

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-VII Semester (CSE/IT: Minor in ECE)

COURSE CODE (CREDITS): 18B1WEC747(3)

MAX. MARKS: 15

COURSE NAME: Internet of Things

COURSE INSTRUCTOR: Dr. Salman Raju Talluri

MAX. TIME: 1 Hour

---

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

---

1. Briefly describe the architecture of Industrial automation systems with important components significance. Explain in detail about the feedback control loop for enhancement of performance of a system. [4 marks] [CO-1]
2. Explain the significance and need of energy harvesting in IoT. Discuss three types of energy harvesting principles. [3marks] [CO-1]
3. Explain in detail about the requirements of LPWAN technologies. List the parameters that can be used to make a comparison with ZigBee. [ 3marks] [CO-2]
4. Compare the architecture of open systems interconnection (OSI) with that of internet of things architecture. [ 3 Marks ] [CO-2]
5. Define/Explain the following. [2marks] [CO-1 and CO-2]
  - a. Non-linearity in sensor characteristic curve.
  - b. Typical electrical specifications of a temperature sensor.
  - c. Need of Gateway in LPWAN.
  - d. The functional configuration of a typical actuator system.