


Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, May 2022</b>			
<b>Course: Wireless Sensor Networks and IOT Standards</b> <b>Program: B.Tech CSE spl in BAO</b> <b>Course Code: CSIS 3001P</b>		<b>Semester: VI</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions: Kindly stick to the question and support every answer with proper explanation.</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q 1	State various operational challenges of Wireless Sensor Network	4	CO1
Q 2	List different types of sensors that can be deployed in WSN	4	CO1
Q 3	Define MOTE. State the evolution of Mote.	4	CO1
Q 4	Explain the working of Zebranet Project	4	CO4
Q 5	Describe Modulation and its role in WSN	4	CO2
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	Demonstrate the Working of 802.11 DCF with detailed Job-Time diagram (Timing Relationship)	10	CO2
Q 7	“Large WSN network working with mobile node need a mean of synchronization among each other”. Elucidate the role and working of satellite communication for time synchronization.	10	CO1
Q 8	Design WSN for an IOT based Smart Agriculture system.	10	C04
Q 9	“Routing protocols plays an important role in communicating”. Interpret the working of Geographical routing in WSN <b>OR</b> “Routing protocols plays an important role in communicating”. Interpret the working of SOP in WSN	10	CO3
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q 10	Identify the various different characteristic of MAC protocols designed for WSN. Elucidate the Contention based MAC protocols with proper working flow of protocol.	20	CO2
Q 11	Write detail note to appraise the role of the following protocols in WSN:	8+7+5	CO3

1. MQTT,
2. AMQP
3. IEEE 802.15.4

**OR**

Write detail note to appraise the role of the following protocols in WSN:

1. COAP
2. XMPP
3. IEEE 802.16