

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION SP/2025)**

**CLASS: BCA  
BRANCH: BCA**

**SEMESTER : IV  
SESSION : SP/2025**

**Subject: CN229 INTRODUCTION TO ARTIFICIAL INTELLIGENCE  
TIME: 02 Hours**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	What is Artificial Intelligence? Explain Role of Turing Test in AI.	[2] 1	2
Q.1(b)	Explain model-based agent software.	[3] 1	3
Q.2(a)	What is problem space? List important components of problem space.	[2] 2	1
Q.2(b)	Differentiate between informed and uninformed search.	[3] 2	2
Q.3(a)	Explain Greedy best first search with example.	[2] 2	2
Q.3(b)	List advantages of Greedy best first search and justify with example.	[3] 2	3
Q.4(a)	How does the Breadth First Search work? Explain with example.	[2] 2	3
Q.4(b)	What is A* search algorithm?	[3] 2	3
Q.5(a)	Explain Knowledge representation in predicate logic.	[2] 3	2
Q.5(b)	Explain Hill climbing search.	[3] 2	2

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