B.E. Instrumentation Engineering Eighth Semester

IN8044 - Elective-II : Wireless Sensor Networks

P. Pages : 1 **GUG/W/18/2067**

Time : Three Hours * 1 5 8 2 * Max. Marks : 80

Notes : 1. Same Answer book must be used for each question.
2. All questions carry marks as indicated.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.
5. Illustrate your answers wherever necessary with the help of neat sketches.

1.	a)	Justify why WSN are said to be low bit rate and low duty cycle.	**8**
	b)	Discuss in brief : 1. In network processing. 2 data centric network.	**8**
		OR	
2.	a)	State how WSN are dynamic network liable for data redundancy.	**8**
	b)	Elaborate design constraints and securements of WSN.	**8**
3.	a)	Explain. self configurable and self organizing WSN system.	**8**
	b)	Draw & explain hardware model of sensor node.	**8**
		OR	
4.	a)	Illustrate data centric protocol for WSN, state its disadvantage for WSN.	**8**
	b)	Explain deterministic routing WSN system.	**8**
5.	a)	Enlist & explain five basic software sab system as referred to software model of sensor node.	**8**
	b)	Discuss climax wireless communication technology.	**8**
		OR	
6.	a)	Describe modulation technique used in WSN.	**8**
	b)	Explain the typical feature of Bluetooth technology.	**8**
7.	a)	Illustrate in brief zig bee protocol stack.	**8**
	b)	Discuss different available wireless technologies.	**8**
		OR	
8.	a)	Explain ALOHA protocol in brief.	**8**
	b)	Describe performance metrics for MAC protocol.	**8**
9.	a)	How data compression technique is useful in WSN?	**8**
	b)	Explain the basic functionality of DSW are (Data service middleware).	**8**
		OR	
10.	a)	Draw & explain general middle were architecture of WSN.	**16**

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