[6263]-356
B.E. (Robotics & Automation)
INDUSTRY 4.0
(2019 Pattern) (Semester -VIII) (411511B) (Elective-VI)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:
1) *Solve Q.1 or Q.2, Q.3 or Q.4., Q.5 or Q.6, Q.7 or Q.8.*
2) *Figure to the right indicates full marks.*
3) *Neat diagram must be drawn wherever necessary.*
4) *Assume Suitable data if necessary.*
5) *Use of Logarithmic Table, Slide rule is Electronic pocket calculator is allowed.*

Q1) a) What do you mean by Process Automation and Optimization? **[8]**

b) Explain term: **[9]**

   i) Cyber physical system

   ii) Impact of Digital Twin

OR

Q2) a) What do you mean Digital twin? Explain with example. **[8]**

b) What is mean by Predictive maintenance and Anomaly Detection in Industry? How it will help for error detection? **[9]**

Q3) a) Explain Different Cloud deployment Techniques? **[9]**

b) Explain the following: **[9]**

   i) Role of cloud Computing in IoT and Industry 4.0

   ii) Virtualization

OR

Q4) a) Explain Architecture of cloud applicatons? **[9]**

b) Explain Fog Computing? With its various types. **[9]**

Q5) a) Explain Cyber Laws and cyber policies in Industry 4.0? **[9]**

b) Explain terms Data Communication and Networking with its characteristics. **[9]**

OR

P.T.O.

Q6) a) What is Security system and its function   **[9]**
     b) Write short note on Information Technology   **[9]**

Q7) a) What is AI, explain in details   **[8]**
     b) Explain the term Industry 4.0 laboratories   **[9]**

<div align="center">OR</div>

Q8) a) Explain IoT and IIoT with its benefits and Disadvantages?   **[9]**
     b) Explain different Case studies on IoT and IIoT   **[8]**