B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations

Programme: B.E.   **Semester: VI**
Branch: Electronics and Communication Engineering   **Duration: 3 hrs.**
Course Code: 22EC6PCECS   **Max Marks: 100**
Course: Electronics and Communication for Sustainable Development

Instructions:1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

				CO	PO	Marks
			UNIT – I			
1	a)		Illustrate a WSN for smart agriculture and briefly explain the objectives of a greenhouse monitoring system	CO1	PO7	7
	b)		Justify the features of WSN technology being appropriate for sustainable development.	CO2	PO1	6
	c)		Analyze various characteristics of WSN to implement crop health management system.	CO3	PO2	7
			OR			
2	a)		Illustrate the usability of sensors along with the UAV for smart agriculture.	CO2	PO1	7
	b)		Identify the challenges to be addressed while employing WSN for smart agriculture.	CO1	PO7	7
	c)		With a neat block diagram, analyze the operation of a wireless sensor node.	CO3	PO2	6
			UNIT – II			
3	a)		Differentiate between scaling activity recognition to complex spaces and multiple spaces.	CO1	PO7	7
	b)		With a neat flow diagram, explain the software process of R+iSpace.	CO1	PO7	7
	c)		Briefly discuss on the sticking and moving mechanism of the MoMo	CO1	PO7	6
			OR			
4	a)		Briefly explain the CASAS SHiB design and discuss on its usability	CO1	PO7	6
	b)		Identify the limitations of adding GPS to sensor nodes in order to localize the WSN.	CO1	PO7	6

				CO	PO	
		c)	Illustrate the electrical structure of R+iSpace and mobile module for flexible smart space	CO1	PO7	8
			UNIT - III			
	5	a)	Analyse the system model and energy information system and illustrate how distributed power consumption measurement is done.	CO3	PO2	10
		b)	Explain the utility of fiber wireless sensor network for smart energy use with the architecture diagram.	CO1	PO7	10
			OR			
	6	a)	Discuss about the various challenges faced by Body sensor networks in clinical and hospital structures.	CO1	PO7	10
		b)	Analyse the logical layers of building energy management system.	CO 3	PO2	10
			UNIT – IV			
	7	a)	Explain how Telemedical system architecture can be utilized for healthcare application	CO1	PO7	10
		b)	Analyze and discuss the scope of any five application of Body Sensor Network	CO3	PO2	10
			OR			
	8	a)	Discuss about the various challenges faced by Body sensor networks in clinical and hospital structures.	CO1	PO7	10
		b)	Analyze the concept of Continuous Monitoring Mechanism of ALARM-NET architecture.	CO3	PO2	10
			UNIT – V			
	9	a)	Briefly discuss on the social sensor networks for transportation management in smart cities.	CO1	PO7	10
		b)	Analyze the proposed approach of Transportation Management in Smart Cities for distributed data gathering, encoding, and dissemination with data refreshment period.	CO3	PO2	10
			OR			
	10	a)	Illustrate a user recognition system as an example of automotive RFID application.	CO1	PO7	10
		b)	Illustrate Customizing a Vehicle for Multiple Drivers and individual authority, analysing RFID Techniques as an example of automotive RFID applications.	CO3	PO2	10

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