Total No. of Questions : 12]

SEAT No. :

**P3693**

[Total No. of Pages : 3

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# B.E. (Electronics)

## COMPUTER NETWORK AND SECURITY

## (2008 Course) (Semester - II) (404207)

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

***Instructions to the candidates:***

1) ***Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, from section - I.***
2) ***Attempt Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12 from section - II.***
3) ***Answers to the two sections should be written in separate answer books.***
4) ***Neat diagrams must be drawn whenever necessary.***
5) ***Assume suitable data if necessary.***

## SECTION - I

***Q1)*** a) Explain types of networks with an example and application of each. **[6]**

b) Discuss network design issues. **[6]**

c) Explain Frame Relay. **[4]**

OR

***Q2)*** a) Enlist uses of networks. **[4]**

b) Discuss the similarities of the reference models. **[6]**

c) Explain working of and applicaion of ATM. **[6]**

***Q3)*** a) Explain two protocols for E-mail. **[8]**

b) Explain how TFTP and BOOTP work. **[8]**

OR

***P.T.O.***

***Q4)*** Write short note on- Attempt any four: **[16]**

a) Ping

b) Trace route

c) ICMP

d) SNMP

e) NFS

***Q5)*** a) What are the various types of addressing? Explain each with example. **[6]**

b) Explain any Link State routing. **[6]**

c) Compare IPv4 and IPv6 protocol. **[6]**

OR

***Q6)*** a) What is quality of service in a network? What are the various parameters contributing to quality of service? **[9]**

b) Compare TCP and UDP and explain working of each. **[9]**

## SECTION - II

***Q7)*** a) Explain various functions of Datalink layer in detail. **[9]**

b) Discuss various elementary protocols. **[9]**

OR

***Q8)*** a) What is the difference between hub, bridge and router? At which layer does each of this work. **[6]**

b) Explain Ethernet and Fast, Switched and Gigabit ethernet. **[12]**

***Q9)*** a) What are the various types of guided media? Explain each with an application. **[12]**

b) Explain how modem is used for internet? **[4]**

OR

***Q10)***a) Explain how satellite and infrared communication work. Where is each of this applied? **[8]**

b) Explain packet switching with its types in detail. **[8]**

***Q11)***a) What is Public key and Private key? Explain each with an example. **[4]**

b) Draw and explain a model for network security. **[4]**

c) Implement the RSA public key cryptosystem- using p=5, q=11 and d=27 find e and encrypt the message "abcdefghij". Treat the alphabets as numerical values is a=1, b=2.etc. **[8]**

OR

***Q12)***a) What is Network Simulation and what is the need of it? **[6]**

b) Explain network monitoring and its application. **[4]**

c) Explain AES. **[6]**

*EEE*