

[5254]-196

B.E. (Information Technology)
ADVANCE COMPUTER NETWORK
(2008 Pattern) (Elective - III)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer to the two sections should be written in separate books.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*

SECTION - I

- Q1)** a) Explain the logical layers of ISO/OSI model in detail. [10]
b) Discuss in detail various principles of network design. [8]

OR

- Q2)** a) What are the Networking principles and Network services with Layered architecture? [12]
b) Explain in detail Internet, ATM and cell phone. [6]

- Q3)** a) Explain the ATM header with appropriate diagram. Explain the structure of the header. [8]
b) Explain mobility management issues in wireless networks. [8]

OR

- Q4)** a) What is Wireless communication and explain its architecture? [8]
b) Explain WDM system with diagram in Optical Networks. [8]

- Q5)** a) Explain in details various parameters specified in the Quality of Service. [6]
b) Explain Congestion control and Flow control mechanism of Datagram network w.r.t. Open Loop and Closed Loop. [10]

OR

- Q6)** a) Explain Congestion control mechanism of ATM network w.r.t. [8]
i) Internal congestion control
ii) Global congestion control
b) Explain Marcov Chain Models w.r.t. M/M/1 queue and M/M/2 queue. [8]

SECTION - II

- Q7)** a) Write notes on: BGP and RIP [10]
b) What is Traffic Engineering and explain TE with MPLS. [8]

OR

- Q8)** a) Explain different BGP messages with their formats. [8]
b) What are VPNs? Explain the significance of tunneling in VPNs. [10]

- Q9)** a) Explain the general characteristics of Mobile IP. [6]
b) Explain various features of IPv6. [10]

OR

- Q10)** a) Explain RTP and RSVP [8]
b) Explain Application Programming Interface for IPv6. [8]

- Q11)** a) Explain cluster based network architecture for ad-hoc networks. [6]
b) What is ad hoc network? Explain its limitations and application areas. [10]

OR

- Q12)** a) Explain how firewall is implemented in the network. [8]
b) What are overlay networks? What is the importance of overlay networks? [8]

