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

Question Paper Code : 52870

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Fourth/Fifth/Sixth Semester

Computer Science and Engineering

CS 6551 — COMPUTER NETWORKS

(Common to Biomedical Engineering/Electronics and Communication Engineering/Mechatronics Engineering/Information Technology)

(Regulation 2013)

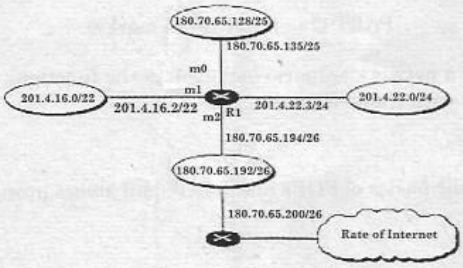
(Also common to PTCS 6551 –Computer Networks for B.E. (Part-Time) – Third Semester – Computer Science and Engineering – Regulation 2014)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How number of duplex mode link is calculated for mesh topology?
2. What is a URL?
3. What is the need for fragmentation?
4. Draw the frame format of Ethernet.
5. What are the two major mechanisms defined to help transition from IPv4 to IPv6?
6. Make a routing table for the Router R1 using the configuration given in the figure below:



7. How does UDP address flow control mechanism?

8. State the purpose of service model.

9. Draw the scenario of Electronics mail.

10. Draw a diagram that illustrate tunneling strategy.

PART B — (5 × 13 = 65 marks)

11. (a) Explain with relevant diagram the functions of physical and data link layer.

Or

(b) Discuss your understanding of Bit Oriented Protocol namely HDLC.

12. (a) Outline the working principle of Bluetooth technology.

Or

(b) Explain the architecture of IEEE 802.11 Wireless LAN.

13. (a) With an example network scenario explain the mechanism of Routing Information Protocol and specify the routing table contents.

Or

(b) Discuss the fundamentals and advantages of open shortest path first protocol.

14. (a) Explain the congestion control techniques used to improve QOS of the computer network.

Or

(b) (i) Explain the operation of Go-Back-N protocol. (6)

(ii) With a diagram explain about TCP connection management. (7)

15. (a) Discuss in detail about HTTP operation.

Or

(b) Write your understanding on File Transfer Protocol.

PART C — (1 × 15 = 15 marks)

16. (a) Consider a network scenario and explain the functions of ARP and RARP protocols with frame formats.

Or

(b) Explain the basics of POP3 and IMAP mail access protocols.

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