

**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA,
GUNUPUR
(GIET UNIVERSITY)**

B. C. A (Fifth Semester Regular) Examinations, November, 2025

BCA23502 – Artificial Intelligence



Time: 3 hrs

Maximum: 60 Marks

(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

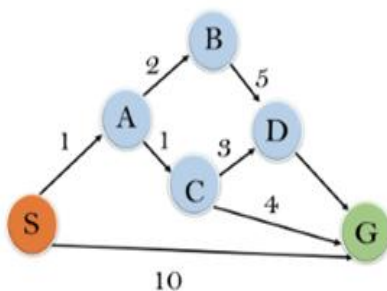
	CO #	Blooms Level
a. Explain the various types of AI.	CO1	K1
b. Explain local search algorithm.	CO2	K2
c. Explain the need of learning.	CO3	K1
d. Describe optimisation problem.	CO3	K2
e. Explain deep learning in AI.	CO4	K1

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Describe the various applications of AI.	5	CO1	K1
b. Discuss the types of searching algorithms in AI.	5	CO1	K2
(OR)			
c. Explain the goals of AI.	5	CO1	K2
d. Discuss the various levels of AI model.	5	CO1	K1
3.a. Discuss how A* algorithm can be used to find the most cost-effective path in the given graph.	5	CO3	K3



State	h(n)
S	5
A	3
B	4
C	2
D	6
G	0

b. Discuss the BFS and DFS algorithms.	5	CO2	K1
(OR)			
c. Discuss various types of search algorithms.	5	CO1	K1
d. Explain the alpha-beta pruning algorithm step-wise, with the terminal values as -4, 7, 1, 3, -5, 2, 7, 6	5	CO2	K3
4.a. Explain Hill Climbing Search and define the basic problem of it.	5	CO3	K1
b. Explain the travelling salesman problem as an optimisation problem.	5	CO2	K2

(OR)

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|--|---|-----|----|
| c. Discuss the applications of game playing. | 5 | CO3 | K1 |
| d. Explain what makes understanding hard. | 5 | CO2 | K2 |
| 5.a. Describe the various types of learning. | 5 | CO4 | K1 |
| b. Discuss the Greedy BFS algorithm. | 5 | CO3 | K1 |

(OR)

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|--|---|-----|----|
| c. Describe briefly the various stages of NLP. | 5 | CO4 | K2 |
| d. Explain the characteristics of deep learning. | 5 | CO3 | K1 |
| 6.a. Discuss Classification and Regression in Supervised learning. | 5 | CO4 | K2 |
| b. Discuss the advantages and limitations of ANN. | 5 | CO4 | K1 |

(OR)

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|--|---|-----|----|
| c. Describe the difference between machine learning and deep learning. | 5 | CO5 | K1 |
| d. Describe the various characteristics of NLP. | 5 | CO5 | K2 |

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