

B.E. (Information Technology) (2008 Course)

Advanced Computer Networks (414450)

(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 answer books.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of Calculator is allowed.
- 5) Assume Suitable data if necessary

SECTION I

- Q1) a) Differentiate between Wi-Max and Wi-Fi. 8
b) State and explain different services of network layer. 8

OR

- Q2) a) Describe in detail protocol stack of ATM. 8
b) Draw a neat diagram of network architecture and explain the functionality of each block. 8

- Q3) a) State and explain various delays in the network. 8
b) Explain the role of Network Address Translator in network. 8

OR

- Q4) a) Describe structure of ATM header. 6
b) What is "Availability" of network? What is MTBF, MTTR? How "Availability" of network is calculated? 10

- Q5) Write short notes on : (any 3) 18
1. Addressing scheme in ATM
2. MPLS
3. Architecture of wireless networks
4. Network Elements

OR

- Q6) a) Explain mathematical background for control of networks like Datagram. 8
b) What is the significance of ATM Adaptation layer? Explain in detail. 10

SECTION II			
Q7)	a)	What is VPN? Explain the significance of tunneling in VPNs.	8
	b)	What is the process for implementation of MPLS?	8
OR			
Q8)	a)	Explain how packets are routed between peers in BGP protocol.	8
	b)	Explain Traffic Engineering in detail.	8
OR			
Q9)	a)	Describe Voice over Internet protocol.	8
	b)	Explain security issues in Mobile IP.	8
OR			
Q10)	a)	Why and how the concept of queuing theory is used to analyze datagram networks?	10
	b)	Describe different features of IPv6.	6
OR			
Q11)	a)	Draw and explain link clustered architecture of a network.	8
	b)	Explain comparative features of various routing methods.	10
OR			
Q12)		Write short notes on : (any 3) <ul style="list-style-type: none"> i. Protocol suit H.323 for IP telephony ii. Mobile ad-hoc network iii. Blocking probability in circuit switch network iv. DSR protocol for ad-hoc networking 	18

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