



JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, May 2026
B. Tech. (CSE and ECE) Semester VI

Roll No.....

EE1222: Introduction to IoT and Automation Projects

Time: 2 hours

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Mention all the assumptions for your answers clearly.

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|------|---|--------------------|
| Q. 1 | What are the role of the link layer in IoT architecture. Analyze protocol selection for healthcare IoT system. | 4.0
(CO 2) |
| Q. 2 | What is framing in data link layer? Explain IPv6 addressing scheme and its importance in IoT. | 4.0
(CO2, 3) |
| Q. 3 | Compare Bluetooth, Zigbee, and Wi-Fi in terms of: <ul style="list-style-type: none">• Range• Power consumption• Data rate• Application | 3.0
(CO2) |
| Q. 4 | Draw the block diagram and flowchart for an attendance marking system using appropriate technology. | 3.0
(CO1, 4) |
| Q. 5 | Design an electronic circuit from microcontroller using transistor drive the motor rated 9 V and 120 mA. Given $V_{BE} = 0.9$ V and $\beta = 100$. | 4.0
(CO4, 5) |
| Q.6 | Design an energy-efficient smart industrial automation system with sensors (LDR & LM35) and actuators (lighting lamp and air conditioner) | 4.0
(CO1, 3, 5) |
| Q.7 | Design an IoT-based smart farming system using NodeMCU and ThingSpeak/Blynk. | 4.0
(CO4, 5) |
| Q.8 | Design a smart parking system using Raspberry Pi. Include a circuit diagram and develop the corresponding Python program or pseudocode. Explain the complete work of the system in a step-by-step manner. | 4.0
(CO4, 5) |

All the best!