

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April 2018

B.Tech VIII Semester

COURSE CODE: 15B1WCI832

MAX. MARKS: 25

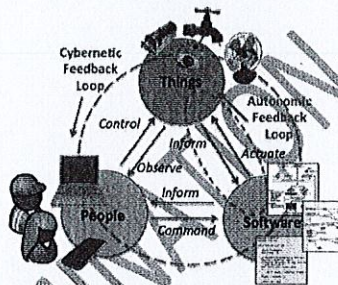
COURSE NAME: Internet of Things Architecture and Design

COURSE CREDITS: 03

MAX. TIME: 1.5 Hrs

**Note:** All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. (a) Explain the Smart Feedback System in Internet of things. What is the role of each component shown below?



- (b) Explain the Foundations of the Industrial Internet of Things and Cyber Manufacturing Systems.
2. (a) Explain the replacement of classical automation pyramid of IIoT with networked, decentralized organized and (semi-)automated services.  
(b) Give the brief summary of Major Research Initiatives to leverage the expected potentials of CMS and IIoT.
3. (a) Explain the following of Industrial Cyber-Physical Systems:
  - a. Technical Dimension of Cyber-Physical Systems
  - b. Human Dimension of Cyber-Physical Systems
 (b) Draw and explain the elaboration of an Application Map for Industrial Cyber-Physical Systems.
4. What is the use of Smart Sensors in the Edge layer of IoT? Explain the following:
  - a. Digital sensor within an instrument
  - b. Analog sensor analyzed by a PC
  - c. multiple sensors displayed over internet
  - d. Instrumentation Amplifier
5. Explain IPv6 datagram header, payload and Format of an IPv6 datagram. How will you Tunnel IPv6 through an IPv4 Network?