

**Paper ID [CS206]**

(Please fill this Paper ID in OMR Sheet)

**B. Tech (Sem. - 4<sup>th</sup>)****DATA COMMUNICATION (CS - 206)****Time : 03 Hours****Maximum Marks : 60****Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

**Section - A****(10 × 2 = 20)****Q1)** Choose the correct or best alternative in the following.

- a) The maximum number of unconfirmed frames that can be outstanding at any one time with SDLC is \_\_\_\_\_.  
(i) 4 (ii) 7  
(iii) 14 (iv) 8
- b) CLP field is used in ATM cell header to \_\_\_\_\_.  
(i) detect and correct single bit errors.  
(ii) indicate type of frame.  
(iii) provide flow control.  
(iv) to discard cell when necessary.
- c) In which type of switching do all the datagrams of a message follow the same channels of a path?  
(i) circuit switching (ii) data gram packet switching  
(iii) virtual circuit packet switching (iv) message switching
- d) A null modem is a unit which interconnects \_\_\_\_\_.  
(i) DTE to DCE (ii) DTE to DTE  
(iii) DCE to DCE (iv) DCE to DTE
- e) USART performs the following function/s  
(i) insert and delete SYN characters  
(ii) insert and delete start and stop bits  
(iii) perform serial to parallel and vice versa  
(iv) both (i) and (iii).

- Q8)** (a) Explain any two shortest path routing protocols you have studied. Explain why adaptive routing techniques are superior to non-adaptive routing?
- (b) How does ATM differ from frame relay? List and briefly define the ATM service categories. What are the services provided by AAC?
- Q9)** (a) Draw and discuss the IP Datagram frame format. Discuss in detail the various fields. What is subnetting?
- (b) Show by calculation how many hosts per network each IP address class A, B, and C can have.

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