UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination - December 2021

Course: Computer Networks   **Semester: III**
Program: BCA (IoT & BFSI)   **Time 03 hrs.**
Course Code: CSBC 2022   **Max. Marks: 100**

Instructions:
Section A: Short answer type questions. Attempt all the questions, each Question carries 4 Marks

Section B: Medium answer type questions. Attempt all the questions, each Question carries 10 Marks

Section C: Long answer type questions. Attempt all the questions, each Question carries 20 Marks

SECTION A
(5Qx 4M = 20 Marks)

S. No.		Marks	CO
Q 1	Describe Wide Area Networks and its Components.	4	CO1
Q 2	Write the steps to configure a Cisco Router.	4	CO3
Q 3	Write a short note on Network Security.	4	CO5
Q 4	Distinguish between Synchronous and asynchronous protocols	4	CO2
Q 5	Why twisted pair cables are preferable over coaxial cables? Explain.	4	CO1

SECTION B
(4Qx 10M = 40 Marks)

Q 1	Explain flow control and error control with example.	10	CO2
Q 2	How does UDP differ from TCP? List the applications of UDP.	10	CO5
Q 3	What are the different types of network devices? Explain all the network devices with their functionalities.	10	CO1
Q 4	Compare and contrast IPv4 Network Addresses and IPv6 Network Addresses.	10	CO4

SECTION-C
(2Qx 20M= 40 Marks)

Q 1	Differentiate between OSI and TCP /IP reference models. Demonstrate all the layers of OSI model in detail.	20	CO1
Q 2	What is an IP Address? Illustrate the various IP classes with proper calculation, and fill the following fields	20	CO4

Class	Opening Bits	Default subnet Mask	Network Range	# of Network	# of Hosts per Network

OR

An organization has given you the below IP address and Subnet Mask
IP Addressing 200.130.7.10
Subnet mask 255.255.255.240
As a Network Administrator, you have to find out the Network Address, Usable host range and broadcast address in the given format.

Network Address	Usable Host Range	Broadcast Address