

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, July 2020**

**Course: Computer Networks**  
**Program: B.Tech- Mechatronics**  
**Course Code: CSEG 391**

**Semester : VIII**  
**Time : 03 hrs.**  
**Max. Marks: 100**

**Instructions: Attempt all the questions.**

**SECTION A**

S. No.		Marks	CO
Q 1	Which of the following maps a known IP address to a MAC address? (a) ARP (b) RARP (c) BOOTP (d) DHCP	5	CO2
Q 2	Which one of the following is not a valid commercial IP address? (a) 30.23.12.122 (b) 178.56.43.10 (c) 200.123.21.34 (d) 250.23.43.123	5	CO1
Q 3	Weed out the odd one from the following: (a) DNS (b) SNMP (c) IPX (d) SMTP	5	CO4
Q 4	The term, Cryptography is used for transforming messages to make them secure and immune to: (a) change (b) idle (c) attack (d) defend	5	CO4
Q 5	What is the meaning of bandwidth in networks? (a) Transmission capacity of a communication channel (b) Connected computers in the network (c) Type of connections being used (d) All of the above	5	CO1
Q 6	Which of the following is/are not the valid layer(s) in TCP/IP protocol suite? (a) DataLink Layer (b) Physical Layer (c) Presentation Layer (d) Session Layer	5	CO1

**SECTION B**

Q 7	What are the types of name servers? Briefly discuss each of them.	10	CO4
Q 8	A company is granted the site address 201.70.64.0. The company needs six subnets. Design the subnets along with the range of valid network addresses.	10	CO2
Q 9	What is multiplexing and demultiplexing at transport layer? Explain in brief with example.	10	CO3
Q 10	Let a message <b>10101111001101011010</b> is to be communicated across the medium using checksum method. Compute the transmittable codeword. <i>[Note: you may choose block sizes of either length 4 or 5 only.]</i> <b>OR</b> Let there be a dataword 1101010 which is to be sent across the medium using the Hamming code. Compute the transmittable codeword.	10	CO2

Q 11	Explain the term <b>Noise</b> in the context of transmission impairments.	<b>10</b>	<b>CO1</b>
<b>SECTION-C</b>			
Q 12	<p>List down the various congestion control policies along with their proper categorization viz. open loop or closed loop. Also, provide with the very brief description for each of the aforementioned policies.</p> <p style="text-align: center;"><b>OR</b></p> <p>Compare between the TCP and UDP protocols in terms of their header-fields. Identify and explain the fields present in TCP which assure the flow and error control.</p>	<b>20</b>	<b>CO3</b>