

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code: 3171930

Date:28-11-2025

Subject Name: Industrial Internet of Things

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) Define IIoT	03
	(b) Enlist the benefits of adopting an industry 4.0 model	04
	(c) Explain categories of potential improvement for Industrial Cyber-Physical Systems.	07
Q.2	(a) Explain the importance of smart manufacturing.	03
	(b) Explain in brief Prognostics, Health Management and Control	04
	(c) Describe in detail Applications of AI in I4.0	07
	OR	
	(c) Demonstrate smart city with the applications of IoT in smart cities with real time example.	07
Q.3	(a) Explain the importance of redundancy in network reliability	03
	(b) Explain in brief the challenges for Routing and Addressing in the IIoT.	04
	(c) Discuss different components for CPS Autonomy.	07
	OR	
Q.3	(a) Distinguish between artificial Intelligence and Machine learning.	03
	(b) Explain big data platforms in CPSs	04
	(c) Explain Model based System Engineering in IIoT.	07
Q.4	(a) Enlighten the concept of Augmented Reality.	03
	(b) Enlist the Industrial applications of AR.	04
	(c) Explain in detail evaluation model for assessment of cyber-physical production systems.	07
	OR	
Q.4	(a) What are the recommendations to improve the innovation ecosystem?	03
	(b) Explain the Pillars of the fourth industrial revolution in detail.	04
	(c) Explain the possible solutions for achieving CPS Autonomy in Smart Factories.	07
Q.5	(a) What is the main objective of IIoT in manufacturing and other industrial process?	03
	(b) What are the real time applications IIoT?	04
	(c) Discuss the IIoT in Manufacturing Sector	07
	OR	
Q.5	(a) Benefits of Cloud Computing	03
	(b) List benefits of IIoT in manufacturing	04
	(c) Explain IIoT in Predictive Maintenance.	07