

Total No. of Questions : 10]

SEAT No. :

P1758

[Total No. of Pages : 2

[5460] - 588

T.E. (Computer Engineering)
Embedded System & Internet of Things
(2015 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Answer any three questions Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 Q.7 or Q.8 and Q.9 or Q.10.*
- 2) *Assume suitable data wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Draw neat & labelled diagram wherever necessary.*

Q1) a) Draw the whole set of ARM registers. **[5]**

b) With the help of diagram explain IOT functional blocks. **[5]**

OR

Q2) a) List and explain different components of an IOT system. **[4]**

b) Explain service specification step of IOT system design methodology, consider smart IOT - based home automation system as an example. **[6]**

Q3) a) Explain operational view specification step of IOT system design methodology, consider smart IOT - based home automation system as an example. **[6]**

b) Explain M2M (the internet of devices) pillar of IOT. **[4]**

OR

Q4) a) Justify, 'The three - layer DCM classification is more about the IOT value chain than its system architecture at runtime'. **[5]**

b) List and explain interfaces available with Raspberry Pi board. **[5]**

P.T.O.

- Q5)** a) Explain IEEE 802.15.4 protocols in detail. [7]
b) List and explain possible vulnerabilities of IOT. [6]
c) List and explain different misuse cases in IOT security? [4]

OR

- Q6)** a) Explain lifecycle of an IOT device. [4]
b) Explain ZigBee protocol in detail. [7]
c) Explain various possible attacks in different layers of IOT. [6]

- Q7)** a) What is Web of Things (WOT)? [4]
b) Draw and explain the cloud of things architecture. [8]
c) Explain SCADA Middleware Standards in brief. [4]

OR

- Q8)** a) Draw and explain multi - tiered cloud architecture based on middle ware. [8]
b) Explain RFID Middleware Standards in brief. [4]
c) Explain Cloud Computing as a fusion of Grid computing and SOA. [4]

- Q9)** a) Design Weather Monitoring system, what are the different components required? Draw deployment design for this system. [7]
b) Draw and explain the WAMP protocol interaction between peers. [6]
c) Write the Auto Bahn installation and setup steps. [4]

OR

- Q10)** a) List and explain various Amazon Web Services for IOT. [7]
b) Explain the python web application framework - Django. [6]
c) Briefly explain Xively Cloud for IOT. [4]

