

	Name of the School	SCSE	Name of the Department	MLDS/COMPSEC/C
	Name of the Program	B.Tech CSE/ME/RAI/BT	Course Code/ Course Name/ Name of the faculty	UCS 1002/Intro. To AI/ML
	Session	2024-25	Branch, Year & Semester	1 st year 1 st sem
	Time/Max Marks	3 Hours/100	Set	A
	Note: 1) Attempt all sections (A, B & C). 2) Attempt all questions in section A & B. 3) Section C consists of 5 questions. One question from each unit. Questions may have internal choice from the same unit. Attempt all questions.			

Q No.	QUESTIONS	MARKS	CO
SECTION-A: Attempt all of the following questions in brief. (10x2=20)			
Q1(a)	Discuss the history of AI.	2	1
(b)	Discuss Risk and Benefits related to AI.	2	1
(c)	Explain A* searching method.	2	2
(d)	Describe heuristic search method.	2	2
(e)	Discuss Knowledge representation and reasoning in AI.	2	3
(f)	Identify the Propositional Logic used in the following statement: "You should eat and watch TV at a Time"	2	3
(g)	Name the various Machine Learning techniques.	2	4
(h)	Write the expression of linear regression equation.	2	4
(i)	List some applications of AI.	2	5
(j)	Discuss IF THEN statement with example.	2	5
SECTION-B: Attempt all questions. (5x6=30)			
Q2(a)	Explain how AI help in Robot Navigation. List the algorithms used in Robots for Navigation	6	1
(b)	Explain Breadth-First Search (BFS) algorithms. Provide a real-world example of a search tree, defining a start state and a goal state. Explain how BFS would traverse this tree to find a solution.	6	2
(c)	Identify which logical operator is used in this statement: "I will go to mall if I have to go to shopping"	6	3
(d)	Compare supervised and Unsupervised Machine Learning. Discuss with the help of some real-world examples.	6	4
(e)	Discuss Propositional Logic and its logical operators	6	5
SECTION-C: Attempt all questions. Attempt any one part of each question. (5x10=50)			
Q3	Discuss the contributions of Philosophy, Mathematics, and Neuroscience to the foundations of Artificial Intelligence	10	1
Q4	Identify who is considered the father of Artificial Intelligence (AI) and explain the concept of "AI winters," analysing their causes and effects on the field's development.	10	2

Q5	<p>a) Provide the Logical Equation in the below statement: "You can access internet of the campus only if you are a CSE student or not a freshman"</p> <p>b) Provide the graphical representation of below statements in the form of nodes and arcs.</p> <p>"Statements:</p> <ol style="list-style-type: none"> 1. Jerry is a cat. 2. Jerry is a mammal 3. Jerry is owned by Priya. 4. Jerry is brown colored. 5. All Mammals are animal. 	10 (5)	3
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Q6

Find Linear regression equation for the following set of data, where x is independent variable and y is the dependent variable.

x	2	4	6	8
y	3	7	5	10

10
= 5

4

Q7	Discuss the Two Quantifiers used in Predicate logic. Also discuss the two logic with an example	10 (5)	5
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