

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(EPDT)EL-III (2016 & Onwards) (Sem.-3)
EMBEDDED WIRELESS SENSOR NETWORK

Subject Code : MTET-305

Paper ID : [74795]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. What are the challenges in use of wireless sensor networks? Distinguish between a wireless sensor network and a traditional sensor network.
2. a) Link- level broadcast capability is assumed in many of the multicast routing protocols. Are such broadcasts reliable? Give some techniques that could be used to improve the reliability of broadcasts.
b) Discuss various hardware components of an ad-hoc wireless network.
3. a) Discuss internet to WSN communication with the help of a suitable diagram.
b) What is WSN tunneling? Discuss it.
4. What is need of a gateway? Discuss WSN to internet communication. What are some of the salient features of such a communication network?
5. Explain the advantage of multiple-channel MAC protocol. How would Group Allocation Multiple Access with Packet Sensing (GAMA-PS) work well with ad hoc network? Comment on it.
6. a) Explain the need of MAC protocols for sensor networks. Discuss IEEE.802.15.4 MAC protocol scheme in detail.
b) Discuss low duty cycle and wake up concept in WSN.
7. What are the various routing strategies used for wireless sensor networks? Discuss multicast geographic routing scheme with the help of a suitable diagram.
8. a) Explain target detection and tracking in context to wireless sensor networks.
b) What is agent based unicast forwarding in WSN? Discuss it.