

	<p style="text-align: center;"><b>ADAMAS UNIVERSITY</b>  <b>END-SEMESTER EXAMINATION : MAY 2021</b>          (Academic Session: 2020 – 21)</p>		
<b>Name of the Program:</b> (Example: B. Sc./BBA/MA/B.Tech.)	BCA	<b>Semester:</b>	VI
<b>Paper Title :</b>	Introduction to Artificial Intelligence	<b>Paper Code:</b>	ECS33102
<b>Maximum Marks :</b>	40	<b>Time duration:</b>	3 hours
<b>Total No of questions:</b>	8	<b>Total No of Pages:</b>	1
(Any other information for the student may be mentioned here)			

**Answer all the Groups**  
**Group A**

Answer all the questions of the following

$5 \times 1 = 5$

1.
  - a) What is a rational agent?
  - b) Define artificial intelligence
  - c) Distinguish between supervised and unsupervised learning
  - d) List 4 application areas of artificial intelligence
  - e) What is Turing test?

**GROUP –B**

Answer *any three* of the following

$3 \times 5 = 15$

2. Distinguish between model based reflex agent and goal based agent.
3. Explain modus ponens with truth table.
4. Write the predicate logic for the statement
  - a. Some people like the rain
  - b. Atleast one person is asleep
5. Explain the benefits of depth limited search.

[ 2+3 ]

**GROUP –C**

Answer *any two* of the following

$2 \times 10 = 20$

6. Describe the A\* Algorithm with a short example
7. Write a short note on Genetic Algorithm
8. Illustrate the structure of the perceptron. Discuss the backpropagation algorithm.

[ 5+5]

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