



# MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code : BCAC502 Computer Networking

Time Allotted : 3 Hours

Full Marks :70

The Figures in the margin indicate full marks.

Candidate are required to give their answers in their own words as far as practicable

## Group-A (Very Short Answer Type Question)

1. Answer any ten of the following :

[ 1 x 10 = 10 ]

- (I) Hamming code can detect up to \_\_\_\_\_ if minimum Hamming distance is 3.  
(a) 2 (b) 3 (c) 4 (d) 5
- (II) Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?  
a. CDMA b. CDMA/CD c. CDMA/CA d. None of the above
- (III) Mapping from MAC address to IP address is done by
- (IV) What is quality of services?
- (V) What is HTTPS?
- (VI) Differentiate between Guided and Unguided media?
- (VII) Which topology requires a central controller or hub?
- (VIII) The data link layer takes the packets from \_\_\_\_ and encapsulates them into frames for transmission.  
(a) network layer (b) physical layer (c) transport layer (d) application layer
- (IX) 802.11 wireless networking uses what method as the media access method?  
a. CSMA/CD b. CTS/RTS c. CSMA/CA d. CSCD/CA
- (X) A 4 byte IP address consists of \_\_\_\_\_
- (XI) If a 120 V carrier peak changes from 170 V to 50 V by a modulating signal, find the modulation factor?  
(a) 0.5 (b) 1.5 (c) 2.5 (d) 3.5
- (XII) Automatic repeat request error management mechanism is provided by \_\_\_\_  
a) logical link control sublayer b) media access control sublayer  
c) network interface control sublayer d) application access control sublayer

## Group-B (Short Answer Type Question)

Answer any three of the following

[ 5 x 3 = 15 ]

2. What are the different types of networks? Explain. [ 5 ]
3. Brief Three functions of data link layer ? [ 5 ]
4. How does HDLC work? [ 5 ]
5. What CSMA means? Why do we use it? [ 5 ]
6. Responsibilities of the transport layer. [ 5 ]

## Group-C (Long Answer Type Question)

Answer any three of the following

[ 15 x 3 = 45 ]

7. (a) Explain three controlled access method. [ 10 ]  
(b) A 4 Mbps token ring has a token holding timer value 10 ms. What is the longest frame that can be sent on this ring? [ 5 ]
8. (a) Difference between Token Bus and Token Ring network? [ 10 ]  
(b) Difference between CSMA/CD and CSMA/CA network? [ 5 ]
9. (a) Describes the services provided by the PPP Protocol . [ 5 ]  
(b) If the window size is 15, give the sequence number of frames in Go-back-N ARQ and selective-repeat ARQ. [ 5 ]  
(c) Write a short note on channel allocation. [ 5 ]
10. (a) Difference between hub and switch? [ 10 ]

- (b) Difference between OSI and TCP/IP. [ 5 ]
11. (a) Represent HelLO34 in EBCDIC Code. [ 7 ]
- (b) Difference between Network and Transport layer. [ 3 ]
- (c) What is Bridge and Hub? [ 5 ]

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