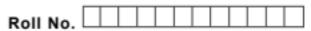


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M.Tech.(ECE) (2018 Batch) (Sem.-1) WIRELESS SENSOR NETWORKS Subject Code : MTEC-PE1X-18-1 M.Code : 75174

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES : 1.Attempt any FIVE questions out of EIGHT questions. 2.Each question carries TWELVE marks.

- 1. a) Compare sensor networks with adhoc networks.
 - b) Write a short note on single node architecture with its applications.
- 2. a) Explain one case study for IEEE 802.15.4 low rate WPAIM standard.
 - b) Differentiate between single-hop and multi-hop networks with neat diagrams.
- a) Explain the requirements and design constraints for wireless MAC and network layer protocols.
 - b) Discuss various programming challenges in wireless sensor networks (WSN).
- Explain in detail about nesC language constructs and restrictions to implement TinyOS and RetOS components and applications.
- 5. a) How energy preservation is performed in wireless sensor networks.
 - b) Discuss medium access control and MAC layer issues of Bluetooth in detail.
- 6. a) Describe in detail about security and fault tolerance in wireless sensor networks.
 - b) Discuss cluster based protocols.
- Discuss the simulation and experimental performance of open source (ns-2) and commercial (QualNet and Opnet) platforms in wireless sensor networks.
- a) Discuss different database management systems.
 - b) Discuss data dissemination and gathering in sensor networks.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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