

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, December 2018**

**Course: Introduction to IOT (CSIS2001)**

**Semester: 1st**

**Programme: Btech Spz IOT**

**Time: 03 hrs.**

**Max. Marks: 100**

**SECTION A**

S. No.	Question	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 d) 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. <p style="text-align: center;">OR</p> Briefly describe the following: a) I <sup>2</sup> c 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	20	CO1 CO2 CO3
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	diagram in support of your answer.		<b>CO4</b>
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	<b>20</b>	<b>CO1</b> <b>CO2</b>
	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.		<b>CO3</b> <b>CO4</b>

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**SECTION A**

S. No.		Marks	CO
Q 1	Draw and explain the diagram of IOT service layers	4	CO1
Q2	What does 6LowPAN stands for ? Draw the diagram for headers	4	CO2
Q3	What is modulation. Categorize the classification .Importance of modulation	4	CO3
Q4	Give two name for each : a)Connectivity protocols b)IEEE 802.15.4 devices	4	CO2 CO3
Q5	Difference between zigbee and HART.	4	CO2

**SECTION B**

Q6	Briefly describe the following: a) I <sup>2</sup> c b) Bluetooth topology c) Zigbee mesh network d) Components of IoT	10	CO2 CO3 CO1
Q7	Explain the features of piconet & scatternet with a scenario and diagram.Explain its usage .	10	CO1
Q8	Give the characteristics of analog sensors and draw the diagrams to justify your answer. How security is maintained in M2M devices OR Briefly describe the following: a) Automation b)Iot interdependence c)Radio propagation effects d)IEEE 802.15.4 types	10	CO4
Q9	a)Differentiate between unicast broadcast & multicast. b)Briefly explain three examples of fleet management c) differentiate between Classic Bluetooth & BLE d)Cell	10	CO1 CO2

**SECTION-C**

Q 10	Pascific estate is a construction company which is involved in the business of smart house .Explain the consideration you need to take as a representative of the company to create a blue print.	20	CO1 CO2 CO3
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			<b>CO4</b>
Q11	<p>“Securing kids” is a campaign started by the government for which your startup has won the tender .What are the considerations and specifications taken by the you to generate the security system</p> <p style="text-align: center;">OR</p>	<b>20</b>	<b>CO1</b> <b>CO2</b> <b>CO3</b> <b>CO4</b>
	<p>Government has decided to make devices for the distribution of medicines in remote place in a smart way .What sort of setup should be generate by the government which could be a help to the mankind to get the first aid medicine in any remote area .</p>		<b>CO1</b> <b>CO2</b> <b>CO3</b> <b>CO4</b>