

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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