

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) What is the difference between fog computing and cloud computing?
- b) Introduce Internet layer and Application layer network technology one each.
- c) Discuss IEEE 802.11ah,
- d) Give principle of operation of micro IP stack.
- e) Give details of Smart Metering under smart devices?

UNIT - I

- II. Explain applications of Internet of Things in Smart home and smart cities automation in detail. (10)
- III. What electronics is used in IoT. Give the process of fabrication the electronics in IoT. Also discuss the conductive and encapsulation material used. (10)
- IV. How NAT helped to overcome the problem faced with IPv4 architecture. Which problem cropped with introduction of NAT. Explain with architecture modifications? (10)

UNIT - II

- V. a) How challenges of Smart Objects categorized. Explain the Challenges.
b) What is Standardisation. Explain. (2x5)
- VI. a) What are the various layer wise protocols of IoT?
b) Give difference between ZigBee and Zee wave communication Technologies.
c) Explain a case study using IITH Mote. (3,2,5)
- VII. Write short notes on:-
 - a) Contiki Operating Systems
 - b) Security and Privacy for IOT (2x5)

x-x-x