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**Question Paper Code : 40449**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Fifth Semester

Electronics and Communication Engineering

EC 8551 – COMMUNICATION NETWORKS

(Common to Electronics and Telecommunications Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What do you understand by Internet? List the uses.
2. What does Protocol layering mean?
3. State the important roles of Data Link Layer.
4. State the nature of Bluetooth connectivity
5. Mention the need for multicast routing.
6. Define the term IPv6 and its advantages.
7. Name any two differences between Transmission Control Protocol and User Datagram Protocol.
8. What is the need for congestion control?
9. State the need for client side programming.
10. What is meant by peer to peer networks?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Present the evolution and the types of Networks. (8)  
(ii) Discuss the layering principles of OSI mode of communication networks. (5)

Or

- (b) Enumerate any one method for error detection and any one method for correction. (13)

12. (a) Elucidate the principles of Ethernet 802.3 protocol.

Or

(b) List and explain the methods and advantages of packet switching in networks. (13)

13. (a) (i) Discuss the role of multicast routing and its relative merits. (8)

(ii) Give a routing method used for interdomain communication. (5)

Or

(b) Discuss the merits of IPv4 and IPv6 and needs for transition to IPv6. (13)

14. (a) Explain the methods of transport layer protocols. (13)

Or

(b) Discuss in length the applications of congestion avoidance. (13)

15. (a) Discuss the protocols used for Electronic mail. (13)

Or

(b) (i) Discuss the evolution of world wide web with its current status. (8)

(ii) Explain the complexities in HTTP with suitable examples. (5)

PART C — (1 × 15 = 15 marks)

16. (a) (i) Discuss the need for cryptography with suitable examples. (8)

(ii) Explain the term firewalls in connection with network security. (7)

Or

(b) (i) Discuss the merits of network layer protocols with suitable examples. (8)

(ii) Explain the term mobile IP and how is it compared with computer networks. (7)