

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3161716****Date:12-07-2023****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.

- Q.1** (a) What is industry 4.0 and how does it work? **03**
(b) Explain the comparison of industry 4.0 factory and today's factory. **04**
(c) What is the industrial internet of things (IIoT)? How does the industrial internet of things (IIoT) work? **07**
- Q.2** (a) State and explain in brief the challenges for industry 4.0. **03**
(b) Explain in brief various industrial revolutions. **04**
(c) Explain digitalization and the networked economy in industry 4.0. **07**
- OR**
- (c) Explain the role of industry 4.0 in business transformation. **07**
- Q.3** (a) Discuss about the role of smart manufacturing in industry 4.0. **03**
(b) Explain smart logistics in industry 4.0. **04**
(c) What are the various smart devices in industry 4.0? Explain any one in detail. **07**
- OR**
- Q.3** (a) Importance of predictive analytics in industry 4.0. **03**
(b) What is mobile computing? Explain its benefits. **04**
(c) Discuss about the cyber physical systems in industry 4.0. **07**
- Q.4** (a) Explain robotic process automation and its benefits. **03**
(b) Explain in brief about collaborative robots. **04**
(c) Define cyber security. Explain in detail regarding its role in industry 4.0. **07**
- OR**
- Q.4** (a) What is the role of Artificial Intelligence in industry 4.0? Explain in brief. **03**
(b) What do you mean by Big Data? Give a brief explanation of the characteristics of Big Data. **04**
(c) Explain the importance of harnessing and sharing knowledge in organizations. **07**
- Q.5** (a) What is the resource based view and why is it important to organizations? **03**
(b) What is Cloud Computing? Explain in brief the benefits of cloud computing. **04**
(c) Explain various smart sensors in detail. **07**
- OR**
- Q.5** (a) What skills are needed in the industry 4.0 revolution? **03**
(b) How cloud computing plays a role in industry 4.0? Explain in detail. **04**
(c) Explain the strategies for competing in the world according to an industry 4.0. **07**
