

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2022****Subject Code:3171930****Date:07-01-2023****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) | List the major benefits of IIOT. | 03 |
| (b) | Examine how IOT in smart office helps better productivity. | 04 |
| (c) | Explain in detail the architecture of Industrial Internet of Things. | 07 |

- Q.2**
- | | | |
|-----|---|-----------|
| (a) | Define Big Data. | 03 |
| (b) | Distinguish between Structured and unstructured data. | 04 |
| (c) | Describe in details any 3 Applications of AI in INDUSTRY 4.0 (IIOT) with its advantages and disadvantages | 07 |

OR

- | | | |
|-----|--|-----------|
| (c) | Demonstrate and explain how Ahmadabad can be converted into a smart city with the applications of IOT in smart cities. | 07 |
|-----|--|-----------|

- Q.3**
- | | | |
|-----|---|-----------|
| (a) | List the viewpoints in Industrial internet. | 03 |
| (b) | Explain System lifecycle process. | 04 |
| (c) | Describe how functional viewpoint is used in business domain, Explain with examples | 07 |

OR

- Q.3**
- | | | |
|-----|---|-----------|
| (a) | Distinguish between artificial Intelligence and Machine learning. | 03 |
| (b) | List the security models employed in IOT. | 04 |
| (c) | Describe in details about Application Programming Interface (API) | 07 |

- Q.4**
- | | | |
|-----|---|-----------|
| (a) | What are the components of a cyber-physical system? | 03 |
| (b) | Enlist the applications of big data platforms in CPSs. | 04 |
| (c) | Explain dimensions of the successful implementation of industrial cyber physical systems. | 07 |

OR

- Q.4**
- | | | |
|-----|--|-----------|
| (a) | Enlighten the concept of Augmented Reality. | 03 |
| (b) | Enlist the Industrial applications of AR. | 04 |
| (c) | Explain the application of IIOT in Smart Logistics Management. | 07 |

- Q.5**
- | | | |
|-----|--|-----------|
| (a) | Difference between IoT and IIoT | 03 |
| (b) | Examine how predictive maintenance is done using IIOT. | 04 |
| (c) | Design and explain architecture to implement IOT for health care in a hospital where Covid situation must be controlled via IOT. | 07 |

OR

- Q.5**
- | | | |
|-----|---|-----------|
| (a) | What is Cloud Computing? | 03 |
| (b) | Benefits of Cloud Computing | 04 |
| (c) | Design a Virtual Machine to manage the control room of COVID DISASTER MANAGEMENT with your own specifications | 07 |