

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3161716****Date:22-05-2024****Subject Name:Industry 4.0****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) Describe how the connectivity, communication and customer are the main pillar of industry 4.0	03
	(b) How will digitization is differing than digitalization? Brief its contribution in networked economy.	04
	(c) Evaluate the roadmap of Ind revolution 1.0 to Ind revolution 4.0 with their prime drivers and an area of application	07
Q.2	(a) Write the different challenges of existing Industry 4.0. Brief the corrective measures to narrowing these challenges.	03
	(b) List the enablers of Industry 4.0. Explain any two enablers in brief.	04
	(c) Draw the generic diagram of Internet of Thing (IoT).Explain each in detail.	07
	OR	
	(c) Describe how Big DATA play lead role intoday's Business Transformation.	07
Q.3	(a) Write the names of Industry 4.0 drivers. Explain any one in brief.	03
	(b) How smart factory is differ from conventional factory> Brief it	04
	(c) Draw and describe the working of Smart manufacturing in detail.	07
	OR	
Q.3	(a) Brief operational differences of Iot with IIoT	03
	(b) Describe how industry 4.0 shaping Logistic in smart way.	04
	(c) Draw and describe the working of Smart devices in context to Industry 4.0	07
Q.4	(a) Compare MQTT protocol with HTTP protocol	03
	(b) Describe the working of IEEE 802.15.4 wireless standard.	04
	(c) What are the concepts of Smart cities? Explain the working of smart cities in context to Industry 4.0	07
	OR	
Q.4	(a) Compare Virtual reality with augmented reality as apart of one of the enabler of Industry 4.0	03
	(b) What is Mobile computing? Describe it in detail.	04
	(c) What is Cloud computing? Describe how it helpful to Industry 4.0 implementation	07
Q.5	(a) Brief the working of CoBot	03
	(b) How does the data, information and knowledge are the key parameters of future of industry 4.0? Explain it	04
	(c) Describe the functional diagram of Cyber physical System (CPS). Brief the benefits offer by it.	07

OR

- Q.5**
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| (a) | What is Data analytics? Brie its role in Industry4.0. | 03 |
| (b) | Briefly describe the contributions of QR codes and barcode-type product identification methods as one of the smarter approach of Industry 4.0. | 04 |
| (c) | What is Cyber security? Why it is very important enabler of Industry 4.0? Discuss with suitable example. | 07 |

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