Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Introduction to IOT(CSIS2001) **Semester: 3rd**
Programme: Btech IOT&SC
Time: 03 hrs. **Max. Marks: 100**
Instructions: Attempt all questions

SECTION A

S. No.		Marks	CO
Q 1	What is a cell? What is its shape? Specify the reason for adopting a shape for a cell	4	CO1
Q2	Explain I2c signals and signal levels	4	CO1 CO2
Q3	List down two features related to consumers and retailers given by IOT	4	CO1 CO2 CO4
Q4	Draw the diagram for the internal structure of Gateway in iot	4	CO4 CO1
Q5	What does ITS stands for ?List down its features	4	CO1
	SECTION B		
Q 6	With the timming diagram explain the concept of sleep and active modes in the sensors arranged in the topology.	10	CO3
Q7	List down the Benefits of telematics and explain the IOT enabling technologies	10	CO1 CO3
Q8	Give a case study on energy harvestation using RF chip . OR Explain the working of RFID with the suitable diagrams	10	CO3 CO2 CO4
Q9	What does NFC stands for ?Explain its classification and working principle.	10	CO2 CO3
	SECTION-C		
Q 10	Smart developers are the one which are used to provide smart solutions to the customers. Suppose you got the project on showcasing the talent for producing smart shopping .What are the consideration taken by you. Support your answer with the suitable diagram.	20	CO1 CO2 CO3 CO4
Q11	Explain the concept of wireless communication and how the signal strength is related to it . Explain it in terms of cellular technology as an example. Or With concept of IOT principle describe how would be you maintain the secure and smart transport in a city .Draw diagram to support your answer .Also explain the third party services provided by your firm.	20	CO1 CO2 CO3 CO4

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SECTION A

S. No.		Marks	CO
Q 1	What is IOT interdependencies. What is its effect on the application?	4	CO1
Q2	What is modulation? Give its classification ? Is it necessary for communication ? justify	4	CO1 CO2
Q3	List down features related to healthcare given by IOT	4	CO1 CO2 CO4
Q4	Draw the diagram for the internal structure of Bluetooth stack	4	CO4 CO1
Q5	What does DSSS stands for ?List down its features	4	CO1

SECTION B

Q 6	What do you understand by 6loWPAN.Give its specifications & types of headers with diagram.	10	CO3
Q7	List down the Benefits of M2M and explain the standard IEEE802.15.4	10	CO1 CO3
Q8	Give a case study on energy harvestation using magnetism concept .Draw diagram in support of your answer.	10	CO3 CO2 CO4
Q9	Explain the connection establishment and working of Bluetooth with diagram OR Explain briefly following : 1) NFC 2) Energy harvestation	10	CO2 CO3

SECTION-C

Q 10	TATA group of companies got the govt. contract to produce "secure old age monitoring" for old people living alone in residential area. Write down the specifications according to you to make a secure & smart transport. Justify your answer with a suitable diagram	20	CO1 CO2 CO3 CO4
Q11	Explain the concept of RFID and the working principle of it .Draw a diagram to justify. Explain its usage in any application. OR With the concept of power management as you are the team lead how will you manage the sensors implanted by you in a climate management application scenario.	20	CO1 CO2 CO3 CO4