GUJARAT TECHNOLOGICAL UNIVERSITY
BE MINOR- SEMESTER–VII EXAMINATION – WINTER 2025

Subject Code:117AG01   **Date:03-12-2025**
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)**	State three applications of Natural Language Processing.	**03**
	(b)	Briefly explain the role of AI to transform customer service in business.	**04**
	(c)	Explain phases of Natural Language Processing with example.	**07**
Q.2	**(a)**	Define qubits, superposition and entanglement.	**03**
	(b)	Explain the concept of quantum gates.	**04**
	(c)	Discuss how Robotic Process Automation improves efficiency and accuracy in supply chain management.	**07**
		OR	
	(c)	Discuss the challenges and limitations of implementing Robotic Process Automation in Supply Chain management.	**07**
Q.3	**(a)**	Define predictive analytics in the context of healthcare.	**03**
	(b)	Explain role of AI in industry automation.	**04**
	(c)	Describe the use of AI chatbots in customer support.	**07**
		OR	
Q.3	**(a)**	Identify three major applications of AI in sales.	**03**
	(b)	Explain role of AI in education.	**04**
	(c)	Describe how AI can be utilized for smart investment analysis.	**07**
Q.4	**(a)**	Define blockchain technology.	**03**
	(b)	Explain the challenges faced in developing AI-based disease prediction systems.	**04**
	(c)	Discuss how AI/ML technologies are being integrated into smart cities to improve urban living.	**07**
		OR	
Q.4	**(a)**	Define smart solutions in the context of AI/ML.	**03**
	(b)	Describe the importance of body language in emotion recognition.	**04**
	(c)	Explain the concept of decentralized AI and its potential impact on data privacy.	**07**
Q.5	**(a)**	Define AI-optimized hardware.	**03**
	(b)	Explain the role of AI in intrusion detection.	**04**
	(c)	Write a short note on digital twin.	**07**
		OR	
Q.5	**(a)**	Define information security.	**03**
	(b)	Explain features of GPU.	**04**
	(c)	Write a short note on AI-optimized hardware architectures.	**07**

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