

16/11/08

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Z 6154

M.E. DEGREE EXAMINATION, MAY/JUNE 2008.

Second Semester

Computer Science and Engineering

CS 1652 — COMPUTER NETWORKS

(Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define the term Protocol and give its key elements.
2. What is CSMA/CD?
3. What do you mean by multihomed computer?
4. Compare multicasting with multiple unicasting.
5. Are both UDP and IP unreliable to the same degree? Why or why not?
6. Will TCP generate negative acknowledgements for corrupted or lost segments?
7. What are the four important properties of Message Digests?
8. Define the term MIME.
9. What is ASN.1?
10. What is object identifier used by SMI?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the functions of each layer in the ISO–OSI reference model. (9)
(ii) Explain hamming code error correction mechanism with an example. (7)

Or

- (b) (i) Explain the protocol, architecture of IEEE 802.5. (9)
(ii) Explain the wireless LAN defined in IEEE 802.11 standard. (7)
12. (a) (i) Explain Circuit switching and Packet switching mechanisms. (10)
(ii) What are about self-learning (transparent) bridges explain with an example? (6)

Or

- (b) (i) Discuss the working principle of router and gateway. (10)
(ii) Explain cell-switching mechanism. (6)
13. (a) (i) Explain the checksum calculation procedure for an UDP data gram. (8)
(ii) State and explain the operations of RPC with diagram. (8)

Or

- (b) (i) Explain TCP congestion control mechanism. (8)
(ii) Explain connection establishment and release phases of TCP. (8)
14. (a) (i) Explain working principle of RSA with an example. (8)
(ii) What is packet filtering firewall? Explain with diagram. (8)

Or

- (b) (i) Explain SMTP commands and responses used to transfer messages between MTA client and MTA server. (8)
(ii) Explain the request and response messages of HTTP. (8)

15. (a) (i) What is MIB? How do you access MIB variables? (10)
- (ii) Explain about lexicographic ordering. (6)

Or

- (b) (i) Explain the data types and encoding method used by SMI. (8)
- (ii) Explain various SNMP PDUs and format of SNMP message. (8)
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