

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2023

M.Tech IoT, Ist Semester (ECE)

COURSE CODE (CREDITS): 21M1WC133(3)

MAX. MARKS: 15

COURSE NAME: INDUSTRIAL AUTOMATION AND IIOT

COURSE INSTRUCTORS: Dr. Rajiv Kumar

MAX. TIME: 1 Hour

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*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

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Q-1. a) Explain fourth industrial revolution with reference to automation in industry.  
[2,CO-1]

b) Give latest trends in Industry 4.0  
[2,CO-1]

Q-2. a) What is importance of sensor, actuator and transducer? How these are related with processors and communication network in IoT applications?  
[2,CO-1]

b) In industry 4.0, information communication technology is considered as main nervous system in any manufacturing industry. Give justification.  
[CO-1], 2

c) Explain in brief about main communication protocols used for IoT.  
[CO-1], 2

Q-3. a) What do you mean by the cyber-twin, digital-twin and cyber physical systems? How all these are different from embedded systems?  
[CO-5], 1.5

b) What are applications of Cyber-physical systems in transportation, power-grid and in industry?  
[CO-5], 1.5

c) What do you mean by the terms resource allocation, availability and QoS with reference to IoT?  
[CO-5], 2