

02419 **BACHELOR OF COMPUTER APPLICATIONS**
(PRE - REVISED)
Term-End Examination
June, 2014

CS-68 : COMPUTER NETWORKS

Time : 2 hours

Maximum Marks : 60

Note : Question No.1 is compulsory. Attempt any three from the rest.

1. (a) What is the size of ATM cell ? Write the significance of each ATM layer. 5
- (b) Show the Manchester encoding and differential Manchester encoding for the bit stream 011011101011. 4
- (c) Explain the concept of packet switching. Why circuit switching is preferred over packet switching in voice communication ? 5
- (d) Compare twisted pair and optical fiber in terms cost, bandwidth, attenuation, construction and uses. 5
- (e) Write any three functions of Data link layer and two functions of network layer of OSI model. 5
- (f) Write the importance of Hamming distance in data communication. 2
- (g) Explain TDM and FDM with the help of an example for each. 4

2. (a) What is count to infinity problem in distance vector routing ? Show with the help of an example. 4
- (b) Explain the advantages and disadvantages of any three topologies used in LAN. 6
3. (a) Differentiate between Switches and Hubs. 4
- (b) Explain the Congestion Control mechanisms used at transport layer of OSI model. 6
4. (a) With an infinite number of user in a slotted ALOHA channel, results show that 10% of the slots are idle. What is the channel load 'G' ? And what is the throughput ? 6
- (b) Write two applications in computer networks for which connection - oriented service is appropriate. Also, give two application for which connection-less service is best. Justify your answer. 4
5. (a) Compare and contrast between simplex, Half-Duplex and Full-Duplex. Also , give an example for each. 6
- (b) Assume three token ring LAN's are connected by a bridge. What happens if a fault occurs on one of the rings? What happens if a bridge fails ? Explain. 4
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