

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3171930****Date:27/12/2021****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
<b>Q.1</b>	(a) What is IIOT?	<b>03</b>
	(b) Enlist the benefits of adopting an industry 4.0 model.	<b>04</b>
	(c) Explain categories of potential improvement for Industrial Cyber-Physical Systems.	<b>07</b>
<b>Q.2</b>	(a) What are the components of a cyber-physical system?	<b>03</b>
	(b) What's the difference between the Internet of Things and the Industrial Internet of Things?	<b>04</b>
	(c) Explain dimensions of the successful implementation of industrial cyber-physical systems.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(c) Explain IIOT based architectural design pattern for manufacturing sector.	<b>07</b>
	(a) Why is condition monitoring important in many industries?	<b>03</b>
	(b) What are the system requirements for HMI?	<b>04</b>
	(c) How visual inspection in manufacturing can get a boost from AI?	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) What are the uses of condition monitoring?	<b>03</b>
	(b) How does HMI relate to IIoT technology?	<b>04</b>
	(c) Explain in detail the positioning of supervisory control for cyber-physical systems.	<b>07</b>
<b>Q.4</b>	(a) Enlighten the concept of Augmented Reality.	<b>03</b>
	(b) Enlist the applications of big data platforms in CPSs.	<b>04</b>
	(c) Explain in detail evaluation model for assessment of cyber-physical production systems.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Enlist the Industrial applications of AR.	<b>03</b>
	(b) What is the relation between IIoT and Big Data?	<b>04</b>
	(c) Explain the application of CPS in machine tools.	<b>07</b>
<b>Q.5</b>	(a) What is the main objective of IIoT in manufacturing and other industrial process?	<b>03</b>
	(b) What are the real time applications IIoT?	<b>04</b>
	(c) Explain the application of IIOT in Predictive Maintenance.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) What is IIoT for Smart manufacturing?	<b>03</b>
	(b) Explain in brief the key application areas of IIoT.	<b>04</b>
	(c) Explain the application of IIOT in Smart Logistics Management.	<b>07</b>

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