

DEC-2018

Total No. of Questions : 10]

SEAT No. :

[Total No. of Pages : 2

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[5460] - 588

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

Time : 2½ Hours]

Instructions to the candidates:

[Max. Marks : 70

- 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.

- a) Draw the whole set of ARM registers. [5]
- b) With the help of diagram explain IOT functional blocks. [5]

OR

- 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]

- 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

- 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]

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