

Roll No.

24447

**B. Tech 7th Semester (ECE)
Examination – May, 2018**

WIRELESS SENSOR NETWORK

Paper : ECE-411-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Section. Question No. 1 is compulsory. All questions carry equal marks.

1. (a) What is meant by energy scavenging in wireless sensor network ? 5
- (b) What is meant by range assignment problem ? 5
- (c) What are the factors that influence physical layer design in wireless sensor networks. 5

- (d) What is the need of clustering nodes in a sensor networks ? 5

SECTION - A

2. Discuss the various challenges for wireless sensor networks. 20
3. Discuss the potential applications of wireless sensor networks. 20

SECTION - B

4. Illustrate and describe the architecture of sensor node hardware components. 20
5. Explain the factors playing major role in optimizing a wireless sensor network. 20

SECTION - C

6. Discuss the principle of S-MAC protocol and Mediation device protocol with a neat sketch. 20
7. Describe in detail about the Geographic routing with and without positions. 20

SECTION - D

8. Explain how the nodes in a sensor network are time synchronized for temporal reasoning. 20

 9. Discuss in detail about information based sensor tracking. 20
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