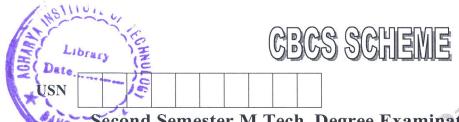
8



18ECS241

# Second Semester M.Tech. Degree Examination, June/July 2019 Wireless Sensor Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Mo	-	W	1
	~ ~ ~		

1	a.	Explain low-end and high-end platforms in sensor mote.	(10 Marks)
	b.	Explain briefly the various main category of WSN applications and discuss t	the Industrial
		application.	(10 Marks)

#### OR

2	a.	Explain the WSN architecture and Protocol Stack.	(10 Marks)
	h	Explain the military and health applications in WSN	(10 Marks)

#### Module-2

3	a.	Explain the general hardware architecture of a sensor node.	(10 Marks)
	b.	Explain correlation model and architecture for Joint Source-Channel coding.	(10 Marks)

# Module-2

1	a.	Explain the concept of fault tolerance and WSN topology in the design of WSN.	(10 Marks)
	b.	Explain the overview of RF wireless communication blocks.	(10 Marks)

### Module-3

5	a.	Explain the challenges of MAC with respect to energy consumption.	(10 Marks)
	b	Explain data centric and flat architecture protocols with necessary diagrams.	(10 Marks)

## OR

6	a.	Explain B – MAC for contention based medium access with necessary diagrams.	(10 Marks)
	h	Explain I FACH and PEGASIS hierarchical protocols in WSN	(10 Marks)

#### Module-4

7	a.	Explain the various challenges for transport layer in WSN.	(10 Marks)
	b.	Explain source coding in application layer.	(10 Marks)

#### OR

3	a.	Explain Congestion Detection and Avoidance (CODA) protocol in WSN.	(10 Marks)
	h	Explain Tiny Aggregation (TAG) service in Query processing	(10 Marks)

#### Explain 1 iny Aggregation (1 AG) service in Query processing. (10 Ms

#### Module-5

9 a. Explain Timing – Sync Protocol for Sensor Networks (TPSN) with suitable example.

(10 Marks)

b. Explain the various challenges in localization in WSN.

#### (10 Marks)

#### OR

- 10 a. Explain Reference Broadcast Synchronization (RBS) with example. (10 Marks)
  - b. Explain time of arrival and time difference of arrival in ranging techniques in WSN.

(10 Marks-