MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

**SEVENTH SEMESTER B.Tech. (E & C) DEGREE END SEMESTER EXAMINATION
NOV/DEC 2017
SUBJECT: WIRELESS SENSOR NETWORKS (ECE - 4037)**

TIME: 3 HOURS   **MAX. MARKS: 50**

Instructions to candidates
- Answer **ALL** questions.
- Missing data may be suitably assumed.

1A. Explain the deployment considerations of an ad hoc wireless system.

1B. Compare the Cellular networks and Ad hoc wireless Networks.

1C. Explain the applications of Ad hoc wireless networks.

                                                                                                (5+3+2)

2A. Describe the major issues of Ad hoc Wireless Internet. Also mention the functions of Gateway nodes in Ad hoc Wireless Internet.

2B. Compare the features of MANETs and WSNs. Mention the similarities and differences.

2C. Explain the working of LEACH protocol.

                                                                                                (5+3+2)

3A. Explain in detail the S-MAC protocol in WSN.

3B. Mention the classification of MAC protocols for WSNs. Explain any three protocols.

3C. What are PSFQ and ESRT Protocols in WSN? Explain them.

                                                                                                (5+3+2)

4A. Explain DSDV and AODV routing protocols with suitable examples in Ad hoc wireless networks. Mention the advantages and disadvantages of each protocol.

4B. Explain the query control mechanisms in ZRP for Ad hoc wireless networks.

4C. Draw the classification of routing protocols in Ad hoc wireless networks based on various aspects.

                                                                                                (5+3+2)

5A. Explain the issues and challenges in providing QoS in Ad hoc Wireless networks.

5B. Explain any three design choices in providing QoS support for Ad hoc Wireless networks.

5C. Describe any two Networks layer protocols that give solutions for providing QoS.

                                                                                                (5+3+2)