

R15

Code No: 127BY

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2018

COMPUTER NETWORKS

(Electronics and Communication Engineering)

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, c as sub questions.

PART- A

(25 Marks)

- 1.a) Write short notes on service and protocol. [2]
- b) Write any four reasons for using layered protocols. [3]
- c) What is a spanning tree bridge? [2]
- d) Briefly define the features of protocol. [3]
- e) What is congestion? [2]
- f) Discuss various goals of routing algorithm. [3]
- g) Discuss in brief about DHCP. [2]
- h) Explain about IPv6 extension headers. [3]
- i) Write down the advantages of FTP. [2]
- j) Give the properties and applications of client-server model. [3]

PART-B

(50 Marks)

- 2.a) Explain the different types of error detection methods. [5+5]
 - b) Differentiate between OSI reference model and TCP/IP reference model. [5+5]
- OR**
- 3.a) What is the significance of twisting in twisted pair cable? What are the different categories of a twisted pair cables and their features. [5+5]
 - b) Describe the stop and wait flow control technique. [5+5]
- 4.a) Describe the Ethernet MAC sublayer protocol. [5+5]
 - b) Mention the five categories of connecting devices and explain in brief. [5+5]
- OR**
5. Write a short note on the following CSMA schemes. [3+3+4]
 - a) Non-persistent b) 1-persistent c) 0-persistent
- 6.a) Explain the Dynamic Routing Algorithms in detail. [5+5]
 - b) Explain the polices that effect Congestion. [5+5]
- OR**
- 7.a) Discuss about count to infinity problem. [5+5]
 - b) Give the advantages of Hierarchical Routing. [5+5]

8.a) Explain the functions of transport layer and the transport control mechanism.

b) Explain about Address Resolution Protocol.

[5+5]

OR

9.a) How are connection establishment and crash recovery managed at the transport layer? Explain.

b) Explain about the IPv4 header format.

[5+5]

10.a) Briefly describe the importance of each field of TCP header.

b) Explain how TCP controls congestion?

[5+5]

OR

11.a) How does DNS perform name resolution? Explain with an example.

b) In E-mail system, where the E-mail messages are stored and why?

[5+5]

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