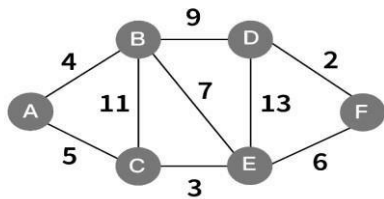


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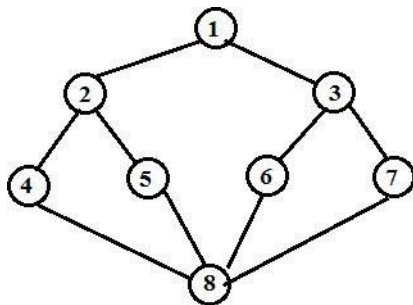
Time: 3 Hours

Max. Marks:35

Q1. Implement Dijkstra's Algorithm to find the shortest path from a single source for the following graph G. [10 Marks]



Q2. Write a Python program to implement Depth First Search algorithm. Refer the following graph as an input for the program. [Initial node=1, Goal node=8] [20 Marks]



OR

Q2. Write a Program to Implement Monkey Banana Problem using Python. [20 Marks]

Q3. Viva [5 Marks]

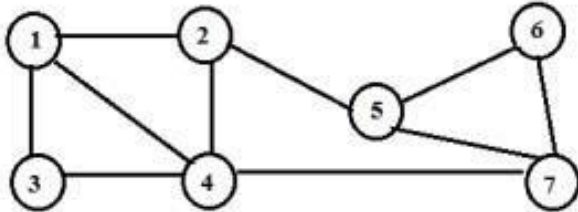
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Max. Marks:35

Q1. Write a Program to Implement Depth First Search using Python.

[10 Marks]



Q2. Write a program to implement A* algorithm.

[20 Marks]

OR

Q2. Write a Program to Implement Tic-Tac-Toe game using Python.

[20 Marks]

Q3. Viva

[5 Marks]

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Max. Marks:35

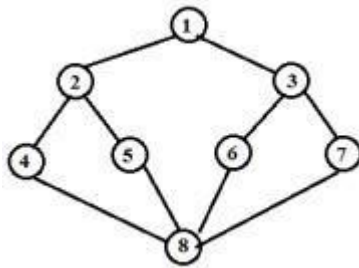
-
- Q1. Given an array of integers, write a Python Program to sort the array in ascending order using Selection Sort. [10 Marks]
- Q2. Implement Minimum Spanning Tree using Kruskal's Algorithm. [20 Marks]
- OR
- Q2. Write a Program to implement 8-Puzzle problem using Python. [20 Marks]
- Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Write a Python program to implement Depth First Search algorithm. Refer the following graph as an Input for the program. [Initial node=1, Goal node=8]. [10 Marks]



Q2. Write a program to implement AO* algorithm.

[20 Marks]

OR

Q2. Write a Program to Implement Water-Jug problem using Python.

[20 Marks]

Q3. Viva

[5 Marks]

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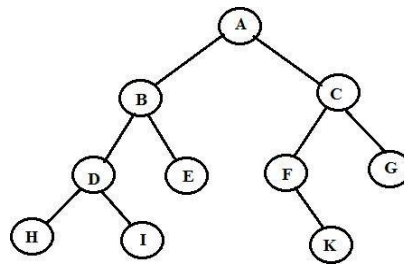
Time: 3 Hours

Max. Marks:35

Q1. Implement Dijkstra's algorithm to find the shortest path from a source node to all other nodes in a weighted graph. [10 Marks]

Q2. Write a program to implement Iterative Deepening DFS algorithm. [20 Marks]

[Goal Node =G]



OR

Q2. Write a Program to Implement Travelling Salesman Problem using Python. [20 Marks]

Q3. Viva [5 Marks]

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Max. Marks:35

- Q1. Given an array of integers, write a Python Program to sort the array in descending order using Selection Sort. [10 Marks]
- Q2. Develop an elementary Chabot for any suitable customer interaction application. [20 Marks]

OR

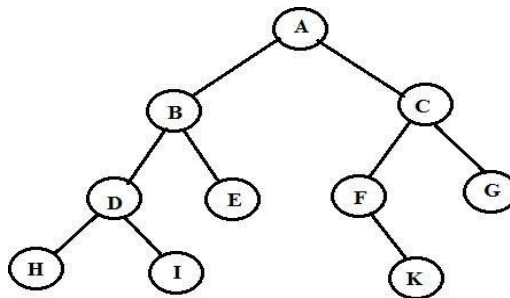
- Q2. Write a Program to Implement Water-Jug problem using Python. [20 Marks]
- Q3. Viva [5 Marks]

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Max. Marks:35

- Q1. Write a Program to Implement Breadth First Search using Python. [10 Marks]
- Q2. Write a program to implement Iterative Deepening DFS algorithm. [20 Marks]
- [Goal Node =G]



OR

- Q2. Write a program to conduct min - max algorithm [20 Marks]
- Q3. Viva [5 Marks]

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Time: 3 Hours

Max. Marks:35

Q1. Write a program to implement Best First Search. [10 Marks]

Q2. Write a Program to implement 8-Puzzle problem using Python. [20 Marks]

OR

Q2. Solve traveling salesman problem using artificial intelligence technique. [20 Marks]

Q3. Viva [5 Marks]

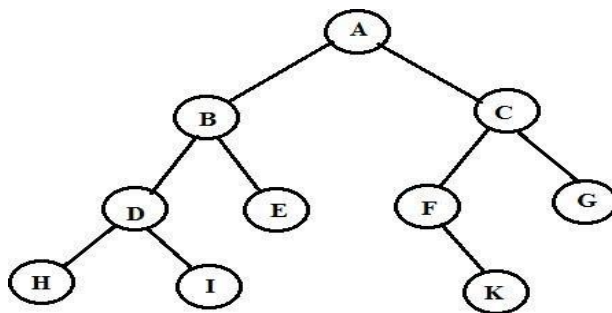
SAVITRIBAI PHULE PUNE UNIVERSITY
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Time: 3 Hours

Max. Marks:35

Q1. Write a Program to Implement Depth First Search using Python. [10 Marks]

Q2. Write a program to implement Iterative Deepening DFS algorithm. [Goal Node =G] [20 Marks]



OR

Q2. Develop Healthcare Appointment Bot (simple chatbot that helps patients book appointments or find clinic information.) [20 Marks]

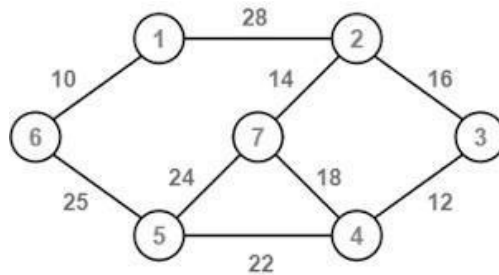
Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Given a number of cities and the cost of connecting them, find the minimum cost to connect all cities. Use Prim's algorithm to solve. [10 Marks]



Q2. Write a program to implement A* algorithm. [20 Marks]

OR

Q2. Write a Python program to implement Mini-Max Algorithm. [20 Marks]

Q3. Viva [5 Marks]

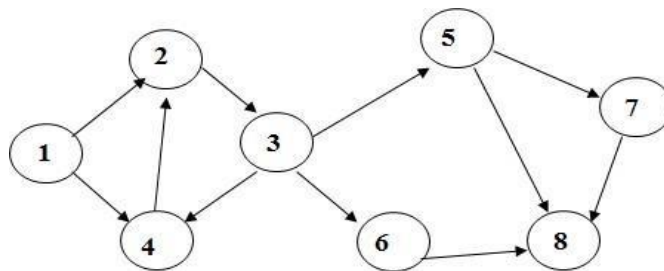
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Time: 3 Hours

Max. Marks:35

Q1. Given an array of integers, write a Python Program to sort the array in ascending order using Selection Sort. [10 Marks]

Q2. Write a Python program to implement Breadth First Search algorithm. Refer the following graph as an Input for the program. [Initial node=1,Goal node=8] [20 Marks]



OR

Q2. Write a Program to Implement Monkey Banana Problem using Python. [20 Marks]

Q3. Viva [5 Marks]

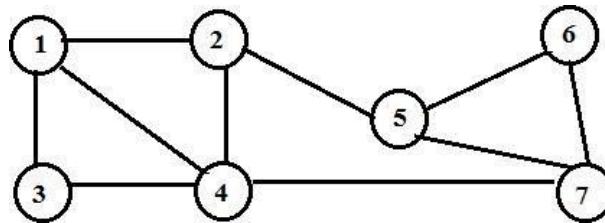
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Time: 3 Hours

Max. Marks:35

Q1. Use an undirected graph and develop a recursive algorithm for searching all the vertices of a graph. [10 Marks]

Q2. Write a Python program to implement Depth First Search algorithm. Refer the following graph as an Input for the program. [Initial node=2, Goal node=7] [20 Marks]



OR

Q2. Write a Program to Implement Tic-Tac-Toe game using Python. [20 Marks]

Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Write a Program to Implement Breadth First Search using Python.

[10 Marks]

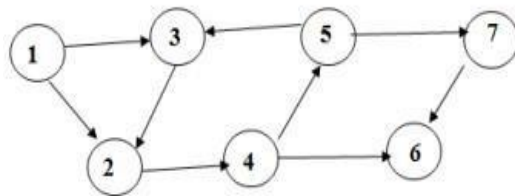
Q2. Implement AO star Algorithm.

[20 Marks]

OR

Q2. Write a Program to Implement Depth First Search using Python.

[20 Marks]



Q3. Viva

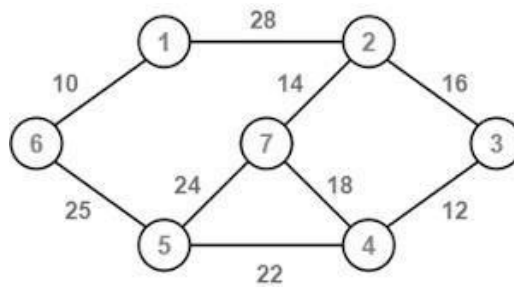
[5 Marks]

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Max. Marks:35

Q1. Given a number of cities and the cost of connecting them, find the minimum cost to connect all cities. Use Prim's algorithm to solve. [10 Marks]



Q2. Write a python program to implement A star Algorithm. [20 Marks]

OR

Q2. Write a program to solve Missionaries and Cannibals problem. [20 Marks]

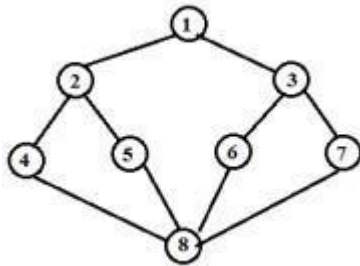
Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Write a Python program to implement Depth First Search algorithm. Refer the following graph as an Input for the program. [Initial node=1,Goal node=8] [10 Marks]



Q2. Write a Program to Implement Alpha-Beta Pruning using Python. [20 Marks]

OR

Q2. Develop a Restaurant Reservation Assistant (A simple chatbot that helps customers make reservations or ask about the menu.) [20 Marks]

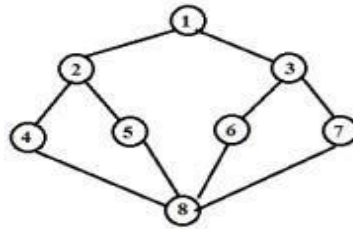
Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Write a Python program to implement Depth First Search algorithm. Refer the following graph as an Input for the program. [Initial node=1,Goal node=8]. [10 Marks]

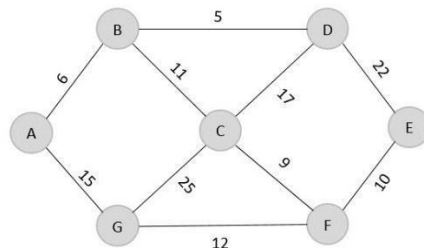


Q2. Write a Program to Implement Tic-Tac-Toe game using Python.

[20 Marks]

OR

Q2. Given a number of cities and the cost of connecting them, find the minimum cost to connect all cities. Use Kruskal's algorithm to solve. [20 Marks]



Q3. Viva

[5 Marks]

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- Q1. Write a Program to Implement Depth First Search using Python. [10 Marks]
- Q2. Write a Python program to solve water jug problem. [20 Marks]

OR

- Q2. Write a program to implement Tic-Tac-Toe_take. [20 Marks]
- Q3. Viva [5 Marks]

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Max. Marks:35

Q1. Write a Program to Implement Breadth First Search using Python. [10 Marks]

Q2. Write a Program to Implement Tic-Tac-Toe game using Python. [20 Marks]

OR

Q2. Develop a FAQ Bot for a University Website (This chatbot can help students with common questions about admissions, course registration, or contact details.) [20 Marks]

Q3. Viva [5 Marks]

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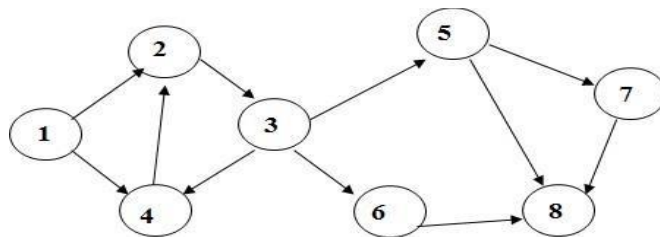
Max. Marks:35

Q1. Write a Program to Implement Depth First Search using Python.

[10 Marks]

Q2. Write a Python program to implement Breadth First Search algorithm. Refer the following graph as an Input for the program.[Initial node=1,Goal node=8]

[20 Marks]



OR

Q2. Write a program to implement A* algorithm.

[20 Marks]

Q3. Viva

[5 Marks]

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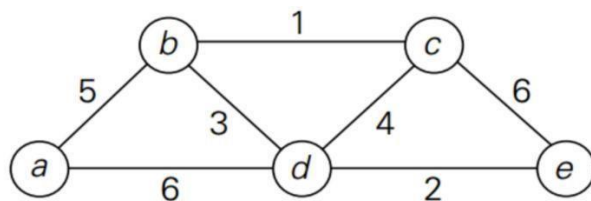
Max. Marks:35

Q1. Write a Program to Implement Depth First Search using Python. [10 Marks]

Q2. Write a program to implement AO* algorithm. [20 Marks]

OR

Q2. Given a number of cities and the cost of connecting them, find the minimum cost to connect all cities. Use Kruskal's algorithm to solve. [20 Marks]



Q3. Viva [5 Marks]