

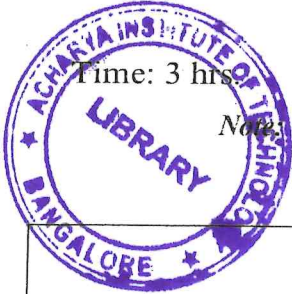
CBCS SCHEME

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BAI654D

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2026 Introduction to Artificial Intelligence



Time: 3 hrs

Max. Marks: 100

*Notes: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Discuss the classification of AI tasks with illustration.	10	L1	CO1
	b.	What are the essential characteristics of a problem to build an efficient solution?	10	L1	CO1
OR					
Q.2	a.	Explain the problem as a state space search by considering an example.	10	L2	CO1
	b.	There are 2 water Jugs of 3 and 4 litre. Neither has any measuring marker. There is a tap that can be used to fill the Jugs with water. Indicate how 4 litre Jug can be filled with 2 litre. Solve this Water – Jug problem by giving complete set of production rules and state space tree.	10	L3	CO1
Module – 2					
Q.3	a.	Briefly explain the four approaches of knowledge representation with an example.	10	L1	CO1
	b.	List the draw backs of propositional logic.	4	L1	CO2
	c.	Differentiate between Procedural and Declarative knowledge.	6	L2	CO2
OR					
Q.4	a.	Compare Forward and Backward reasoning by considering an example of 8 puzzle.	10	L2	CO2
	b.	For the following sentences write predicate logic. 1. Marcus was a man 2. Marcus was a Pompeian 3. All Pompeian were Romans 4. Caesar was a ruler 5. All Romans were either loyal to Caesar or hated him 6. Everyone is loyal to someone 7. People only try to assassinate rulers they are not loyal to 8. Marcus tried to assassinate Caesar 9. All men are people 10. The rose is red.	10	L3	CO2

Module – 3

Q.5	a.	What is non monotonic reasoning? Explain the 2 approaches of default reasoning.	10	L2	CO3
	b.	Explain minimalist reasoning with example.	10	L1	CO3

OR

Q.6	a.	Explain Dempster – Shafer theory with example.	10	L1	CO3
	b.	State and prove Bayes Theorem for conditional probability.	10	L1	CO3

Module – 4

Q.7	a.	Briefly explain the MINIMAX algorithm with example.	10	L2	CO3
	b.	Explain iterative deepening. Write algorithm of depth first iterative deepening and iterative deeping A*.	10	L2	CO3

OR

Q.8	a.	Explain the different steps in natural language understanding process.	10	L2	CO3
	b.	With example explain Soundex algorithm.	10	L2	CO3

Module – 5

Q.9	a.	Define Learning. Explain Learning by taking advice.	10	L1	CO3
	b.	Explain the following learning technique. i) Learning by parameter adjustment ii) Learning with Macro operators.	10	L1	CO3

OR

Q.10	a.	Explain Winston Learning System.	10	L1	CO3
	b.	Explain MOLE knowledge acquisition system for heuristic classification problems.	10	L2	CO3
