

GUJARAT TECHNOLOGICAL UNIVERSITY**BVOC - SEMESTER-VI EXAMINATION – SUMMER 2022****Subject Code:1160201****Date:02-06-2022****Subject Name:Introduction to Artificial Intelligence****Time:10:30 AM TO 12:30 PM****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Define the term “Artificial Intelligence”. Explain how AI techniques improve real-world problem solving.	05
	(b) Explain Best First Search method.	05
Q.2	(a) Represent the following sentences in first-order logic 1. Some students took English subject. 2. Every student who takes English passes it. 3. Every person who buys policy is a smart. 4. No person buys an expensive policy. 5. Some person buys a medical policy.	05
	(b) Solve the following Cryptarithmic Problem: SEND + MORE = MONEY	05
	OR	
	(b) Explain how a problem can be analyzed based on its characteristics. Analyze the game of “8 Puzzle” based on these characteristics.	05
Q.3	(a) Explain steps of Natural Language Processing.	05
	(b) Discuss the different approaches to knowledge representation.	05
	OR	
Q.3	(a) Write a short note on Rote Learning.	05
	(b) What is clausal form? How is it useful? Explain it.	05
Q.4	(a) Define Machine Learning. Give the difference between supervised learning and unsupervised learning.	05
	(b) What is expert system? Explain expert system shells.	05
	OR	
Q.4	(a) Write a short note on pragmatic processing.	05
	(b) Explain knowledge acquisition in detail.	05
Q.5	(a) Explain programming structure of LISP.	05
	(b) Explain semantic processing with suitable example.	05
	OR	
Q.5	(a) Explain architecture of an Expert System.	05
	(b) Explain any two applications of Machine Learning in your day to day life.	05
