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**M.Tech. (CSE Engg.)E-I (2018 Batch) (Sem.-1)****WIRELESS SENSOR NETWORKS****Subject Code : MTCS-106-18****M.Code : 75156****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. General MAC protocols can result in a waste of energy in WSNs. How?
  - b. Classify the routing protocols for Wireless Sensor Networks.
2. Answer the following :
  - a. Different applications of sensor Networks.
  - b. Explain overall architecture of Wireless Sensor Networks.
3. Explain basic hardware and software subsystems of sensors.
4. Answer the following :
  - a. How are Wireless Sensor Networks different from traditional networks?
  - b. Difference between single hop and multiple hop in WSNs.
5. What are the characteristics of Operating Systems in Wireless Sensor Networks? Explain different operating Systems used in WSNs.
6. Explain the basic architecture of wireless sensor node with the help of a block diagram.
7. What are the possible attacks in WSNs? What are the countermeasures?
8. Explain the following network models of WSNs :
  - a. MAC Model
  - b. Routing Model

**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.**

