

Total No. of Questions : 8]

SEAT No. :

P-6617

[Total No. of Pages : 2

[6181]-180

B.E. (E & TC)

MODERNIZED IoT

(2019 Pattern) (Semester - VII) (404184E) (Elective - III)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6 and Q7 or Q8.
- 2) Figures to the right side indicate full marks.
- 3) Assume suitable data, if necessary.

Q1) a) Explain the RFID middleware architecture. [6]

b) What is Z-Wave? Explain the two types of nodes in Z-Wave. [6]

c) What is MQTT? Describe components and methods in MQTT. [8]

OR

Q2) a) What is RPL? Explain how it is useful in IoT implementations. [6]

b) What is Bluetooth Low Energy? Explain its architecture. [6]

c) What is 6 LowPAN? Write a brief overview of 6 LowPAN adaptation Layer. [8]

Q3) a) Describe various features of an arduino board. [8]

b) Describe how do you sense the data and upload on the cloud using Raspberry Pi? [8]

OR

Q4) a) Describe various ports available on Raspberry Pi board. [8]

b) Write a program to display temperature and humidity for arduino board interfaced with DHT 11 Sensor. [8]

P.T.O.

Q5) a) What are the IoT key technologies? Why security is important in IoT? [8]

b) What are various types of Big Data? Explain in detail. [8]

OR

Q6) a) What are the precursors of IoT? [3]

b) What are criteria for selection of sensors in IoT system Design. [7]

c) Write difference between IoT & IIoT. [6]

Q7) a) Write about home automation using IIoT. [10]

b) Describe use of IIoT in plant automation. [8]

OR

Q8) a) How IIoT will be used to protect environmental loss? [8]

b) Describe use & IIoT in Health care. [10]
