Code No: 135AE **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, December - 2019
DATA COMMUNICATION AND COMPUTER NETWORKS
(Common to CSE, IT)

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	How are computer networks classified on the basis of physical size?	[2]
b)	List the difference between logical, physical and port addresses.	[3]
c)	How would you describe access point?	[2]
d)	Illustrate the function of hop by hop flow control.	[3]
e)	What is meant by Tunneling?	[2]
f)	Based on what you know, generalize the term Network Address Translation.	[3]
g)	Discover the processes involved in process-to-process delivery.	[2]
h)	Measure the performance of TCP State Transition Control.	[3]
i)	What is the need of FTP?	[2]
j)	What information would you use to examine the view of DNS?	[3]

PART – B

(50 Marks)

2.a) Examine OSI architecture with neat diagram.
b) Evaluate and explain about your understanding about network [5+5]

OR

3. Explain in detail about the different phases of Virtual –Circuit networks. [10]

4. How performance is improved in CSMA/CD protocol compared to CSMA protocol? Explain. [10]

OR

5. Use IEEE 802.3 and IEEE 802.11 to generalize the differences between wired and wireless LANS. [10]

6. Why subnetting is necessary? With suitable example, develop the concept of subnetting in class B network. [10]

OR

7.a) How would you summarize the services expected from the network layer?
b) Describe in detail the operation of OSPF protocol by considering a suitable network. [5+5]

8.a) Describe in detail about reliable flooding.

b) How would you summarize TCP congestion control like AIMD Slow start Fast transmit and fast recovery? [5+5]

OR

9. Describe with examples the three mechanisms by which congestion control is formulated in TCP. [10]

10.a) Describe the elements of network management in detail.

b) Explain the operation of SNMP protocol in detail. [5+5]

OR

11. Analyze the message format and the message transfer and the underlying protocol involved in the working of the electronic mail. [10]

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