Reg. No. :

Question Paper Code : 71656

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

Seventh/Eighth Semester

Computer Science and Engineering

CS 6003 – AD HOC AND SENSORS 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. Define a wireless sensor network.

2. State the difference between cellular network and Ad hoc wireless network.

3. Define packet delivery ratio.

4. What is a contention based protocol?

5. How the table driven protocols work in Ad hoc network?

6. What is hybrid routing?

7. List the components of a sensor node.

8. Define data relaying in a wireless sensor network.

9. Outline the need for data dissemination in a wireless sensor network.

10. Define quality of service.

PART B — (5 × 16 = 80 marks)

11. (a) (i)   Discuss the characteristics of wireless channel.   (6)

        (ii) Explain the radio propagation mechanisms.   (10)

                                        Or

    (b) (i)   What is multipath propagation? Explain with an example how it affects the signal quality.   (6)

        (ii) Explain the design issues in Ad Hoc networks.   (10)

12. (a) Discuss the issues in designing of MAC protocol for Ad Hoc networks. (16)

Or

(b) Classify MAC protocols for Ad Hoc networks and present an overview of the same. (16)

13. (a) Discuss any four reactive routing protocols for Ad Hoc wireless networks. (16)

Or

(b) What is TCP? Discuss with an example TCP over Ad Hoc wireless networks. (16)

14. (a) Discuss the architecture of wireless sensor network with diagrammatic illustration. (16)

Or

(b) Present an overview of MAC protocols for wireless sensor networks. (16)

15. (a) (i) Appraise the issues related to routing in wireless sensor networks. (8)

(ii) Present an overview of localization in wireless sensor networks. (8)

Or

(b) (i) Appraise the QoS related measures in wireless sensor networks. (8)

(ii) Outline the issues related to the transport layer in wireless sensor networks. (8)