Name:.....
Roll No:.....

MAR ATHANASIUS COLLEGE OF ENGINEERING (AUTONOMOUS),
KOTHAMANGALAM - 686666
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B.TECH FIRST SERIES EXAMINATION, AUGUST 2026 (S7-CS)
CST401 ARTIFICIAL INTELLIGENCE

Max. Marks: 40 Duration: 1.5 Hours

PART A

Answer all questions. Each question carries 3 marks.

1. List out the disciplines that contributed to AI. (CO1)
2. For the given activity, explain PEAS description of the task environment and characterize it in terms of the task environment properties. (a) Part picking robot (CO1)
3. Discuss the infrastructure needed to solve a search problem. (CO2)
4. How to evaluate the performance of a search algorithm. (CO2)

PART B

Answer all questions. Each question carries 14 marks.

6. With diagram compare model based reflex agent , simple reflex agent and goal based agent programs in intelligent systems. (CO1) (14 marks)
7. Evaluate and compare the optimal path from Arad (initial state) to Bucharest (goal state) using Greedy Best first search and A* algorithm. (CO2) (14 Marks)

P.T.O.

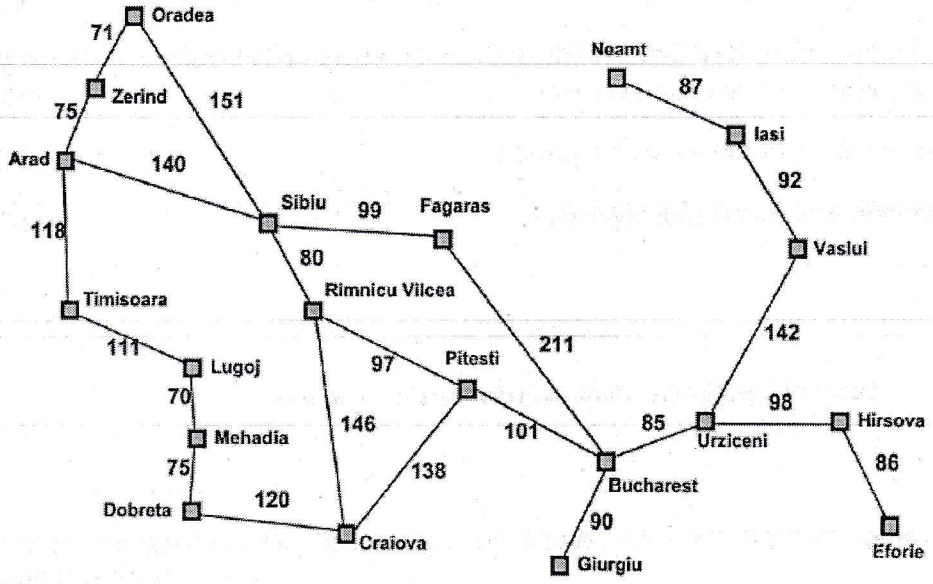
VISION

Mould competent professionals to serve as valuable resources for society in pursuit of excellence.

MISSION

- Provide quality education tuned to the challenging phases of technology.
- Mould disciplined and Socially Committed engineers capable of professional leadership.
- Promote theoretical and practical understanding, along with critical thinking and logical reasoning.

Romania with step costs in km



Straight–line distance to Bucharest	
Arad	366
Bucharest	0
Craiova	160
Dobreta	242
Eforie	161
Fagaras	178
Giurgiu	77
Hirsova	151
Iasi	226
Lugoj	244
Mehadia	241
Neamt	234
Oradea	380
Pitesti	98
Rimnicu Vilcea	193
Sibiu	253
Timisoara	329
Urziceni	80
Vaslui	199
Zerind	374

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