**CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT,PARALAKHEMUNDI**

**Industrial IoT & Automation(CUTM1017)**

**Assignemnt3**

**Last date of submission:before 15/11/22**

**Short question**

1. What is nodemcu.
2. Differentiate between cloud computing edge computing.
3. Write the feature of Aeudino and raspberry pi.
4. Mention some of the Applications of IOT.
5. What is the need of Gateway.
6. Explain about LORA.
7. How IOT can be used for home automation.
8. What are the different applications available in Thingspeak

Long question

1. What is Programmable logic controller? Draw the ladder diagram for all logic expression X= AB+CD.
2. Draw the interfacing diagram of smoke sensor with NODE MCU.and also write the programming code for interfacing of smoke sensor with node mcu.
3. Interface a ultra sonic sensor with node mcu and write the code to interface the sensor with node mcu.
4. Suggest the interfacing of IR sensor with nodemcu.write a code for displaying ir sensor value in serial monitor.
5. Draw plc design for all logic gates
6. What is controller and explain about water lever controller .