AALIM MUHAMMED SALEGH COLLEGE OF ENGINEERING
AVADI-IAF, CHENNAI-55
Department of Electronics and Communication Engineering

PROG & BRANCH : B.E – ECE **TIME : 3.00hrs**
YEAR/SEMESTER : III/VI **MAX MARKS : 100**
SUB CODE / NAME : EC2352 – COMPUTER NETWORKS

PART-A(10 × 2 = 20)

(Answer all the Questions)

1. Define a computer network.
2. What is the similarity between transport layer and data link layer?
3. Define the characteristics of frame relay.
4. What are Virtual Lans?
5. Find the class of the following IP addresses.
   i) 10000000 11110000 11111111 00110011
   ii) 117.28.32.16
6. What is the use of Network Address Translation?
7. Differentiate flow control and congestion control.
8. Mention the techniques used to improve QOS in process – to – process delivery.
9. What are overlay networks?
10. Define symmetric key.

PART – B (5 × 16 = 80)

(Answer all the Questions)

11. a. Explain in detail about network dependent and network independent layers in OSI reference model. (16)

OR

b. Explain the virtual circuit switching network with neat diagram. (16)

12. a. Describe in detail about the architecture and layers of ATM. (16)

OR

b. With the help of a neat diagram explain in detail about the stop and wait ARQ protocol in detail. (16)

13. a. Explain the IPv6 addressing schemes in detail. (16)

OR

b. Write short notes on the following:

i) BOOTP (8)

ii) Multicast routing (8)

14. a. Explain the congestion control techniques in TCP. (16)

OR

b. Explain in detail about transport layer protocols with neat diagram. (16)

15. a. Explain in detail about symmetric key algorithms with neat sketch. (16)

OR

b. Explain in detail about the following:

i) DNS (8)

ii) HTTP (8)

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PART-A(10 × 2 = 20)

(Answer all the Questions)

1. What is TCP/IP?
2. State the role of Digital Subscriber Line.
3. What are the advantages of Bluetooth?
4. What is a bridge?
5. Define ICMP.
6. What is the need of subnetting?
7. What is meant by choke packet?
8. Differentiate between delay and jitter.
9. Discuss the three main divisions of the DNS.
10. Give the URL format and explain each of its components.

PART – B (5 × 16 = 80)

(Answer all the Questions)

11. a. i) Explain the TCP/IP reference model with a neat sketch. (8)

    ii) Compare the performance of TCP/IP and ISO/OSI reference model. (8)

OR

b. Discuss about OSI reference model with neat sketch. (16)

12. a. Describe in detail about the architecture and layers of Frame Relay. (16)

OR

b. Define Fast Ethernet. Give a brief note on standard Ethernet and explain the types of Ethernet. (16)

13. a. Explain the IPv6 addressing schemes in detail. (16)

OR

b. Explain the following:

i) Internet protocol (12)

ii) Routers (4)

14. a. i) Define QOS. Elaborate the characteristics of QOS. (8)

ii) Explain the segments formats for UDP. (8)

OR

b. i) Explain how connection is established and released in TCP with a neat sketch. (8)

ii) Explain the default timer mechanism followed in TCP. (8)

15. a. Draw the architecture of WWW and explain the various blocks in detail. (16)

OR

b. i) Write a brief note on File Transfer Protocol. (8)

ii) What is Cryptography? Describe Symmetric key and Public key algorithms in detail. (8)

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PART-A(10 × 2 = 20)

(Answer all the Questions)

16. What are the features of datagram networks?
17. What do you mean by framing?
18. Why Ethernet is said to be a I – persistent protocol?
19. What is the purpose of Network Interface Card?
20. Compare IPv4 and IPv6 addressing.
21. Define ARP.
22. What is meant by quality of service?
23. Differentiate constant bit rate and variable bit rate.
24. What is meant by DNS?
25. How is a asymmetric key different from public key?

PART – B (5 × 16 = 80)

(Answer all the Questions)

26. a. i) Explain the principles of guided transmission media. (8)
ii) Write a short notes on cable TV for Data transfer. (8)

OR

b. i) Briefly discuss about the Datagram networks and Virtual Circuit networtks. (4)
ii) Explain the OSI reference model with neat diagram. (12)

27. a. Explain in detail about Bit oriented data link control protocol with neat diagrm. (16)

OR

b. i) Compare the different types of Ethernet in detail. (12)
ii) Write a note on Bluetooth. (8)

28. a. Explain the ICMP message format and error reporting in detail. (16)

OR

b. Explain in detail about the different types of routing algorithms. (16)

29. a. Explain the following characteristics. (4 × 4 = 16)

i) Reliability

ii) Delay

iii) Jitter

iv) Bandwidth

OR

b. Explain in detail about Congestion control techniques in Transport layer. (16)

30. a. Describe the message format and the message transfer and the underlying protocol involved in the working of the electronic mail. (16)

OR

b. i) Explain the private key cryptosystem with an example. (8)

ii) Explain the RSA algorithm with an example . (8)