6E6021

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6E6021

B. Tech. VI-Sem. (Main/Back) Exam., April/May-2016
Computer Science & Engineering
6CS1A Computer Networks
CS, IT

Time: 3 Hours **Maximum Marks: 80**

Min. Passing Marks (Main & Back): 26

Instructions to Candidates:-

*Attempt any **five questions,** selecting **one question** from **each unit**. All Questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly.*

Units of quantities used/ calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

UNIT-I

Q.1 (a) What do you understand by routing? Explain the classification of routing algorithms. [6]

(b) Discuss shortest path routing algorithm with help of suitable example. [10]

OR

Q.1 (a) Discuss the reason of congestion in a network. Also discuss Leaky bucket and Token bucket algorithms in detail. [8]

(b) Contrast between distance vector and link state routing after discussing both. [8]

UNIT-II

Q.2 (a) State the concept of tunneling. Under what practical circumstances it is used? Explain by suitable example. [8]

(b) Discuss classes of IPV4. Also explain provision of multicast and broadcast support in IPV4. [8]

OR

Q.2 Write short note on following: [8×2=16]

(a) IPV4 Vs IPV6

(b) Mobile IP

UNIT-III

Q.3 (a) Write a technical note on flow control and buffering. [8]

(b) Explain the need of multiplexing at transport layer. Describe the multiplexing and De-multiplexing with help of suitable diagram. [8]

OR

Q.3 (a) Differentiate between a reliable and lossy channel. Also derive relation between channel and bit errors. (Take your own assumptions.) [8]

(b) Describe UDP protocol and its application in DNS. [8]

UNIT-IV

Q.4 Draw and explain TCP Header and segment structure. [16]

OR

Q.4 (a) Discuss the TCP connection establishment and release. [8]

(b) Write a technical note on TCP congestion control. [8]

UNIT-V

Q.5 (a) What is Network Security? Explain the principles of Network Security. Also discuss the various challenges in implementation of security in computer network. [8]

(b) Draw and explain Domain Name System (DNS) record structure. [8]

OR

Q.5 Write short note on:-

(a) World Wide Web (WWW) [8]

(b) File Transfer Protocol (FTP) [8]
