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PRESIDENCY UNIVERSITY

BENGALURU

School of CSE

Mid - Term Examinations - November 2024

Semester: V

Date: 04/11/2024

Course Code: CSE 3055

Time: 02.00pm to 03.30pm

Course Name: WIRELESSCOMMUNICATION IN IOT

Max Marks: 50

Program:CIT

Weightage: 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Qx2M=10M

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|---|---|---------|----|-----|
| 1 | How does wireless sensor network work? | 2 Marks | L2 | C01 |
| 2 | identify the requirements in WSN Design | 2 Marks | L2 | C02 |
| 3 | List the basic components of a sensor node? | 2 Marks | L1 | C02 |
| 4 | Define dynamic voltage scaling? | 2 Marks | L1 | C02 |
| 5 | Choose the three options for a sink. | 2 Marks | L3 | C02 |

Part B

Answer ALL Questions. Each question carries 10 marks.

4Qx10M=40M

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|-----|---|--------|----|-----|
| 6a. | Write the challenges for WSN | 2Marks | L3 | C01 |
| 6 | 6b. Choose the enabling technologies for wireless sensor networks | 3Marks | L3 | C01 |
| 6c. | Explain the following sensor, sensor node, sensor types, | 5Marks | L2 | C01 |

Or

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|-----|---|--------|----|-----|
| 7a. | Explain the single and multi-hop with a suitable figure | 2Marks | L2 | C01 |
| 7 | 7b. Show MINA in layered architecture | 3Marks | L3 | C01 |
| 7c. | With diagram, explain the concept of Energy Scavenging in WSN | 5Marks | L2 | C01 |

	8a.	Compare a source node and sink node	2Marks	L3	C02
8	8b.	List the Basic components of single node architecture	3Marks	L1	C02
	8c.	Make use of figure Write the operating state of a sensor node with different power consumption	5Marks	L3	C02
	Or				
	9a.	Define aggregation	2Marks	L1	C02
9	9b.	Identify the factors to be balanced for the choosing of modulation scheme.	3Marks	L1	C02
	9c.	With a neat diagram explain energy consumption of sensor node operation state with different power consumption	5Marks	L2	C02
	10a.	List the types of Sensors	2Marks	L1	C02
10	10b.	List the Design Principles for WSN	3Marks	L1	C02
	10c.	Choose the OS programming Models, Explain with diagrams?	5Marks	L2	C02
	Or				
	11a.	List the Types of Mobility	2Marks	L1	C02
11	11b.	Write the energy efficient execution requirements	3Marks	L3	C02
	11c.	Explain the various scenarios of Sensor Networks.	5Marks	L2	C02
	12a.	Illustrate the Data Centricity	2Marks	L3	C02
12	12b.	Illustrate the Transceiver Structure in communication unit	3Marks	L3	C02
	12c.	Write a note on Gateway Concepts. With suitable Diagrams	5Marks	L3	C02
	Or				
	13a.	Define the LEACH concept	2Marks	L1	C02
13	13b.	Discuss the techniques used for in-network processing.	3Marks	L2	C02
	13c.	Describe about optimization goals of a WSN and figures of merit in detail	5Marks	L1	C02