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<b>6E6021</b>	<b>6E6021</b>
<b>B. Tech. VI-Sem. (Main/Back) Exam., April/May-2016</b>	
<b>Computer Science &amp; Engineering</b>	
<b>6CS1A Computer Networks</b>	
<b>CS, IT</b>	

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]

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UNIT-II

- Q.2 (a) State the concept of tunneling. Under what practical circumstances it is used? [8]  
Explain by suitable example.
- (b) Discuss classes of IPV4. Also explain provision of multicast and broadcast support in IPV4. [8]

OR

- Q.2 Write short note on following: [8x2=16]
- (a) IPV4 Vs IPV6 [8]
- (b) Mobile IP [8]

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]
- Q.4 (a) Discuss the TCP connection establishment and release. [8]
- (b) Write a technical note on TCP congestion control. [8]

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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]

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