

[3 hours]

[Marks: 80]

- Question No. 1 is compulsory
- Attempt **any four** from the remaining six questions
- Assumptions should be made whenever required and should be clearly stated
- Answers to sub questions should be answered together
- Illustrate answers with diagrams wherever necessary
- Use of Calculators is permitted

- Q1 A Explain the IEEE 802.3 standard. 10
- B What are connecting devices? Explain the various connecting devices used at the various layers of the communication model 10
- Q2 A Explain difference between distance vector and link state routing protocol. Explain anyone link state routing algorithm in detail. 8
- B Find the CRC for $F(x) = X^6 + 1$ using the divisor polynomial $G(x) = X^4 + X^3 + X + 1$. 7
- Q3 A Explain the IP Addressing System along its classes. What do you mean by subnet masking? 8
- B Describe the congestion control mechanism used in TCP. 7
- Q4 A Explain the Multicasting Algm MOSPF. 8
- B Differentiate between the following 7
- Connection Oriented and Connectionless communications
 - Routers and Switches
- Q5 A Explain how MPLS solves the problems of traditional routing algorithms. 8
- B What are transmission impairments? Explain the various impairments effecting wired medium. 7
- Q6 A What are the guided and unguided media? Explain the twisted pair and optical fibers as guided medium 8
- B In which Layer PPP works ? Explain PPP in detail 7
- Q7 A Write Short Notes on **any three** of the following 15
- BGP
 - FTP
 - NAT
 - QOS
