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

Elective-II : Wireless Sensor Network

P. Pages : 2 **NRJ/KW/17/4689/4701**

Time : Three Hours * 0 2 4 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 sensor taxonomy for wireless sensor network. **7**

b) Explain basic sensor network architectural elements in detail. **7**

OR

2. a) Briefly explain following sensor network application in detail. **8**

i) Military Aplication

ii) Medical Application

iii) Environmental Application

iv) Industrial Application.

b) Describe the characteristics of wireless sensor Network. **6**

3. a) Explain Radio Technology primer in detail. **7**

b) Explain the Performance requirement of MAC protocol. **6**

OR

4. a) Describe schedule Based MAC protocols for sensor networks. **7**

b) Compare the following wireless technologies **6**

i) IEEE std. 802.11

ii) IEEE std. 802.15.1

iii) IEEE std. 802.15.4

5.	a)	Explain data dissemination & data gathering concept in detail.	**6**
	b)	Explain Low Energy Adaptive Clustering Hierarchy (LEACH) as routing algorithm.	**7**

OR

6.	a)	Explain Sensor Protocol for Information via Negotiation (SPIN) routing strategies of WSW in detail.	**7**
	b)	Explain routing challenges and design issues in WSN.	**6**
7.	a)	Explain connection oriented transport control protocol (TCP RFC -793) in detail.	**7**
	b)	What are the performance issues of transport control protocol.	**6**

OR

8.	a)	Explain design issues of transport control protocol.	**7**
	b)	Explain existing examples of transport control protocol:-	**6**
		i) CODA ii) GARUDA	
9.	a)	Explain challenges in the design of Middleware for WSN.	**6**
	b)	Draw and explain the middleware architecture of WSN.	**7**

OR

10.	a)	Explain the existing middleware strategies:	**6**
		i) MiLAN ii) AMF	
	b)	Explain middleware data related functions for WSN.	**7**
11.	a)	Explain traditional network management protocol (SNMP) in detail.	**7**
	b)	What are the requirements of network management.	**7**

OR

12.	a)	What are design issues of network management protocol.	**7**
	b)	Explain performance and traffic management model for WSN.	**7**

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