

Total No. of Questions : 12]

SEAT No. :

**P1462**

**[4759]-219**

[Total No. of Pages : 2

**B.E. (Computer Engineering)**  
**HIGH PERFORMANCE NETWORKS**  
**(2008 Course) (Semester-II) (Elective-III)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:*

- 1) *Answer Q.1or Q.2, Q.3 or Q.4, Q.5 or Q.6 from section I and Q.7 or Q.8,Q.9 or Q.10,Q.11or Q.12 from section II*
- 2) *Answer to the two sections should be written in separate answer-books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable data if necessary.*
- 5) *Figures to the right indicate full marks.*

**SECTION-I**

**Q1)** a) Discuss in short about 1000 BASE- X family with suitable applications. [8]

b) Explain high level system architecture of Gigabit. [10]

OR

**Q2)** a) Explain in short the need of flow control in gigabit Ethernet? How it is supported? [8]

b) Differentiate between 10, 100, 1000 Mbps n/w based on their MAC characteristics. [10]

**Q3)** a) Explain physical configurations for ISDN User-Network Interfaces with examples. [8]

b) Explain in brief elementary functions for ISDN [8]

OR

**Q4)** a) Describe the SS7 protocol architecture. [8]

b) Explain Frame-Mode Control Signaling with example. [8]

**Q5)** a) Explain in short the functional architecture of B-ISDN. [8]

b) What is Quality of Service? Explain in detail the various ATM QoS parameters specifying their category of assessment. [8]

**P.T.O.**

OR

- Q6)** a) Explain in details the ATM adaptation layer. [8]  
b) What are the different ATM Service Categories? Explain in details. [8]

**SECTION-II**

- Q7)** a) Draw and explain a typical ADSL equipment configuration. [8]  
b) Draw and explain the general block diagram of DMT Transmitter. [8]

OR

- Q8)** a) Explain architecture of VDSL. [8]  
b) Explain in short why are some variations of xDSL asymmetric? [8]

- Q9)** a) Explain step-by-step MPLS operations that can occur on data packets in an MPLS domain. [8]

- b) Explain working of RSVP. [8]

OR

- Q10)** a) Describe the following terms related to MPLS operation  
i) LER ii) LSR iii) LDP iv) LSP [8]  
b) Explain tunneling in MPLS. [8]

- Q11)** a) What is Wi-Fi? Explain with configuration steps. [10]  
b) What is WiMax? Explain in details. [8]

OR

- Q12)** a) Comment on any 3 WiMax QoS classes along with suitable Application support. [8]  
b) Explain the following terms related to WiMax  
i) Fixed wireless access  
ii) Nomadic wireless access [10]

