

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)

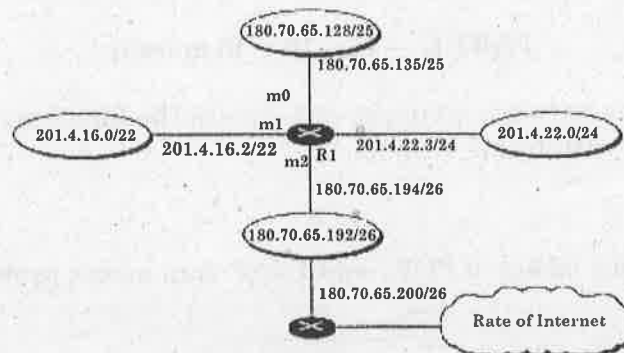
Time : Three hours

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.