**18EE604**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **June, 2022** | **Electrical and Electronics Engineering** | | |
| **Sixth Semester** | **Application of IOT in Electrical Engineering** | | |
| **Time:** Three Hours | | **Maximum: 5**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X10=40 Marks) |

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| 1. | a) | Mention the roles of Internet and Things in IOT. | CO1 | |  |
|  | b) | What are the differences between M2M communication and IOT. | CO1 | |  |
|  | c) | How many PWM pins are there in Arduino UNO board | CO2 | |  |
|  | d) | What are the applications of Ultrasonic sensors. | CO2 | |  |
|  | e) | Why is Python preferred in developing the API for IOT. | CO2 | |  |
|  | f) | What is an open-source cloud service provider and give an example? | CO3 | |  |
|  | g) | What are the different cloud models available in IOT industry? | CO3 | |  |
|  | h) | What time of communication is preferred in home automation? | CO3 | |  |
|  | i) | List out few properties of smart grid. | CO4 | |  |
|  | j) | Mention the processes where IOT can be adapted in agriculture. | CO4 | |  |
| **Unit - I** | | | | | |
| 2. | a) | Explain about IOT architecture. | CO1 | **5M** | |
|  | b) | Explain the enabling technologies for Internet of Things in detail. | CO1 | **5M** | |
|  |  | **(OR)** |  |  | |
| 3. | a) | List the device platform communication protocols, network communication protocols and network backbone protocols which IoTs can use. | CO1 | **5M** | |
|  | b) | How does M2M relate to IoT? What are the differences between the two? | CO1 | **5M** | |
| **Unit - II** | | | | | |
| 4. | a) | What are the different sensors and actuators used in IOT applications? | CO2 | **5M** | |
|  | b) | Explain wireless communication technologies for physical cum data-link layer functions. | CO2 | **5M** | |
|  |  | **(OR)** |  |  | |
| 5. | a) | List the features which are common in Arduino boards. | CO2 | **5M** | |
|  | b) | Define MQTT & Explain Design principles of IOT. | CO2 | **5M** | |
| **Unit - III** | | | | | |
| 6. | a) | Write Short notes on Data Storage & Data Processing. | CO3 | **5M** | |
|  | b) | What does data validation mean? When does a data acquisition application consider data invalid? How can an application compensate for the missing or invalid data? | CO3 | **5M** | |
|  |  | **(OR)** |  |  | |
| 7. | a) | How do you define cloud computing? How does it differ from distributed computing? | CO3 | **5M** | |
|  | b) | Explain about IOT frame works. | CO3 | **5M** | |
| **Unit - IV** | | | | | |
| 8. |  | Explain how the IOT Technology is impacting the health care sector and Agriculture. | CO4 | **10M** | |
|  |  | **(OR)** |  |  | |
| 9. |  | Explain the implementation of IOT technology in Industrial Automation and Transportation. | CO4 | **10M** | |

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