**18EC602**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | | | | | | | |
| **June, 2022** | | | | **Electronics & Communication Engineering** | | | | | |
| **Sixth Semester** | | | | **Internet of Things** | | | | | |
| **Time:** Three Hours | | | | | **Maximum:**50 Marks | | | | |
| Answer Question No. 1 Compulsorily. | | | | | | (10X1 = 10 Marks) | | | |
| Answer ANY ONE question from each Unit. | | | | | | (4X10=40 Marks) | | | |
| 1. | Answer all questions | | | | | (10X1=10 Marks) | | | |
|  | a) | What are the components of ARDUINO UNO? | | | | | CO1 |  | |
|  | b) | What is the use of PWM Pins in ARDUINO UNO? | | | | | CO1 |  | |
|  | c) | Abbreviate HDMI. | | | | | CO1 |  | |
|  | d) | Define IoT. | | | | | CO2 |  | |
|  | e) | List different IOT enabling technologies. | | | | | CO2 |  | |
|  | f) | Give different layers of IOT reference model. | | | | | CO2 |  | |
|  | g) | What is the functioning of USB? | | | | | CO3 |  | |
|  | h) | What is the use of ECU in CAN.? | | | | | CO3 |  | |
|  | i) | List the applications of IOT. | | | | | CO4 |  | |
|  | j) | Name the protocols that are used for M2M | | | | | CO4 |  | |
|  | **Unit-I** | | | | | | | | |
| 2. |  | Describe the pin functionalities of Raspberry pi with a neat sketch. | | | | | CO1 | 10M | |
|  | **(OR)** | | | | | | | | |
| 3. | a) | Write the features and technical specifications of ARDUINO UNO | | | | | CO1 | 5M | |
|  | b) | Write an Arduino sketch to blink an led for 1.5sec ON period and 3sec OFF period. | | | | | CO1 | 5M | |
|  | **Unit-II** | | | | | | | | |
| 4. |  | Discuss in detail about different types of IOT communications models. | | | | | CO2 | 10M | |
|  | **(OR)** | | | | | | | | |
| 5. | a) | Summarize the difference between IoT and M2M | | | | | CO2 | 5M | |
|  | b) | List the characteristics of IOT. | | | | | CO2 | 5M | |
|  | **Unit-III** | | | | | | | | |
| 6. |  | With a neat sketch explain WSN architecture and its technologies. | | | | | CO3 | 10M | |
|  | **(OR)** | | | | | | | | |
| 7. | a) | Analyze and differentiate COAP and AMQP. | | | | | CO3 | 5M | |
|  | b) | Describe the concept of RS-485 in detail. | | | | | CO3 | 5M | |
|  | **Unit-IV** | | | | | | | | |
| 8. | a) | Using suitable example explain how IOT helps in home automation. | | | | | CO4 | 5M | |
| b) | Explain the role of IoT in smart cities | | | | | CO4 | 5M | |
|  | **(OR)** | | | | | | | | |
| 9. | a) | Elaborate IOT in Agriculture. | | | | | CO4 | 5M | |
|  | b) | Write Short notes on smart Logistics. | | | | | CO4 | 5M | |

