Reg. No. : | | | | | | | | | | | |

V 4118

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Seventh Semester

Mechatronics Engineering

CS 1029 — NETWORKING OF COMPUTERS

(Regulation 2004)

Time : Three hours | Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is a network topology?

2. Mention the functions of the transport layer.

3. How is packet switching different from message switching?

4. Briefly explain stop and wait protocol.

5. What is a virtual circuit?

6. Explain the principle of operation of ALOHA protocol.

7. State the functions performed by a router.

8. List any two application layer protocols.

9. What is cell switching?

10. What is VSAT network?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the LAN topologies and compare their relative merits and demerits. (6)

(ii) Describe the various layers in OSI reference model (10)

Or

(b) (i) Discuss the characteristics of different transmission media ? (12)

(ii) What are the service primitives required for implementing a connection oriented service? (4)

12. (a) *Compare circuit, packet, message and hybrid switching techniques.* (16)

Or

(b) (i) Explain sliding window protocol. Give diagrammatic illustrations. (10)

(ii) Discuss the different framing methods in detail. (6)

13. (a) Discuss the following algorithms :

(i) Hierarchical routing (6)

(ii) Multicast routing (5)

(iii) Distance vector routing. (5)

Or

(b) (i) How is congestion, controlled in virtual circuits and datagram subnets? (6)

(ii) Explain IEEE 802.11 STANDARD for wireless LANS. (10)

14. (a) (i) How are connections established and managed in TCP? (10)

(ii) Mention the functions of Internet Protocol. (6)

Or

(b) (i) How do bridges help in internetworking? Explain. (8)

(ii) Write short notes on : (8)

(1) Hubs

(2) Gateways

(3) Repeaters

(4) Switches.

15. (a) Explain asynchronous transfer mode (ATM) layers, sub layers and their functions in detail. (16)

Or

(b) Write notes on :

(i) ISDN (8)

(ii) SONET. (8)
