

S.E. I.T. Sem IV (CBUS)
CN.

27/11/14

Q.P. Code : 12452

(3Hours)

[Total Marks : 80

- N.B.** (1) Question No.1 is **compulsory**.
(2) Attempt any **3** questions out of remaining questions.
(3) Total **4** questions need to be **solved**.

1. (a) Explain collision detection procedure in CSMA/CD. 5
- (b) Consider a message 11010011101100, divisor 1011. Compute n bit binary CRC. 5
- (c) Compare circuit switched and packet switched networks. 5
- (d) Differentiate between connection oriented and connectionless services. 5

2. (a) What are the three main functions performed by network layer? What is routing. Explain distance vector counting. 10

- (b) What is IP address? Why it is required? What is subnet mask? Explain subnetting and supernetting with Explain. 10

3. (a) Explain TCP congestion control. 10
- (b) Explain connection establishment and termination in TCP with neat diagram. 10

4. (a) Explain HDLC protocol with suitable diagram. 10
- (b) Explain TCP sliding window with neat diagram in detail. 10

5. (a) Explain TCP timer management and transaction TCP. 10
- (b) A IP header from an IP packet received at destination 4500003c1c4640004006b1e6ac100a63ac100a0c. Map these values to IP header and explain all bits. 10

6. Write short note (any **four**) :- 20
 - (i) Network topology
 - (ii) GSM operation subsystem (OSS)
 - (iii) Link state routing
 - (iv) Framing at data link layer.
 - (v) Networking using windows and LINUX operating system
 - (vi) Static channel allocation of LAN & MAN.