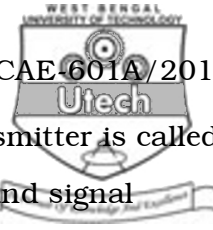




- iv) Frame relay technique uses
 - a) Circuit switching
 - b) Connection oriented packet switching
 - c) Message switching
 - d) Hybrid switching.
- v) Which of the following networks requires all channels in a message transmission path be of the same speed ?
 - a) Packed switched networks
 - b) Circuit switched networks
 - c) Message switched networks
 - d) None of these.
- vi) FDDI is
 - a) Bus topology
 - b) Ring topology
 - c) Star topology
 - d) none of these.
- vii) Token Bus is
 - a) IEEE 802.2
 - b) IEEE 802.3
 - c) IEEE 802.4
 - d) IEEE 802.6.
- viii) ISDN's BRI service has B channel(s) and D channel(s).
 - a) one, one
 - b) one, two
 - c) two, one
 - d) none of these.
- ix) TCP/IP is a/an
 - a) Reliable connection oriented protocol
 - b) Unreliable connection oriented protocol
 - c) Reliable connectionless protocol
 - d) Unreliable connectionless protocol.



- x) Unmodulated signal coming from a transmitter is called
- a) Carrier signal
 - b) Baseband signal
 - c) Frequency signal
 - d) all of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Differentiate between Character oriented protocol and Bit oriented protocol.
3. What is LLC ? Explain.
4. With the help of a suitable diagram, describe an ATM cell.
5. Explain the following terms :
Unicast, Multicast and Broadcast.
6. What is Transmission impairment ? What are its causes ?

2 + 3

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) An ISP is granted a block for addresses starting with 120.60.4.0./22. The ISP needs to distribute these blocks to 100 organizations with each organization receiving just eight addresses.

Design the sub-blocks and give the slash notation for each sub-block. Find out how many addresses are still available after these allocations. 11
- b) What is a transparent bridge ? 4
8. a) Explain the Stop and Wait protocol. 5
- b) What is IEEE 802.6 ? 5
- c) Write the advantages of optical fibre over twisted pair and coaxial cable. 5



9. a) Why do we need a DNS system when we can directly use an IP address ? 5
- b) Differentiate between 'Symmetric Key Cryptography' and 'Asymmetric Key Cryptography'. 5
- c) Explain the RSA algorithm. 5
10. a) Differentiate between TCP and UDP. 6
- b) Five channels, each with a 100 kHz bandwidth, are to be multiplexed together. What is the minimum bandwidth of the link if there is a need for a guard band of 10 kHz between the channels to prevent interference ? 4
- c) Distinguish between Virtual Circuit and Datagram Subnet. 5
11. Write short notes on any *three* of the following : 3 × 5
- a) RIP
- b) There-way Handshake protocol
- c) Circuit switching
- d) ISDN
- e) ATM.
-