

## AUTUMN MID-SEMESTER EXAMINATION-2023

School of Computer Engineering  
Kalinga Institute of Industrial Technology, Deemed to be University  
Internet of Things  
IT 3007

Time: 1 1/2 Hours

Full Mark: 40

*Answer any four Questions, including Question No. 1, which is compulsory.  
The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable, and all parts of a question should be answered in one place only.*

1. Answer all the questions. [2 x 5]
  - a) Distinguish between Active and Passive Sensor with an example.
  - b) What is the need for a controller service?
  - c) Why do IoT systems have to be self-adapting and self-configuring?
  - d) List the IoT protocols used for power-constrained IoT devices.
  - e) What is the role of the coordinator in wireless sensor networks?
2. A) Describe different IoT communication models in detail. [5]  
B) Distinguish between REST-based and Web socket-based API. [5]
3. A) Based on the understanding of different types of sensors & actuators, explain and justify the need of different types of Sensors and actuators and IoT levels for IoT Home automation. [5]  
B) Explain the components of IoT. [5]
4. A) Difference between IoT and M2M with examples [5]  
B) Explain the basic IoT architecture. [5]
5. A) Explain the design methodology steps involved in designing an IoT-based Smart weather monitoring system. [8]  
B) Discuss any 2 Enabling Technologies of IoT. [2]

\*\*\* Best of Luck \*\*\*