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Question Paper Code : 80300

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Seventh Semester

Bio Medical Engineering

CS 6551 — COMPUTER NETWORKS

(Common to Fourth Semester – Computer Science and Engineering/
Fifth Semester – Information Technology and Sixth Semester Electronics
and Communication Engineering)

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the services provided by data link layer.
2. Write the mechanism of stop and wait flow control.
3. What is meant by exponential backoff?
4. What is scatternet?
5. Define VCI.
6. What is fragmentation and reassembly?
7. Give the comparison of unicast, multicast and broadcast routing.
8. Differentiate between TCP and UDP.
9. Expand POP3 and IMAP4.
10. What is persistent HTTP?

PART B — (5 × 16 = 80 marks)

11. (a) Draw the OSI network architecture and explain the functionalities of each layer in detail. (16)

Or

- (b) (i) Discuss in detail about the network performance measures. (8)
- (ii) Explain selective-repeat ARQ flow control method. (8)

12. (a) Explain the physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver and adapter. (16)

Or

- (b) With a neat sketch explain about IP service model, packet format, Fragmentation and reassembly. (16)

13. (a) Discuss in detail about open source shortest path routing with neat diagrams. (16)

Or

- (b) Discuss in detail about any two Multicast routing with neat sketches. (16)

14. (a) Explain various fields of the TCP header and the working of the TCP protocol. (16)

Or

- (b) How is congestion controlled? Explain in detail about congestion control techniques in transport layer. (16)

15. (a) Give a detailed note on DNS operation. (16)

Or

- (b) (i) Explain in detail about SNMP messages. (8)
(ii) Illustrate the role of POP3 in Electronic mail Applications. (8)