

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/Backlog), December 2022

B.Tech, Semester V (All Branches)

Roll No.....

EE1111: Introduction to IoT

Time: 2 hours

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
4. Use of Programmable Calculator is not allowed.

Q.1A	An IoT Board has 16 bit ADC with 20V reference voltage. Determine the output in hexadecimal values of this convertor when reading a 6.4 V signal.	03 (CO 1)
Q.1B	Explain the use of CoAP and HTTP protocol using suitable example.	05 (CO 4)
Q.2A	Design an attendance system using suitable Technology. Draw block diagram and flowchart for solution suggested.	05 (CO 4)
Q.2B	Design a smart light system using NodeMCU. The system should be able to glow the light (220 V) when there is darkness. Assume that Sensor is connected to A0 pin and light is controlled through D5 pin of NodeMCU. List all the components required. Draw circuit diagram and write the program for the system.	07 (CO 1, CO 2)
Q.3	Design a water level indicator system for water tank using Raspberry Pi. It should have three led to indicate three different levels empty, mid and full. And it should turn on the motor for 5 minutes if tank is empty. You also need to send motor on data on MQTT Server. Draw circuit diagram and write the python program/pseudo code for the system. You can choose the sensor required.	10 (CO 3, CO 4)