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: VI**
Branch: Institutional Elective **Duration: 3 hrs.**
Course Code: 19ML6OE1ER **Max Marks: 100**
Course: Ergonomics **Date: 07.07.2023**

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

			UNIT - I	CO	PO	Marks
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.	1	a)	With the help of neat sketch, explain the general approach to the human-machine model.	*CO2*	*PO2*	**10**
		b)	Discuss the Principles of applied anthropometry in ergonomics	*CO2*	*PO2*	**10**
			UNIT - II			
	2	a)	Describe the faults in workspace design that cause standing workers to experience more postural discomfort.	*CO3*	*PO3*	**10**
		b)	What are the risk factors of work-related musculoskeletal disorders? Identify the common problems leading to work-related musculoskeletal disorders and explain how will you prevent them?	*CO1*	*PO1*	**10**
			OR			
	3	a)	Discuss methods of reducing shoulder stress.	*CO2*	*PO2*	**10**
		b)	Describe the main components of the Armstrong model for the development of work related upper body musculoskeletal diseases.	*CO2*	*PO2*	**10**
			UNIT - III			
	4	a)	Elaborate on the basic steps involved in heat stress management.	*CO2*	*PO2*	**10**
		b)	Define “Heat illnesses” and narrate on the same with the conditions that can arise when the body is unable to cope with thermoregulatory challenges.	*CO2*	*PO2*	**10**
			UNIT - IV			
	5	a)	Describe the factors that should be taken into account when designing lighting so as to meet visual demands and promote visual comfort.	*CO2*	*PO2*	**10**

		b)	Describe the structure and function of the eye. How can this information be used to analyze practical visual problems in the workplace?	*CO2*	*PO2*	**10**
			UNIT - V			
	6	a)	Define task analysis. Explain the procedure for carrying out a task analysis.	*CO2*	*PO2*	**10**
		b)	Discuss the various guidelines for the visual design of VDU tasks.	*CO2*	*PO2*	**10**
			OR			
	7	a)	Elaborate on Implementation modes for human–computer interaction.	*CO2*	*PO2*	**10**
		b)	Discuss the Principles for the design of visual displays	*CO2*	*PO2*	**10**

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