

Model Question Paper - 2022 Scheme

CBCS SCHEME

Sixth Semester B.E Degree Examination 2024-25

Human Centered AI (BAI613A)

TIME: 03 Hours

Max.Marks:100

1. Note: Answer any FIVE full questions, choosing at least ONE question from each MODULE

2. M: Marks, L: Bloom's level, C: Course outcomes.

	Module - 1		M	L	C
Q.1	a	Define Human-Centered AI. Differentiate between AI and HCAI	6	L2	CO1
	b	Justify the statement that humans and computers are fundamentally different.	6	L3	CO1
	c	List and explain the four design metaphors that can combine the two AI research goals.	8	L2	CO1
	OR				
Q.2	a	What are the challenges of Automation? What are the solutions and policies to overcome these challenges?	10	L2	CO1
	b	How has automation historically impacted employment trends, and what are some key examples of job transformation rather than job loss?	10	L3	CO1
	Module - 2				
Q.3	a	Analyze the refinement of levels of automation in a one-dimensional framework for self-driving cars. Explain the limitations of this model.	10	L2	CO2
	b	Classify AI applications based on their level of importance and potential risks	10	L2	CO2
	OR				
Q.4	a	How automation and human control work together to provide a seamless user experience. Explain the same for elevator user interface/ Digital Cameras.	10	L3	CO2
	b	What is Waymo's approach towards the HCAI framework?	10	L3	CO2
	Module - 3				
Q.5	a	Differentiate Science and Innovation goals.	10	L4	CO3

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	b	What are supertools? Give 3 real world examples of supertools. List the advantages of using supertools	10	L2	CO3
	OR				
Q.6	a	What are the drawbacks of teammates?	6	L2	CO4
	b	Explain the real-life examples of Tele-bots	6	L3	CO4
	b	Explain the popular examples of Animal Robots	8	L2	CO3
	Module - 4				
Q.7	a	With a neat diagram, explain the four-layer governance structure for HCAI systems	10	L3	CO4
	b	Explain the nine-stage software-engineering workflow for HCAI systems.	10	L2	CO3
	OR				
Q.8	a	Explain the bias testing to enhance fairness	10	L3	CO4
	b	What are the three independent oversight methods?	10	L2	CO4
	Module - 5				
Q.9	a	Explain a few examples of challenges for research and development of HCAI projects. Also, suggest ways to accelerate the adoption of HCAI	10	L3	CO5
	b	What are the different approaches to evaluate attributes of HCAI systems?	10	L2	CO5
	OR				
Q.10	a	Explain the process of HCAI trustworthiness assessment.	10	L3	CO5
	b	What are the different HCAI approaches to assist older adults?	10	L3	CO5