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| **B. E. Degree (Autonomous) Eighth Semester End Examination (SEE), May 2018/June 2018** | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | |
| **INTERNET of THINGS** | | | | | | | | | | | | | | | | | | | |
| **(Model Question Paper – II)** | | | | | | | | | | | | | | | | | | | |
| **Time: 3 Hours ]** | | | | | | | | | | |  | | | | **[ Maximum Marks: 100** | | | | |
|  | | | | | | | **Instructions to students:**  **Answer FIVE FULL questions.** | | | | | | | | | |  | | |
|  | | | | | | | | | | | | | | | | | | | |
| **Q.No.** | | | **Questions** | | | | | | | | | | | | | **Marks** | | **CO** | **RBT Cognitive Level** |
| **1.** | **a)** | | Write a summary of cellular M2M market situation. | | | | | | | | | | | | | 10 | | CO1 | L3 |
| **b)** | | Explain the various emerging IoT applications. | | | | | | | | | | | | | 10 | | CO1 | L3 |
| **OR** | | | | | | | | | | | | | | | | | | | |
| **2.** | **a)** | | Explain various trend in Information and communication technologies and its impact on IoT. | | | | | | | | | | | | | 10 | | CO1 | L3 |
| **b)** | | Explain the potential and benefits of an IoT oriented approach over M2M by considering a Health band as the real world use case example. Compare the Main characteristics of M2M and IoT. | | | | | | | | | | | | | 10 | | CO1 | L3 |
|  | | | | | | | | | | | | | | | | | | | |
| **3.** | **a)** | | Explain the five fundamental roles within I-GVC that companies and other factors are forming around in IoT industrial structure. | | | | | | | | | | | | | 10 | | CO2 | L3 |
| **b)** | | Describe how a solution is designed for a particular problem by making use applied architecture in M2M/IoT. Also, explain the use of partitioning the architectural work and solution work into two domains. | | | | | | | | | | | | | 10 | | CO2 | L2 |
| **OR** | | | | | | | | | | | | | | | | | | | |
| **4.** | **a)** | | Discuss the design objectives of IoT architecture needed to target a horizontal system of real-world services. | | | | | | | | | | | | | 10 | | CO2 | L2 |
| **b)** | | Explain the functional layers and capabilities of an IoT solution with a neat diagram. | | | | | | | | | | | | | 10 | | CO2 | L3 |
|  | | | | | | | | | | | | | | | | | | | | 8 Marks |
| **5.** | **a)** | | Identify the key characteristics of M2M data. Also, explain the data generation, data acquisition, data validation steps in M2M data management. | | | | | | | | | | | | | 10 | | CO3 | L2 |
| **b)** | | Explain data storage, data processing, data analysis steps in M2M data management. | | | | | | | | | | | | | 10 | | CO3 | L3 |
| **OR** | | | | | | | | | | | | | | | | | | | |
| **6.** | **a)** | | Explain how cloud of things acts as an enabler for new value added services and applications with a neat diagram. | | | | | | | | | | | | | 10 | | CO3 | L3 |
| **b)** | | Describe distributed business process in IoT. | | | | | | | | | | | | | 10 | | CO3 | L2 |
|  | | | | | | | | | | | | | | | | | | | |
| **7.** | **a)** | | Illustrate ITU-IoT Reference model in detail with a neat diagram. | | | | | | | | | | | | | 10 | | CO4 | L2 |
| **b)** | | Explain OGC functional architecture and interactions with a neat diagram. | | | | | | | | | | | | | 10 | | CO4 | L3 |
| **OR** | | | | | | | | | | | | | | | | | | | |
| **8.** | **a)** | | Discuss IETF Working Groups and Specifications Scope. | | | | | | | | | | | | | 10 | | CO4 | L2 |
| **b)** | | Illustrate ETSI M2M High Level architecture with a neat diagram | | | | | | | | | | | | | 10 | | CO4 | L2 |
|  | | | | | | | | | | | | | | | | | | | |
| **9.** | **a)** | | Describe the information flow process when utilizing the IoT service resolution FC with a neat diagram. | | | | | | | | | | | | | 10 | | CO5 | L2 |
| **b)** | | Explain the information flow process when the Virtual Entity Service Resolution FC is utilized with a neat diagram. | | | | | | | | | | | | | 10 | | CO5 | L3 |
| **OR** | | | | | | | | | | | | | | | | | | | |
| **10.** | **a)** | | Explain service choreography and Processing of IoT services with a neat diagram | | | | | | | | | | | | | 10 | | CO5 | L3 |
| **b)** | | Explain the deployment and operational view, resources, services, virtual entities, users in an IoT system by considering a Parking lot example. | | | | | | | | | | | | | 10 | | CO5 | L3 |

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