

(3 Hours)

[Total Marks: 80]

Note: (1) Question 1 is compulsory
(2) Solve any three questions out of remaining
(3) Assume suitable data wherever necessary

- Q.1** Solve any four **[20]**
- (a) Explain principle differences between connection less and connection oriented communication.
 - (b) What is channel allocation problem?
 - (c) Find the error, if any, in the following IPv4 addresses.
(i) 221.24.7.8.20 (ii) 75.45.351.14
 - (d) Differentiate between TCP and UDP.
 - (e) Write short note on SMTP.
- Q.2** (a) Describe OSI reference model with a neat diagram. **[10]**
(b) Explain different framing methods. **[10]**
- Q.3** (a) Explain different types of guided transmission media in detail. **[10]**
(b) Explain sliding window protocol using selective repeat technique. **[10]**
- Q.4** (a) Explain Link State Routing with suitable example. **[10]**
(b) What is need of DNS and explain how DNS works? **[10]**
- Q.5** (a) Explain IPv4 header format in detail. **[10]**
(b) Explain Three Way Handshake Technique in TCP. **[10]**
- Q.6** (a) Explain leaky bucket algorithm and compare it with token bucket algorithm. **[10]**
(b) Write short notes on: (i) TCP Timers (ii) HTTP **[10]**