

Third Semester

MS18014 –INTERNET OF THINGS

(Regulation 2018)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions

PART A - (8 X 2 = 16 marks)

1. YANG is a _____
 - a. protocol
 - b. Technology
 - c. Language
 - d. Script
2. _____ Model captures the main concepts or entities of an IoT system.
 - a. Information
 - b. Domain
 - c. Functional
 - d. Communicational Model
3. The potential communicating endpoints are the Users, _____ and Devices from the IoT Domain Model.
 - a. Entities
 - b. Resources
 - c. Services
 - d. Artifacts
4. Devices being controlled in a zigbee network are known as _____.
 - a. end devices
 - b. clients
 - c. slaves
 - d. Resources
5. Brief about sensor web enablement group standard.
6. Mention the key objectives of IoT –A reference architecture.
7. Draw the pin configuration of Raspberry pin and name the pins .
8. List few Amazon web services for IoT and cloud storage models.

PART B - (4 X16 = 64 marks)

09. (a) Describe in detail about the components of an IoT system and also define the various levels of IoT system based on increasing complexity. (16)

(OR)

- (b) Describe in detail the steps involved in designing a weather monitoring system using IoT design methodology. (16)

10. (a) Explain in detail about the data communication protocol used in Building and Automation control. (16)

(OR)

- (b) Explain in detail with neat sketches how Modbus achieve communication between devices connected on different buses and networks. (16)

11. (a) (i) Write a program to explain about the flow control statements in python (8)
(ii) Write a python program to explain about compound, sequence and mapping data type. (8)

(OR)

- (b) (i) Write a python program to control the intensity of a LED using a switch and PWM signal. (8)
(ii) Write a python program for switching LED/Light based on LDR reading. (8)

12. (a) Illustrate the technical design constraints that needs to be accounted when developing and implementing M2M and IoT solution. (16)

(OR)

- (b) Choose an IoT use case and discuss in detail about its benefits, maintenance, and management. (16)