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M.Tech. ECE (Wireless Communication) (2018 Batch) (Sem.-1)**WIRELESS SENSOR NETWORKS****Subject Code : MTWC-PE1A-18****M.Code : 75799****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. Enlist the challenges in wireless sensor networks (WSN). (6)
 b. How Single-sink single-hop WSN differs from the Single-sink multi-hop WSN? (6)
2. a. Explain the role of WSN in health monitoring with the help of suitable diagram. (6)
 b. List any six applications of WSN. (6)
3. What is Zigbee technology? Give its architecture and applications. (12)
4. Give detail description of all the components of the sensor node with suitable diagram. (12)
5. a. Explain the design consideration of the transceiver. (6)
 b. Discuss the energy consumption of sensor node. (6)
6. a. Explain directional MAC protocol for wireless sensor network. (6)
 b. Discuss PAMAS protocol with neat sketch. (6)
7. a. Classify various routing protocols based on routing topology. (6)
 b. How is secure routing done on wireless channels? (6)
8. Write short notes on :
 - a. TinyOS (4)
 - b. Energy scavenging (4)
 - c. WSN tunneling (4)

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.