

COMPUTER NETWORK
Paper-ES-CS-AIDS-305A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt any five questions.

1. Answer each part in brief. Each of it is of 3 marks.

- (a) What is ALOHA? Compare different ALOHA protocols.
- (b) Explain the meaning of P/F field in HDLC control field.
- (c) Discuss the MAC sublayer Design issues.
- (d) Write the HTTP Response message formats.
- (e) What is Medium Access Control Sublayer? (3×5)

2. (a) Explain IEEE 802.11 architecture and addressing mechanism in detail. (8)
- (b) What is CSMA? Explain CSMA with Collision Detection. (7)

3. (a) Describe the functional differences between statistical and synchronous time division multiplexing. (7)
- (b) Show the generation of codeword at the sender site and check the same at the receiver site using CRC where data word is 1010011010 and the deviser is 10111. (8)

4. (a) Differentiate static, dynamic and active documents used in World Wide Web. (7)
- (b) What is public key encryption algorithm? Explain RSA cryptosystem with encryption and decryption in details. (8)

5. (a) List the similarities and dissimilarities between OSI & TCP/IP reference models. (7)
- (b) Explain Leaky bucket algorithm and token bucket algorithm for congestion control. Also write its steps. (8)

6. (a) What is the relevance of sliding window protocol in the improvement of link utilization? Explain sliding window protocol in detail. (8)
- (b) What is the difference between symmetric key and asymmetric key cryptography? Explain it with example. (7)
7. (a) What are responsibilities of data link layer? Explain each of the reasonability of data link layer in details with is associated mechanism. (8)
- (b) What is the working mechanism of ISDN? Explain the conceptual difference between narrowband ISDN and broadband ISDN. (7)

8. (a) What is HTTP? Explain Non-persistent and Persistent connections of HTTP. (7)
- (b) What is IPv6 addressing? Explain the concept behind unicast and multicast protocol with example. (8)