PAPER ID-410590

Roll No: | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2023-24
ARTIFICIAL INTELLIGENCE

TIME: 3 HRS   **M.MARKS: 100**

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   **Attempt all questions in brief.**   **2 x 10 = 20**

Q no.	Question	Marks	CO
a.	Define agent.	02	1
b.	Define artificial intelligence. How you decide system is intelligence or not?	02	1
c.	Define uninformed search.	02	2
d.	Explain ascent hill climbing approaches.	02	2
e.	Differentiate between predicate logic and propositional logic.	02	3
f.	Explain quantifiers.	02	3
g.	Write working of fraud detection agents.	02	4
h.	Differentiate between multi-agent system and hierarchical agent system.	02	4
i.	Define natural language processing.	02	5
j.	Write application of AI in information retrieval.	02	5

SECTION B

2.   **Attempt any three of the following:**   **3 x 10 = 30**

a.	List characteristics of intelligence agent.	10	1
b.	What is Problem Space? How problem can be defined as state space search?	10	2
c.	Differentiate between Forward and Backward chaining of Inference with the help of an example.	10	3
d.	Trust and reputation is essential for an agent. How it achieved.	10	4
e.	List all phases of natural processing language. Explain.	10	5

SECTION C

3.   **Attempt any one part of the following:**   **1 x 10 = 10**

a.	Explain two problem solving approach for an AI problem.	10	1
b.	Comment on future of artificial intelligence. Also explain CNN.	10	1

4.   **Attempt any one part of the following:**   **1 x 10 = 10**

a.	Explain min-max algorithm for game tree with example.	10	2
b.	Write A* algorithm and explain with example.	10	2

5.   **Attempt any one part of the following:**   **1 x 10 = 10**

a.	List all inference rules. Explain with example.	10	3
b.	Translate the following sentences in quantified expressions of predicate logic. i) All students need financial aid. ii) Some cows are not white. iii) Suresh will get if division if and only if he gets first div. iv) if water is hot, then shyam will swim in pool. v) All integer are either even or odd integer.	10	3

Roll No: | | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2023-24
ARTIFICIAL INTELLIGENCE

TIME: 3 HRS   **M.MARKS: 100**

6.	**Attempt any *one* part of the following:**	1 x 10 = 10	
a.	Draw and explain architecture of an agent.	10	4
b.	Categorize the agents. Explain.	10	4

7.	**Attempt any *one* part of the following:**	1 x 10 = 10	
a.	What is Image- Processing Operations? Define how Vision can be used for navigation and manipulation.	10	5
b.	Explain information extraction. How it helps for AI application. Explain an approach for information extraction.	10	5