**18EID22**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular/Supplimentary) DEGREE EXAMINATION** | | | |
| **June, 2022** | **Electronics and Instrumentation Engineering** | | |
| **Sixth Semester** | **INTERNET OF THINGS** | | |
| **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 |  | **Answer all questions** | **10x1=10M** | | |
|  | a) | How is the host identification done in network layer? | CO1 | |  |
|  | b) | What is the port number used for HTTP? | CO1 | |  |
|  | c) | What is MQTT? | CO1 | |  |
|  | d) | Which layer is responsible for providing sensor nodes with access to the wireless channel? | CO2 | |  |
|  | e) | What are the popular communication interfaces in Wireless sensor network? | CO2 | |  |
|  | f) | List out the contention-free protocols. | CO2 | |  |
|  | g) | Determine IOT level for designing home automation including smart light and intruser detection? | CO3 | |  |
|  | h) | List development challenges of IoT | CO3 | |  |
|  | i) | List any two IoT Tools | CO4 | |  |
|  | j) | How Python is useful for IoT ? | CO4 | |  |
| **Unit - I** | | | | | |
| 2. | a) | Draw the generic block diagram of an IOT device and brief about it. | CO1 | **5M** | |
|  | b) | Discuss about Application layer protocols in IOT. | CO1 | **5M** | |
|  |  | **(OR)** |  |  | |
| 3. | a) | What are the differences between Machines in M2M and Things in IOT? | CO1 | **5M** | |
|  | b) | Write a short note on software defined network and its architecture. | CO1 | **5M** | |
| **Unit – II** | | | | | |
| 4. | a) | Briefly discuss about one of the contention-free MAC protocol. | CO2 | **5M** | |
|  | b) | Discuss about sensor deployment . | CO2 | **5M** | |
|  |  | **(OR)** |  |  | |
| 5. | a) | Elaborate on data aggregation and dissemination. | CO2 | **5M** | |
|  | b) | Draw the wireless sensor network architecture and brief about it. | CO2 | **5M** | |
| **Unit – III** | | | | | |
| 6. | a) | List the IoT security challenges. | CO3 | **5M** | |
|  | b) | Discuss about implementation of IoT for smart parking. | CO3 | **5M** | |
|  |  | **(OR)** |  |  | |
| 7. | a) | Discuss about implementation of IoT for Home automation for smart lighting. | CO3 | **5M** | |
|  | b) | List the IoT design challenges. | CO3 | **5M** | |
| **Unit – IV** | | | | | |
| 8. | a) | Brief about Raspberrypi Board features and interfaces. | CO4 | **5M** | |
|  | b) | Write a python program to control LED on/off with Raspberrypi Board. | CO4 | **5M** | |
|  |  | **(OR)** |  |  | |
| 9. | a)  b) | Brief about PCDUINO Board features and interfaces.  Write a python program to display temperature ,humidity with Raspberrypi Board. | CO4  CO4 | **5M**  **5M** | |

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