

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]

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- 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]

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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

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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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