	Course Name:	Artificial Intelligence	Course Code:	AI2002
	Program:	BS (CS)	Semester:	Spring 2024
	Duration:	15 Minutes	Total Marks:	
	Section:	BCS-6C	Page(s):	1
	Exam Type:	Quiz1		

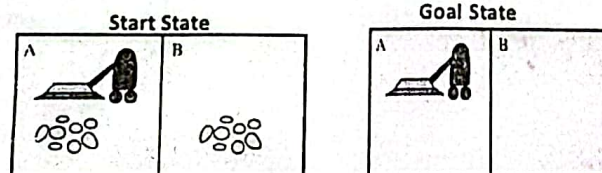
Student Name: [REDACTED] Section: [REDACTED] Roll No. [REDACTED]

Q1. Execute the following uninformed state space search strategies for the Vacuum cleaner problem. You must display solution path from initial state to goal state with all moves performed along with board updates. (Marks:8)

1. Breadth First Search
2. Iterative Deepening Search

Problem: Vacuum Cleaner

1. States: Dirt, Robot status w.r.t. room numbers
2. Successor function (Actions): Move Left, Clean, Move Right
3. Goal test: No dirt in both rooms
4. Path cost: 1 per move



Q2. Which of the following searches are Incomplete?

(Marks:1)

- a. Iterative deepening search
- b. Breadth first search
- ☒ c. Depth First Search
- d. All of the above

Q3. Which of the following searches are optimal in case all actions have equal cost?

(Marks:1)

- a. Iterative deepening search
- ☒ b. Breadth first search
- c. Uniform Cost Search
- d. All of the above