Total No. of Questions : 12]

P3421

SEAT No. :

[Total No. of Pages : 3

[4959]-196

B.E. (Information Technology)
d:ADVANCED COMPUTER NETWORKS
(2008 Course) (Semester - II) (Elective - III) (414450)

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

Instructions to the candidates:
1) *Answers to the two sections should be written in separate answer books.*
2) *Answer three questions from each section.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Figures to the right side indicate full marks.*
5) *Use of Calculator is allowed.*
6) *Assume Suitable data if necessary.*

SECTION - I

Q1) a) Explain in detail the layers of ISO/OSI model. **[10]**

b) State and explain various principles of network design. **[8]**

OR

Q2) a) List the Networking principles and services with Layered architecture?**[12]**

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

Q3) a) Draw and explain the ATM header. Explain the structure of the header.**[8]**

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

OR

Q4) a) Define Wireless communication and explain its architecture? **[8]**

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

P.T.O.

Q5) a) What are various parameters of Quality of Service? Explain. **[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) Define traffic engineering and explain TE with MPLS. **[8]**

OR

Q8) a) Explain formats of various BGP messages. **[8]**

b) What are VPNs? Explain the significance of tunneling in VPNs. **[10]**

Q9) a) State the general characteristics of Mobile IP. **[6]**

b) List and explain various features of IPv6. **[10]**

OR

*Q10)*a) Describe RTP and RSVP. **[8]**

b) Explain API for IPv6. **[8]**

*Q11)*a) What is 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 implement of firewall in the network. **[8]**

b) What are overlay networks? Why it is important? **[8]**

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