

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024

Sixth Semester

**Electronics and Communication Engineering
20ECPC602 - COMMUNICATION NETWORKS**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (MCQ) (20 × 1 = 20 Marks)

Answer ALL Questions

	<i>Marks</i>	<i>K- Level</i>	<i>CO</i>
1. What type of signal can be transmitted by Broadband? (a) Analog (b) Digital (c) Both Analog and Digital (d) None	1	K1	CO1
2. Which of the following is NOT a cause of transmission impairment? (a) Attenuation (b) Noise (c) Distortion (d) Congestion	1	K1	CO1
3. Which one is used in parts of the cellular telephone system and for some satellite communication? (a) CDM (b) TDM (c) FDM (d) WDM	1	K1	CO1
4. Every station connected to Ethernet network is provided a 6-byte physical address by (a) firmware (b) the network interface card (c) the interface service provider (d) none of these	1	K1	CO2
5. The T in 100 base T Ethernet technology stands for (a) transmission (b) twisted pair (c) total utilization (d) top speed	1	K1	CO2
6. When an acknowledgement is lost during Go-back-N ARQ, the receiver retransmits the acknowledgement after timeout. (a) true (b) false	1	K1	CO2
7. BGP communication packets are (a) SYNC,OPEN,UPDATE,NOTIFICATION (b) OPEN,UPDATE,NOTIFICATION ,KEEP LIVE (c) SYNC ,FINISH, NOTIFICATION ,KEEP LIVE (d) FINISH, OPEN,UPDATE,NOTIFICATION	1	K1	CO3
8. Why do we consider dividing an IP address into network address and host address? (a) To increase the total number of IP addresses possible (b) So that routers route the packets based on the host address (c) To avoid the overhead of storing all possible host IP addresses in each router (d) For resolving IP addresses from domain names	1	K1	CO3
9. How many classes exist in classful addressing of IP? (a) 2 (b) 5 (c) 3 (d) 6	1	K1	CO3
10. What is the role of "Scheduling" in the basic QoS architecture? (a) It regulates the outgoing traffic rate to control jitter. (b) It marks packets according to their service type. (c) Detects which packets violate the QoS, and drops them. (d) Maintains queue and prioritizes packets into the outgoing buffer as per policy.	1	K1	CO4
11. Socket Address is: (a) IPv4 Address Translated to Ipv6 Address (b) Combination of IP Address and Port Address (c) Combination of MAC Address and domain Address (d) Application Layer Address	1	K1	CO4

12. (i) UDP does not have any flow control and congestion control mechanism. 1 K1 CO4
(ii) UDP is suitable for purposes where error checking and correction is less important than timely delivery.
Which of the above statement(s) is/are true?
(a) Only (i) (b) Only (ii) (c) Both (i) and (ii) (d) None the above
13. Flow control is mainly implemented in 1 K1 CO5
(a) Physical layer (b) Application layer (c) Transport layer (d) Session layer
14. Transport layer is implemented in the firmware of a computer system. 1 K1 CO5
(a) True (b) False
15. Let the maximum TCP payload be given 1450 bytes; then, what is the maximum network layer payload in Bytes? 1 K1 CO5
(a) 1450 Bytes (b) 1470 Bytes (c) 1430 Bytes (d) 1480 Bytes
16. The use of cryptographic function to generate sequence numbers for TCP connection is helpful to avoid 1 K1 CO5
(a) TCP Congestion overflow (b) DoS attack
(c) TCP SYN flood attack (d) None of these
17. Which of the following is remote login application? 1 K1 CO6
(a) telnet (b) FTP (c) DNS (d) SMTP
18. FTP control connection is initiated on port number 1 K1 CO6
(a) 20 (b) 21 (c) 80 (d) 143
19. A “web Browser” is an HTTP Client. 1 K1 CO6
(a) True (b) False
20. int domain name refers to 1 K1 CO6
(a) Business use (b) informational sites
(c) international organizations (d) None of these

PART - B (10 × 2 = 20 Marks)

Answer ALL Questions

21. What is meant by data communication? 2 K1 CO1
22. Outline the four basic network topologies. 2 K2 CO1
23. What are the functions of MAC? 2 K1 CO2
24. Enumerate some of the physical properties of Ethernet. 2 K2 CO2
25. What is the use of Network Address Translation? 2 K1 CO3
26. Relate the use of Border Gateway Protocol. 2 K2 CO3
27. What is dotted decimal notation? 2 K1 CO4
28. Classify the different classes of IP address. 2 K2 CO4
29. What is three way handshaking? 2 K1 CO5
30. Summarize the four factors needed for a secured network. 2 K2 CO6

PART - C (6 × 10 = 60 Marks)

Answer ALL Questions

31. a) Discuss in detail about the layers of OSI model. 10 K2 CO1
OR
b) Discuss about stop and wait ARQ scheme with sliding window ARQ scheme in detail. 10 K2 CO1
32. a) Explain Ethernet 802.3 in detail with its frame format. 10 K2 CO2
OR
b) Discuss the operation of switching and bridging in detail. 10 K2 CO2
33. a) Explain Distance Vector routing in detail. 10 K2 CO3
OR
b) Write notes on the following (i) Internet Protocol (ii) Routers. 10 K2 CO3
34. a) Discuss in detail the various aspects of IPV6. 10 K2 CO4

OR

b) With the help of neat diagram, explain the transition from IPV4 to IPV6. 10 K2 CO4

35. a) Elaborate the services and features offered by TCP. 10 K2 CO5

OR

b) Summarize the different approaches in flow and error control of transport layer. Explain them in detail. 10 K2 CO5

36. a) Elaborate on WWW and HTTP in detail. 10 K2 CO6

OR

b) Explain in detail about DNS and its types. 10 K2 CO6