

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Data Communication and Computer Networks	Semester: 2nd
Program: M.Tech CSE	Time : 03 hrs.
Course Code: CSEG-7004	Max. Marks: 100

Instructions:

SECTION A (Attempt all 5 Questions)-20 Marks

S. No.	Question	Marks	CO
Q 1.	How Network and Transport Layers work collaboratively in OSI Model?	4	CO1
Q2.	How DNS protocol works for data communication.	4	CO5
Q3.	What is Class full IP address and their ranges?	4	CO3
Q4.	How piggybacking offers Efficient transmission.	4	CO4
Q5.	How is Link State routing is better than Distance Vector Routing?	4	CO4

SECTION B (Attempt all 4 Questions)-40 Marks

Q 6.	Differentiate technically between Aloha and Slotted Aloha protocols. Generate their throughput expressions also	10	CO2
Q7.	A class C address of 192.168.10.0/24 has been allocated. Perth, Sydney, and Singapore have a WAN connection to Kuala Lumpur. <ul style="list-style-type: none"> • Perth requires 60 hosts. • Kuala Lumpur requires 28 hosts. • Sydney and Singapore each require 12 hosts. , Compute and write, subnet masks for these cities, with their first host address, last host address and the broadcast addresses. 	10	CO4
Q8.	What is count to infinity Problem? And How it is resolved?	10	CO4
Q9	What are protocols data units used in layers of OSI model? Show their encapsulation and De-capsulation? OR What is role of routers and Gateways in a WWW network? What is significance of TTL and its maximum value.	10	CO1

SECTION-C-40 Marks

Q 10.	Technical notes on HTTPS, UDP, FTP, 3 way handshaking.	4*5= 20	CO5
Q11.	Define working of Distant vector Routing? How it generates the shortest path among intermediate nodes, apply it in a suitable example. OR How CSMA CD and CSMA CA protocols are able to handle collisions. Discuss them with the suitable examples.	20	CO3