

GUJARAT TECHNOLOGICAL UNIVERSITY**BE(Minor) - SEMESTER– VII EXAMINATION – WINTER 2023****Subject Code:117AG01****Date:08-02-2024****Subject Name: Applications of AI****Time: 10:30 AM TO 01:00 PM****Total Marks:70****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) Explain significance of Natural Language Processing.	03
	(b) Compare and contrast classical computing with quantum computing.	04
	(c) Evaluate the ethical implications of using AI in business operations in areas such as employee monitoring, data privacy.	07
Q.2	(a) State the features of AI based prediction system.	03
	(b) Explain applications of AI in healthcare.	04
	(c) Describe the benefits of implementing AI in sales and customer support operations for business.	07
OR		
	(c) Describe the key components involved in building an AI-based emotion recognition system.	07
Q.3	(a) Define Robotic Process Automation.	03
	(b) Write a short note on Smart Investment Analysis.	04
	(c) Discuss the primary objectives and benefits of implementing Robotic Process Automation in optimizing supply chain processes.	07
OR		
Q.3	(a) Define Supply Chain Management.	03
	(b) Explain the role of dataset in disease prediction system.	04
	(c) Discuss the potential applications of Robotic Process Automation in optimizing logistics and transportation management.	07
Q.4	(a) Give the difference between CPU and GPU.	03
	(b) Explain the concept of digital twin.	04
	(c) Explain the challenges and ethical considerations in using AI for cyber security purposes.	07
OR		
Q.4	(a) State advantages of FPGAs.	03
	(b) Explain the components of digital twin system.	04
	(c) Explain the applications of Machine Learning in Intrusion Detection System.	07
Q.5	(a) State challenges of integrating blockchain with AI.	03
	(b) Write a short note on AI-driven security analytics.	04
	(c) Discuss the potential impact of AI/ML on addressing climate change which is one of the global challenges.	07

OR

- Q.5** (a) State characteristics of blockchain technology. **03**
(b) Write applications of AI-optimized hardware. **04**
(c) Discuss the role of AI and ML algorithms in optimizing energy consumption in smart buildings. **07**
