

Total No. of Questions :12]

SEAT No. :

**P2963**

**[4958]-203**

**[Total No. of Pages :3**

**T.E. (Information Technology)**  
**COMPUTER NETWORK TECHNOLOGY**  
**(2008 Course) (Semester - I)**

*Time : 3 Hours]*

*[Max. Marks :100*

*Instructions to the candidates:*

- 1) Answer any 3 questions from each section.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicates full marks.*
- 4) Assume Suitable data if necessary.*

**SECTION - I**

**Q1) a)** What is routing? State different types of routing? Write properties of routing algorithm. **[8]**

b) What is flow control mechanism? What is the role of timer in the flow control. **[8]**

OR

**Q2) a)** Compare virtual circuit subnet and datagram subnet. **[8]**

b) Explain in detail Link State routing algorithm with example. **[8]**

**Q3) a)** What is fragmentation? Explain types of fragmentation with example. **[8]**

b) Explain in detail BGP. **[8]**

OR

**P.T.O.**

**Q4) a)** Is fragmentation supported by IPv4 and IPv6? Explain. [6]

b) Consider any class – C network with default subnet mask. [10]

How many actual hosts can be connected in that network? Divide that network into 8 equal subnets?

What is the new subnet mask?

What is the starting address of the 6<sup>th</sup> Subnet?

What is the last address of the 6<sup>th</sup> Subnet?

How many hosts can be connected in each subnet? (Give all details)

**Q5) a)** What is a Socket? Explain various socket primitives used in client-server interaction. [8]

b) Explain all the fields of TCP header. [10]

OR

**Q6) a)** Explain the three way handshake algorithm for TCP connection establishment. [10]

b) What do you mean by flow control in transport layer? What are the different methods to achieve it? [8]

## **SECTION - II**

**Q7) a)** List the similarities and differences between POP3 and IMAP. [8]

b) Explain persistent and non-persistent HTTP Connection. [8]

OR

**Q8) a)** List and describe seven message types in SNMP. **[8]**

b) Where and when FTP is used? Explain the importance of two ports in FTP? **[8]**

**Q9) a)** Explain Round Robin and Weighted Fair Queuing algorithm for scheduling. **[8]**

b) Explain the RTSP protocol. Why this protocol is needed. **[8]**

OR

**Q10)a)** What do you mean by integrated services? Explain with suitable example. **[8]**

b) What is the need of scheduling and policing techniques in multimedia networking. **[8]**

**Q11)a)** Discuss various layers used in ATM architecture. **[9]**

b) Explain Bluetooth architecture with diagram. **[9]**

OR

**Q12)** Write short note on **[18]**

a) Limitations of Bluetooth.

b) ATM Protocol Stack.

c) Hidden Station problem.

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