

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- MAY 2018

B.Tech VIII Semester

MAX. MARKS: 35

COURSE CODE: 15B1WCI832

COURSE NAME: Internet of Things Architecture and Design

COURSE CREDITS: 03

MAX. TIME: 2 Hrs

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

1. (a) What are the challenges faced by cognitive computing? Explain the human-centered cognitive computing architecture, which includes Internet of Things (IoT), big data analysis and cloud computing.
(b) Explain the Cognitive Computing Architecture which support the following underlying technologies:
 - Cognitive computing and Internet of Things
 - Cognitive computing and big data analysis
 - Cognitive computing and cloud computing
2. (a) Explain the following edge computing platforms:
 - (i) resource-rich servers deployed at the edge,
 - (ii) heterogeneous edge nodes
 - (iii) edge-cloud federation.(b) Summarize the edge computing platforms and their features
3. (a) Explain the following characteristics of Edge Computing for IoT Applications
 - a. Low-latency communication
 - b. Bandwidth
 - c. Geographical distribution(b) What is the roll of deep learning for IoT in edge computing?
4. Explain the following neighbor discovery algorithms.
 - a. Asynchronous Neighbor Discovery Mechanism
 - b. Asymmetric Block Design-Based Neighbor Discovery Scheme
 - c. Distributed Asymmetric Neighbor Discovery Algorithm
5. (a) Map the following design Considerations for Industrial IoT applications
 - a. Energy b. Latency c. Throughput d. Scalability e. Topology(b) Draw and explain the service-oriented architecture (SOA) of IoT