



Duration : 3 Hrs

Total Marks : 80

- N.B. : 1. Question No. 1 is Compulsory.
 2. Attempt **any three** questions, from remaining **five** questions.
 3. Figure to the right indicates full marks

- Q.1. A) Explain LAN, MAN and WAN. 5
 B) Compare various network topologies. 5
 C) Explain the purpose of Flow control and Error Control from DLL perspective. 5
 D) Explain the purpose of fragmentation of Packet and how it is done. 5
- Q.2. A) Explain OSI / ISO model with neat diagram and the functions of each layer. 10
 B) Explain the functionality of Repeater , HUB , L2-Switch and Router. 10
- Q.3. A) Explain the need for subnetting? A company is granted the site address 201.70.64.0 (class C). The company needs six subnets. Design the subnets. 10
 B) What is difference between interior gateway and exterior gateway routing ? Explain the count to infinity problem of DVR and various solutions for the same. 10
- Q.4. A) What are Berkley socket primitives? Explain in brief. 10
 B) What is error detection and correction? Explain CRC with example. 10
- Q.5. A) What is congestion control ? Explain open loop and closed loop congestion control policies. 10
 B) Explain in brief – 10
 a) Telnet
 b) TCP timers
- Q.6. Write Short Note on (Any four) 20
 (a) TCP segment header
 (b) IPV4 vs IPV6
 (c) Go back n ARQ
 (d) Design issues for various layers
 (e) DNS