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**RNS Institute of Technology**

**Department of MCA**

**V Semester - I Test – Sep 2018**

**Internet of Things (16MCA552)**

**Duration: 90 mins. Max Marks: 45 Time:9. 00a.m-10: 30a.m Date: 22/09/2018**

**NOTE: Answer *FIVE* full questions.**

***Don’t write anything on question paper other than USN.***

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| **Qn.**  **No.** | | **Questions** | **Marks** | **BCL** | **CO** |
| 1 | a) | Differentiate M2M and IoT. | 3 | L1 | CO1 |
|  | b) | Explain the three reasons how M2M and IoT has uptaken. | 6 | L2 | CO1 |
| **OR** | | | | | | |
| 2 | a) | Define the following   1. Megatrends ii) Capabilities iii) Implications | 3\*3 | L1 | CO2 |
|  | | | | | | |
| 3 | a) | What is M2M Communication? | 2 | L1 | CO1 |
|  | b) | With diagram, explain the system components of an M2M solution. | 7 | L2 | CO1 |
| **OR** | | | | | | |
| 4 | a) | Explain the inputs and outputs of an M2M value chain. | 7 | L2 | CO2 |
|  | b) | What is Global Value Chain? | 2 | L1 | CO2 |
|  | | | | | | |
| 5 | a) | Define IoT. | 2 | L1 | CO1 |
|  | b) | With the diagram, discuss IoT and its emerging applications. | 7 | L2 | CO1 |
| **OR** | | | | | | |
| 6 | a) | Describe the steps involved in IoT Value chains. | 9 | L2 | CO2 |
|  | | | | | | |
| 7 | a) | Explain main design principles and needed capabilities of IoT. | 9 | L2 | CO1 |
| **OR** | | | | | | |
| 8 | a) | List and explain the fundamental roles of information-driven global value chain (I-GVC). | 7 | L1 | CO2 |
|  | b) | What is reference architecture? | 2 | L1 | CO2 |
|  | | | | | | |
| 9 | a) | Explain the trends in information and communication technologies. | 7 | L2 | CO1 |
|  | b) | Define applied architecture. | 2 | L2 | CO1 |
| **OR** | | | | | | |
| 10 | a) | Mention the additional functional layers of IoT. | 2 | L1 | CO2 |
|  | a) | Explain IoT architecture outline with a diagram**.** | 7 | L2 | CO2 |

**Subject Co-Ordinators Scrutinizer HoD**

1. **Shwetha G N**
2. **Rajatha S**

**Course Outcomes:**

CO1: Explore the constraints and opportunities of M2M, wireless and mobile networks of IoT

CO2: Analyze the societal impact of IoT Security events

CO3: Acquire the fundamental knowledge of devices and sensors

CO4: Interpret the architecture of M2M and IoT

CO5: Design or develop parts of an Internet of Things solution and map it toward selected business model(s)

CO6: Evaluate ethical and potential security issues related to the Internet of Things.