B.E. (Computer Technology) Semester Seventh (C.B.S.)

Elective - II : Wireless Sensor Networks

P. Pages : 2 **KNT/KW/16/7486**

Time : Three Hours * 0 8 5 3 * 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. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is Sensor Network? Explain the difference between Sensor Networks and Traditional data Networks. **8**

b) Describe about Management dimension in WSN. **5**

OR

2. a) Explain the different types of Sensor Network application. **7**

b) Explain the importance of middleware in sensor network with example. **6**

3. a) Explain the following Major models for system level programmability. **8**

a) Database model

b) Active Sensor Model

c) Active Networks - Mobile agents

b) Explain the following frameworks for system level programility. **6**

1) Cougar 2) Tiny DB

3) SQTL

OR

4. a) Write a short note on communication in Sensor Network. **6**

b) What is the importance of Packing in MEMs. **8**

5. a) Explain the different routing protocol in WSNs. **9**

b) Explain the different routing challenges in WSNs. **4**

OR

6. a) Write a short note on future directions in routing in WSNs. **6**

b) Explain the modeling of perceptual system in reference with **7**

a) Sensor Fusion b) Time Concept

c) Error Handling d) Reasoning

7. a) Describe in detail application layer protocol in WSN. **7**

b) Describe the SMP (Sensor Management Protocol) with their administrative task. **7**

OR

8. Write a short note on : **14**

1) Localization protocols

2) Time Synchronization protocols

9. a) Describe in detail Sink to sensor transport. **7**

b) Describe in detail medium access control (MAC). **6**

OR

10. Write a short note **any two.** **13**

1) Event to - sink transport. **6**

2) Key distribution scheme. **7**

3) Privacy of location information. **6**

11. a) Explain the privacy protection in WSN. **7**

b) Explain the Security Architectures of cell Based WSNs. **6**

OR

12. a) Explain in detail the unique security challenges in sensor networks and enabling. **8**

b) Write a short note on **5**

Security architectures : Cell Based WSN.

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