

**Elective-I : EC7052 - Wireless Sensor Network**

P. Pages : 1

Time : Three Hours



**GUG/W/18/1798**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Draw & explain the architecture of smart wireless sensor node architecture. **8**  
b) Which component of the sensor node consumes more power and why. **8**

**OR**

2. a) Define the following terms. **8**  
i) Dynamic network. ii) Data Dependency.  
b) Why multi hop data transmission is preferred in WSN. **8**
3. a) Explain generic protocol stack for WSN, draw neat diagram. **8**  
b) Explain in brief requirements & design constraints of WSN. **8**

**OR**

4. a) Describe data centric protocol for wireless sensor network. **8**  
b) Explain Location based routing protocol for WSN. **8**
5. a) Describe the working technology for WiFi communication. **8**  
b) Explain Zig Bee communication technology used for WSN. **8**

**OR**

6. a) Explain the advantages and disadvantages of Bluetooth technology used for WSN. **8**  
b) Describe DAM modulation technique used in communication. **8**
7. a) Describe performance metrics for MAC protocol. **8**  
b) Describe TDMA. **8**

**OR**

8. a) Explain in brief ALOHA protocol. **8**  
b) Describe MAC protocol for WSN. **8**
9. a) Describe middleware used in WSN. **8**  
b) How data storage carries importance in data management of WSN. **8**

**OR**

10. a) Explain AMF (Adaptive Middleware Framework) architecture. **8**  
b) What are different data storage schemes that are used in WSN. **8**

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