



# √Midterm Exam □ Terminal Examination - SPRING 2022

Course Title:	Artificial Intelligence	Course Code:	CSC462 Cree	dit Hours:   2		
Course Instructor/s	Dr. Atifa Athar Dr. Wajahat Mahmood Qazi, Dr. Zeeshan Gillani		CSC462 Credit Hours: 3  BS. Computer Science			
Time Allowed:	90 mins	Maximum Marks:		25		

### Important Instructions / Guidelines:

- a. Start with prayer
- b. Attempt your own exam
- c. Write in legible handwriting
- d. Write appropriate answers

### Question No 1.

CLO: 1

Marks: 9

Bloom Taxonomy: Understanding

Explain when it is inappropriate to use the following:

- 1. AI systems when designed to think rationally.
- 2. Goal Agent with planning
- 3. Reflex Agent

#### Question No 2.

CLO: 2

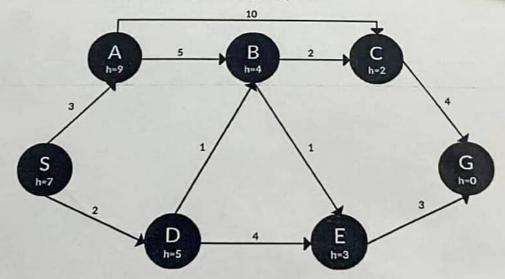
Marks: 10

Bloom Taxonomy: Applying

a. Apply A\* to find path from S to G.

b. Apply DFS to find path from S to G

Note: for both (a) and (b) write a complete step-by-step process.



Question No 2.

CLO: 2

Bloom Taxonomy: Applying

Marks: 6

Apply genetic algorithm on string to print "Hello"

4 mul

# COMSATS University Islamabad (Lahore Campus)



# √Midterm Exam □ Terminal Examination -FALL 2022

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### Question No 1.

Marks: 8

## CLO: <1>; Bloom Taxonomy Level: <Understanding>

In order to make a safe city as an intelligent security and surveillance agent. Please explain Peas. Page and the type of agent that will be used in this scenario.

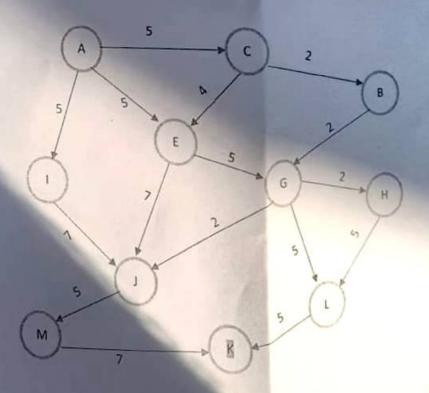
#### Question No 2.

Marks: 8

### CLO: <2>; Bloom Taxonomy Level: <Applying>

Calculate the path from node A to node K in the following graph by following the A\* Algorithm. Show the working for path calculation. The cost of edges is given in the following table.

Node A	P C	C	P I	-							
		B   C		E	G	H	1	J	K	L	M
leuristic	istic 15	0	10								144
CONTRACTOR OF STREET	13	9	13	9	5	2	8	4	0 1	5	7
value							The state of	Annual Control	All Street, or other Designation of the last of the la		-5-



Marks: 9

Question No 3.

CLO: <3>; Bloom Taxonomy Level: <Applying

Apply ALPHA-BETA Pruning algorithm on the following tree. Show the complete working for every step according to the algorithm. MAX MIN

