Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18EI3023** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INTERNET OF THINGS AND PROTOCOLS** | **Max. Marks :** | **100** |

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| **Q. No.** | **Sub Div.** | **Questions** | **Course Outcome** | **Marks** |
| **ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)** | | | | |
| 1. | a. | Discuss various functional layers and capabilities of IoT solution. | CO1 | 8 |
| b. | List the overall IoT architecture objectives. | CO1 | 8 |
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| 2. | a. | Elaborate the role of BLE(Bluetooth Low Energy) in IoT. | CO2 | 8 |
| b. | Describe various IEEE standards related to IoT. | CO2 | 8 |
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| 3. | a. | Summarize IEEE 802.11 IoT protocol. | CO3 | 8 |
| b. | Demonstrate the working of wireless HART protocol. | CO3 | 8 |
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| 4. | a. | Discuss the working of multipath TCP protocol. | CO4 | 8 |
| b. | Explain the working of Message Queue Telemetry Transport protocol. | CO4 | 8 |
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| 5. | a. | Summarize the role of IoT in data analytics. | CO5 | 8 |
| b. | Justify the need of aritifical intelligence for IoT. | CO5 | 8 |
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| 6. | a. | Discuss the protocols of network layer. | CO3 | 8 |
| b. | Mention the usage of user Datagram protocol. | CO2 | 8 |
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| 7. | a. | Discuss IoT architecture –State-of- the-art. | CO1 | 8 |
| b. | Explain Advanced Message Queuing Protocol in detail. | CO3 | 8 |
| **COMPULSORY QUESTION (1 x 20 = 20 Marks)** | | | | |
| 8. | a. | With block diagram, explain IoT based home automation. | CO6 | 10 |
| b. | Discuss the challenges and opportunites in IoT and smart cities. | CO6 | 10 |