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

Autonomous Institute Affiliated to VTU

September / October 2024 Supplementary Examinations

Programme: B.E. **Semester: VII**
Branch: Electrical and Electronics Engineering **Duration: 3 hrs.**
Course Code: 19EE7PCSPE **Max Marks: 100**
Course: Sustainable Practices in Power Engineering

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.

			CO	PO	Marks
		UNIT - I			
1	a)	Define Reliability and Sustainability and its process of adapting by industries and business practices.	*CO1*	*PO 1*	**06**
	b)	How society is enriched with the practices adopted in successful organizational vision and mission?	*CO1*	*PO1*	**07**
	c)	Suggest the steps to follow and to improve capabilities and deliverables in details	*CO1*	*PO2*	**07**
		UNIT - II			
2	a)	Comment in the integration of product into systems. List of its advantages.	*CO2*	*PO3*	**06**
	b)	Explain the parameters on how the functionality and the ranges are selected in power system products.	*CO2*	*PO2*	**07**
	c)	What are the considerations to be made for the mechanical and electrical product integration? Explain in detail?	*CO2*	*PO1*	**07**
		OR			
3	a)	How the electrical breakers are selected and the standards considered for the choice of make-break-withstand of the contactors?	*CO2*	*PO2*	**07**
	b)	Explain electric-current at different levels Rated, Overload, Inrush, Short-circuit calculations for the contactors.	*CO2*	*PO2*	**07**
	c)	List out the considerations to be made for the mechanical and electrical product integration in detail.	*CO2*	*PO2*	**06**
		UNIT - III			
4	a)	What do mean by safety? Explain product safety and product safe in detail with respect to electrical power system.	*CO2*	*PO6*	**07**

		b)	Differentiate between selectivity and discrimination in power system in detail.	*CO2*	*PO2*	**06**
		c)	Explain about the regulatory requirements of OSHA, ROHS and WEEE in detail	*CO2*	*PO2*	**07**
			OR			
	5	a)	What is design language? Explain the importance of design language in domain and design tool knowledge/	*CO2*	*PO4*	**06**
		b)	Explain selectivity and discrimination in power system.	*CO2*	*PO2*	**08**
		c)	Explain the importance of regulatory requirements.	*CO2*	*PO2*	**06**
			UNIT - IV			
	6	a)	List out the factors that are considered for robust design of power system.	*CO2*	*PO3*	**07**
		b)	What are the precautions to be considered for the safety of people and installations of distribution system?	*CO2*	*PO2*	**07**
		c)	What are the criteria for fail safe design in distribution system?	*CO2*	*PO2*	**06**
			UNIT - V			
	7	a)	On what parameters the design margin and trade-offs are considered? Explain in brief.	*CO3*	*PO2*	**06**
		b)	Explain the procedure followed in evaluation of field performance and feedback of distribution system.	*CO3*	*PO2*	**07**
		c)	Explain process control and quality management system for monitoring of internal and external defects in electrical equipments.	*CO3*	*PO2*	**07**

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