HITEC University Taxila

Admit Card of Mid Term Semester Examinations - Fall Semester 2025

Bachelors of Cyber Security (Entry Fall - 2024)

me: ABDUL WASAY RAJPOOT Registration #: 24-CyS-038

urse Title: CS-213. : Artificial Intelligence : 2-0-2

Note: 1. Attach this slip with Answer Book 2. Mobile phones are NOT allowed inside Exam Hall

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IMPORTANT

This Answer Book should not be used for any purpose other than writing the anser to question in the Examination Hall. Illegal use of answer book or any part of it will lead to action as per rules.

Reg No: 24-CyS-038 Name: Abdul Wasay

Program: Cyber-Security Semester: 3rd

Subject : Artifical Intelligence Section: 'A' Date: 2-12-2025

INSTRUCTIONS FOR CANDIDATE

1. Before writing answers, please FILL correctly all the particulars mentioned above.
2. This answer book has 1-6 leaves.
3. Paper to be solved with blue ball point / ink pen.
4. Answer only the require number of questions, Attempting more number of questions(s) will result in discarding the best answer.
5. Write on both sides and on each line of the leaf and cross unused portion.
6. No Answer Book or paper of any kind is to be taken in or removed from the Examination Hall/Room except the Question Paper
7. No leaf from Answer Book will be torn out.
8. This Answer Book must be handed over to the Superintendent/Invigilator, even if no question has been answered.
9. Candidates are not permitted to leave the Examination Hall/Room until the expiry of one third of the allowed time after the distribution of Question paper.
10. Candidates guilty of making appeals to the Examiner in Answer Book will entail the penalty of cancellation of the Answer Book through which such appeal is made.
11. Candidates found using unfair means shall be liable to disciplinary action.
12. Cellular/Mobile Phones, Smart Watches and Programable Calculators are not allowed inside the Examination Hall/Rooms.

Q No	1	2	3	4	5	6	7	Total Marks
Marks Obtained	2	4	4	0	—			10/50
Q No	8	9	10	11	12	13	14	
Marks Obtained								

Marks Obtained in Words:_____ Signature of the Examiner:_____

Examiner Name:_____ Examiner Name:_____

PLEASE START WRITING ANSWER ON REVERSE OF THIS SHEET

:: Question:: No:: 1::

2

(a)

Not making any Sense

Intelligence

It is the ability to learn and complex any problem. It is the ability to Solve problem easily. In which work perform human. AI is not perform perform perfectly.

e.g:: Human is playing football easily AI Robots perform not correctly.

Artifical intelligence::

It is the ability program and perform to easily. Artifical intelligence is used in editing video, perform work.

Example::

Editing video,

(b)

Evolutionary AI:

Evolutionary AI is very simple they solve and at a time.

Example:

Giving question, give a answer at a time.

Artifical Super Intelligence:

Artifical super intelligence that supported AI floats are more powerfull then EAI.

(C)

Simple Reflex agent & Goal-Based Agent.

Simple Reflex agent is also the type of AI he is the translate and read simple form.

(2)

Goal based Agent:.

Goal based Agent is also type of AI, he is very A His work is perfectly and he acheive the goal.

Stack and Queue:.

Stack is IFFO.
Queue is FIFO.

Optimal Solution :.

Optimal solution is the ability to give optimal solution is every thing.

Near - optimal Solution:.

Near optimal solution is also the type of AI.

Question:

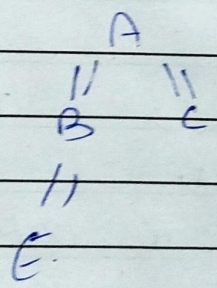
No:

2

(a) Explain how breadth first search works. Mention one advantage and one disadvantages:-

Breadth - first search works It is a searchin g algorithm which goes to to ~~a~~ breadth first search ~~and~~ are used in graphs.

e.g



Advantage:

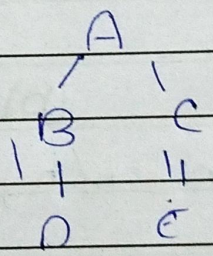
Memory usage

Dis advantage:.

(b)

It is a searching algorithm which goes in the deepth from the root node till it finds the ends after that back tracking begin from point tio vist. It goes the respective in the depth to search the good node.

e.g



(c)

Depth limited Searched:-

Depth limited searched we stop limit of depth that after back transing if that optimize the depth limiting searching.

Not making any sense

Uniform Cost Search.

Uniform Cost search is used in only queries and breadth first search is used in graphs and trees. Uniform cost search is used to optimize and breadth first search is use in graph.

Question:

No:

4:

(b)

f(n) {g(n), h(n)}

A → G 10
B → G 8
C → G 5
D → G 7
E → G 3
F → G 6
G → G 0

~~A~~B
~~D~~B = 5
= 9
8

$A \to B = 2 + 3 = 5$

$B \to E = 3 + 3 = 6$

Question No: 3

a) Detect passenger flow at different stops using live video feeds.

In every stop detect the passenger you can see the live vide feeds In this stop here is too much rush. You can apply and see the bus control on those side.

b) Predict bus overcrowding before it happens.

The passenger is come too much the rush is starting bus is too over crowding because you can apply the over-speeding, jam brakes etc.

c) Adjust bus schedule dynamacilly based on traffic patterns:

Bus schedule dynamically based on traffic patterns

In road too much traffic you can apply the traffic pattern. No quickly but easy to drive and time manage. No worry to time is not you can drive easily.

4) Notify drivers an the control center when unsafe driving behaviour.

You can Notify the driver and the controlg center. Driver behaviour, suddenly braking speeding, in every issue you can contact the Control center. Asked driver behaviour is not good and his driving is also not good you can complain it.

5) Provide -real time updated to passenger waiting to bus stop.

Provide real time to updated passenger in this

time I am coming Not a given those time you will not come. And update to passenger In this stop is comming. Is every one have drop and come.

Performance Measure:-

You can complain the performance In any issue you can complain it Environment, Actuator and sensor for the bus.