IT9026-TCP/IP DESIGN AND IMPLEMENTATION

Time: 3Hrs   Max.Marks: 100

Answer all questions

PART A (10 x 2 = 20 Marks)

1. State the role of ARP protocol.

2. Draw the packet format of ICMP echo request message.

3. Draw the flow diagram of TCP connection establishment.

4. How TCP initiates retransmission of data?

5. What is the need of routing algorithms?

6. What is the role of ICMP?

7. Specify the contents of a TCB.

8. List down the various states of TCP FSM.

9. What is the need for congestion control in networks?

10. How PUSH operation is initiated in TCP?

PART B (5 x 16 = 80 Marks)

11.i) Explain any four internetworking devices in terms of their operation while

handling data.   (8)

ii) Explain Subnetting and Supernetting with examples.   (8)

12. a) Draw the sketch of TCP header and explain the various fields in detail. (16)

Or

b) i) Write notes on TCP Timer management in detail...   (8)

ii) Explain the various states involved in TCP connection termination   (8)

13. a) Explain in detail about fragmentation and reassembly that is carried out in networks during data transmission. (16)

Or

b) Explain in detail about any two dynamic routing algorithms in network with a suitable network scenario. (16)

14. a) Write down the appropriate data structure for TCP input and output processing and explain. (16)

Or

b) Write notes on
   i. TCB (8)
   ii. Mutual exclusion in TCP data processing. (8)

15. a) Explain how flow control and adaptive retransmission is carried out in TCP with detail flow diagram. (16)

Or

b) Explain the various TCP congestion avoidance mechanisms in detail. (16)