B.E.Eighth Semester (Electronics / Electronics & Telecommunication / Electronics & Communication Engineering) (C.B.S.)

Elective - II : WSN (Wireless Sensor Network)

P. Pages : 2 **NKT/KS/17/7551/7563**

Time : Three Hours * 0 3 2 5 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Explain basic sensor network architectural elements (Software & hardware both). **7**

b) Briefly define & explain the following terms. **7**
i) Military related WSN application.
ii) Civil related WSN application.
iii) Medical related WSN application .

OR

2. a) Give difference between wireless sensor network and traditional wireless ad hoc network. **7**

b) Explain factors which influenced the wireless sensor network? **7**

3. a) Explain OSI reference model of MAC architecture. **6**

b) Explain the fundamentals of MAC protocol in WSN. **7**

OR

4. a) Explain various strategies used by MAC protocol. **7**

b) Explain advanced wireless technologies. **6**
i) ZigBee Protocol
ii) Bluetooth
iii) 802.22

5. a) Explain the functionalities of following routing Protocols: **6**
a) LEACH
b) Directed diffusion

b) State the various routing challenges & design issue in wireless sensor networks. **7**

OR

6.	a)	Explain the operation of PEGASIS protocol.	**4**
	b)	Describe geographical routing in detail.	**4**
	c)	Explain the spin routing protocol in detail.	**5**
7.	a)	Explain Transport protocol design issue in WSN	**7**
	b)	Explain in detail operation of protocols used in sensor network.	**7**

OR

8.	a)	How you will analyzed the performance of transport control protocols.	**7**
	b)	Explain in brief existing TCP in WSN.	**7**
9.	a)	Draw & Explain middleware architecture of WSN.	**7**
	b)	What are challenges during the design of middleware.	**6**

OR

10.	a)	Explain the concept of data compression & data storage in middleware.	**7**
	b)	Write a basic principle of middleware with respect to appropriate application.	**6**
11.	a)	What is Traffic management? Discuss different issues related to it.	**7**
	b)	Discuss the basic issues in the design of network management.	**6**

OR

12.	a)	Draw and explain the management model used for Traditional network.	**7**
	b)	State the performance metrics for WSN.	**6**

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