
Information Technology

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions :

PART – A   (10×2=20 Marks)

1. State Shannon's theorem.

2. What is fading ? List the different types of fading ?

3. Write down the issues of designing a MAC protocol for Ad-hoc networks.

4. Outline how node scheduling is done in contention-based MAC protocols with scheduling mechanisms.

5. What is called hybrid routing ?

6. Write down the difference between proactive and reactive routing.

7. List out the hardware and software components of a sensor node.

8. Write down the various operational states of transceiver in WSN.

9. Define localization, lateration.

10. Define the term data dissemination.

PART – B   (5×16=80 Marks)

11. a) Explain.

    i) Challenges of mobile adhoc networks.   (8)

    ii) Electromagnetic spectrum.   (8)

                   (OR)

  b) i) Differentiate adhoc and cellular network.   (8)

    ii) Write the advantages of directional antennas of MMAC over MACAW.   (8)

12. a) Describe the scheduling mechanism achieved in distributed wireless ordering protocol. Explain how the information symmetry and perceived collisions are handled.   (16)

                   (OR)

  b) Elaborately explain different steps involved in five phase reservation protocol with its frame format.   (16)

13. a) Explain various protocols used in multicast routing in detail.   (16)

                   (OR)

  b) i) Explain the demand routing protocol in detail.   (8)

    ii) Discuss MAC protocol in WSN in detail.   (8)

14. a) Explain localization and its services with examples.   (16)

                   (OR)

  b) i) Explain IEEE 802.15.4 in detail.   (8)

    ii) With neat sketch discuss sensor network architecture.   (8)

15. a) Discuss in detail about triangulation.   (16)

                   (OR)

  b) Explain :

    i) Physical time.

    ii) QoS challenges.

    iii) Issues in WSN routing.

    iv) OLSR routing protocol.   (16)

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