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**Reg. No. :**

**Question Paper Code:47023**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Elective

Information Technology

14UIT913 - INTERNET OF EVERYTHING

(Regulation 2014)

Duration: Threehours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1.From the following which is not the characteristics of IoT in business field when

 compare to M2M

 (a) Open market place (b) B2B, B2C

 (c) Business objective driven (d) Participatory community drive

2. Any IoT application that requires operation over longer distances can utlize which the

 following communication technology

 (a) Zigbee (b) Cellular (c) NFC (d) Sigfox

3. IoT architecute classified to problem doimain and solution domain. Find the option frem

 the following which is not the solution domain of IoT

 (a) Technology components (b) System design

 (c) Business and technical constraints (d) Deployment view

4. IEEE 802.15.4 is a technical standard which defines the operation of

 (a) Bluetooth (b) Wifi (c) MiWi (d) Wimax

5. Bluetooth is the wireless technology for

 (a) Local area network (b) Personal area network

 (c) Wide Area network (d) Both (a) and (b)

6. CoAP Stands for

 (a) Center of Application Programming

 (b) Co – operative Application Programming

 (c) Constrained Application Protocol

 (d) Co- operative advanced protocol

7. RPL (IPv6 Routing Protocol for Low Power and Lossy Networks) utilizes which the

 following major concept in initial development

 (a) Direct Acyclic Graph (b) Bipartite Graph

 (c) Adjacency Graph (d) Binary Tree

8. Find the odd one from the following

 (a) Radio Frequency Identification (b) Bar Code

 (c) QR Code (d) Actuator

 9. Find the correct matching choice

1. Smart Grid a. Identity Management
2. Privacy Model b. Supply Chain management
3. Mesh c. Hop-by-Hop

 (a) 1-c, 2-b , 3-a (b) 1-b,2-c,3-a (c) 1-c, 2-a,3-b (d) 1-b,2-a,3-c

10. How many domains defined by the framework of The National Institute of Standards

 and Technology (NIST) Smart Grid Conceptual Model (Bryson & Gallagher 2012)

 (a)10 (b)09 (c)08 (d)07

PART - B (5 x 2 = 10 Marks)

11. Write the system components of an M2M solution .

12. What is IoT ontology?

13. What are the basic characteristic properties for IoT devices?

14. Write the key strategies for e-Maintenance in the M2M

15. Develop a small case study about Smart homing using IoT with cloud services

PART - C (5 x 16 = 80 Marks)

16.(a) (i) Write short notes on usage of IoT in Urban environment. (8)

 (ii) Let consider the following case study: Stress can be a root cause for many direct

 negative health conditions. Studies from the U.S. Department of Health and

 Human Services have shown that close to 50% of the health risks of the enterprise

 workforce are stress related. Stress can be measured and monitored iteratively by

 stressor diagnosis, stress reliever recommendations, logging and measuring the

 impacts of stress relievers for making a stress assessment.

 Design an IoT-oriented stress analysis solution for the above case study . (8)

Or

 (b) Who is game changer? Explain Megatrends, Capabilities, and IoT Implications in

 detail. (16) .

17. (a) Write the detailed notes on Functional layers and capabilities of an IoT solution.(16)

Or

 (b) What are the five fundamental Information-driven global value chains? Explain the

 concept in detail . (16)

18. (a) Describe the details about the different stages of data processing and management in

 M2M. (16)

 Or

 (b) (i) Write short notes on Cloud of Things with respect to new value added services

 and application. (6)

 (ii) How the collaborative environment for M2M and M2B being achived ?

 Compare the traditional business process with new cloud business process. (10)

19. (a) What is domain model ? Explain the relationships available in complete refined

 Domain Model for IoT reference model. (16)

Or

 (b) (i) Elucidate the IoT Process management system in functional group. (8)

1. Let consider a parking lot problem in huge malls or theaters. Draw and explain the deployment and operational view of this case study with necessary architecture model. (8)

20.(a) Write short notes on the following IoT technology with detailed architecture diagrams.

1. Smart energy City (ii) Smart metering (16)

 Or

 (b) Write the report of present commercial building automation Case study with suitable

 architecture model and propose a future model with the help of IoT and Cloud

 technology? (16)