U.S.N.										

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

Autonomous Institute Affiliated to VTU

July 2023 Semester End Main Examinations

Programme: B.E. **Semester: VIII**
Branch: Computer Science and Engineering **Duration: 3 hrs.**
Course Code: 21CS8PCGCT **Max Marks: 100**
Course: Green Computing **Date: 04.07.2023**

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

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			UNIT - I	*CO*	*PO*	Marks
1	a)		List and explain the three R's of green IT.	*CO1*	*PO1*	**6**
	b)		Discuss OCED green IT framework in detail.	*CO1*	*PO1*	**6**
	c)		Briefly outline the different drivers of environmental sustainability and green IT.	*CO2*	*PO2*	**8**
			UNIT - II			
2	a)		Categorize all the techniques available to improve the energy efficiency of computers.	*CO2*	*PO2*	**6**
	b)		Some argue that the effort required to implement energy-efficient methods in software does not deliver sufficient return on investment. Can energy efficiency be an effective differentiator in software products?	*CO2*	*PO2*	**6**
	c)		Summarize the software sustainability attributes which are more relevant to sustainability performance.	*CO2*	*PO2*	**8**
			UNIT - III			
3	a)		Analyze the various green data centres metrics.	*CO2*	*PO2*	**8**
	b)		Summarize the consolidated data centre power management usage models.	*CO2*	*PO2*	**8**
	c)		Describe the key challenges in managing data centre operations.	*CO1*	*PO1*	**4**
			OR			
4	a)		List the objectives of green networking.	*CO1*	*PO1*	**6**
	b)		Summarize the strategies to reduce carbon emissions suggested by business for social responsibility at all stages of business lifecycle in general.	*CO2*	*PO2*	**6**
	c)		Analyze the strategies of business drivers for green IT.	*CO2*	*PO2*	**8**

			UNIT - IV			
	5	a)	Illustrate the ERP system with a neat diagram for environmental management information system.	*CO2*	*PO2*	**10**
		b)	Discuss briefly the global regulatory environment for the electrical, electronic and IT sectors.	*CO1*	*PO1*	**10**
			UNIT - V			
	6	a)	Summarize the characteristics of cloud computing.	*CO2*	*PO2*	**10**
		b)	Analyze the various elements of clouds and their energy efficiency using typical cloud usage scenarios.	*CO2*	*PO2*	**10**
			OR			
	7	a)	Explain the green cloud architecture with a neat diagram.	*CO1*	*PO1*	**10**
		b)	Describe an approach to create a green IT strategy.	*CO1*	*PO1*	**10**

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