Total No. of Questions :12]

SEAT No. :

P1794

[Total No. of Pages :3

[4859]-196

B.E (Information Technology)

d:ADVANCED COMPUTER NETWORKS

(2008 Course) (Elective - III) (Semester - II)

Time : 3 Hours] *[Max. Marks :100*

Instructions to the candidates:

1) ***Answers 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) What are the Networking principles and Network services with Layered architecture? **[12]**

b) Explain in detail Internet, ATM and cell phone. **[6]**

OR

Q2) a) Explain the logical layers of ISO/OSI model in detail. **[12]**

b) Discuss in detail various principles of network design. **[6]**

Q3) a) What is Wireless communication and explain its architecture? **[8]**

b) Explain WDM system with diagram in optical Networks. **[8]**

OR

Q4) a) Explain the ATM header with appropriate diagram. Explain the structure of the header. **[8]**

b) Explain mobility management issues in wireless networks. **[8]**

P.T.O.

Q5) a) Explain Congestion control mechanism of ATM network w.r.t. **[6]**

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. **[10]**

OR

Q6) a) Explain in details various parameters specified in the Quality of Service. **[8]**

b) Explain Congestion control and Flow control mechanism of Datagram network w.r.t. Open Loop and Closed Loop. **[8]**

SECTION - II

Q7) a) Explain different BGP messages with their formats. **[10]**

b) What are VPNs? Explain the significance of tunneling in VPNs. **[8]**

OR

Q8) a) Write notes on: **[8]**

i) BGP

ii) RIP

b) What is Traffic Engineering and explain TE with MPLS. **[10]**

Q9) a) Explain RTP and RSVP. **[8]**

b) Explain Application Programming Interface for IPv6. **[8]**

OR

*Q10)*a) Explain the general characteristics of Mobile IP. **[8]**

b) Explain various features of IPv6. **[8]**

Q11)a) Explain how firewall is implemented in the network. **[8]**

b) What are overlay networks? What is the importance of overlay networks? **[8]**

OR

Q12)a) Explain cluster based network architecture for ad-hoc networks. **[6]**

b) What is ad hoc network? Explain its limitations and application areas. **[10]**

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