

R09

Code No: 09A50508

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, May/June – 2013

Data Communication and Computer Networks

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) What is the difference between a port address, a logical address, and a physical address?
b) Compare OSI model and TCP/IP protocol suite. [15]
- 2.a) Define the digital hierarchy used by telephone companies and list different levels of the hierarchy.
b) Compare and contrast a circuit-switched network and datagram networks. [15]
- 3.a) Discuss the concept of redundancy in error detection and correction.
b) What are the various multiple access techniques? Compare them. [15]
- 4.a) How does a VLAN provide extra security for a network?
b) Discuss the functions of each SONET layer.
c) How is an ATM virtual connection identified? [15]
- 5.a) What are the differences between classful addressing and classless addressing in IPv4?
b) What are the differences between routing and forwarding?
c) Compare unicast and multicast routing protocols. [15]
- 6.a) Compare the TCP header and the UDP header. List the fields in the TCP header that are not present in UDP header. Give the reason for their absence.
b) What is congestion? Explain any one of the congestion control mechanism. [15]
- 7.a) What are the main categories of DNS messages? Explain.
b) What are the functions of network management? Explain. [15]
8. Write short notes on:
a) Electronic mail
b) Voice over IP
c) HTTP. [15]

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