Name: Enrolment No:	ⓔUPES UNIVERSITY OF TOMORROW

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

Course:	Semester:
Program:	Time : 03 hrs.
Course Code:	Max. Marks: 100

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Draw the diagram of IOT service oriented architecture	4	CO1
Q2	What does RFID stands for ? Draw the diagram for working principle	4	CO2
Q3	What is Bluetooth. Draw the diagram of protocol stack of Bluetooth	4	CO3
Q4	Give two name for each : a)Data protocols b)Signal weakening reason	4	CO2 CO3
Q5	Difference between classic Bluetooth and BLE standard.	4	CO2

SECTION B

Q6	Briefly describe the following:
	   a) SPI
	   b) Bluetooth modes
	   c) Hart network & transport layer
	Applications of HART
		10	CO2
			CO3
			CO1

Q7	Explain the concept of power management with a scenario and flow diagram	10	CO1
Q8	Explain the concept of antenna polarization and draw the diagrams to justify your answer for propagation of waves in air .	10	CO3
Q9	How bell 202 modem standard applies modulation technique. Draw a diagram to justify the scenario. Explain the features of zigbee. OR Briefly describe the following: a) I^2c b)M2M c)Wireless communication d)6lowPAN headers	10	CO1 CO2

	SECTION-C		
Q 10	Power grid has won the government tender for smart electricity. You are been appointed as a team lead to make a setup for the smart electricity initiative. What are various consideration that you will take for the work assigned to you. Draw the diagram in support of your answer.	**20**	**CO1** **CO2** **CO3** **CO4**
Q11	Secugenius is a firm which forms security system related to physical security. As you are the team lead explain the measures taken by you in developing the security system. OR	**20**	**CO1** **CO2**
	As per the scenario of changing climatic conditions what are the considerations taken by you if you are the team lead to make device for smart agriculture.		**CO3** **CO4**