UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course : Introduction to IoT
Semester : V
Program : BTech in CSE minor spl. in IoT
Time : 03 hrs.
Course Code: CSIS3014P   **Max. Marks: 100**

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q1	Write a simple code for reading distances through Ultrasonic sensors?	4	CO1
Q2	Name the four major components of an IoT system?	4	CO1
Q3	Draw the pin diagram of Arduino Nano board?	4	CO2
Q4	Name any four commercially available sensors for IoT applications?	4	CO2
Q5	Describe in brief the use cases for an Arduino and Raspberry Pi based applications?	4	CO3

SECTION B
(4Qx10M= 40 Marks)

Q6	Describe how IoT can be critical for the implementations of Smart Cities?	10	CO2
Q7	How IoT can be utilized for the benefits of especially abled people?	10	CO4
Q8	How machine learning can be involved in the data obtained from IoT devices?	10	CO4
Q9	With the help of distance measurement with Ultra Sonic sensors, demonstrate how Energy efficiency can be managed? OR Describe the MQTT protocol? How it can be used in the NodeMCU?	10	CO4

SECTION-C
(2Qx20M=40 Marks)

Q10	Write about any four possible challenges in implementing IoT in large scale?	20	CO3,4
Q11	Describe how Bluetooth and WiFi communication protocols work? Write five points on the difference between them? Draw the pin diagram	20	CO1,2,3,4

| | | connecting the commercially available BT device with the Arduino Nano board? (10 + 5 + 5]

OR

Describe how HTTP protocols work? Write a suitable example codes? | | |