PRN No.	

Paper Code   U482-264A(FSE)

MAY 2022-ENDSEM EXAM
B. TECH. (MECHANICAL) (SEMESTER - VIII)
COURSE NAME: ROBOTICS
COURSE CODE: IOEUA40184A
(PATTERN 2018)

Time: [1 Hr.]   [Max. Marks: 30]

Instructions to candidates:

1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
2) Draw the diagrams where necessary.
3) **Question a) carries 4 marks whereas question b) carries 6 marks.**

Q1. a Interpret the terms HMI, SCADA, IIOT, and Automation?   [4]

Q1. b Simplify the significance of Communication Protocol and its types?   [6]
Describe any one Communication Protocol.

OR

Q2. a Simplify working of Relay and find its areas of application?   [4]

Q2. b Rephrase your understanding of Industrial Internet of Things? Give a   [6]
detailed account of design principles of Industry 4.0.

Q3. a Give and account of language elements and function that are used while   [4]
programming the robot?

Q3. b Illustrate with example the Point-to-Point control and Continuous Path   [6]
control robot?

OR

Q4. a Demonstrate programming of Continuous Path control robot.   [4]

Q4. b Examine 3 types of interpolation and how do we use it in programming?   [6]

Q5. a Give a detailed account of different types of costs associated with   [4]
Installation of Robotic systems.

Q5. b Does robotics have any real potential to enhance people's lives by, for   [6]
example, relieving them of dangerous work?

OR

Q6. a Dictate the formulae for calculation of payback period, downtime,   [4]
and Productivity?

Q6. b Robots lead to rise in Unemployment. Debate.   [6]