

## Computer Networks Comprehensive Examination

Work each of the following problems without use of a calculator or any reference material. Please explain fully and address the questions asked. In problem 4 be sure that it is clear how you obtained your answer.

1. Explain the difference between a connectionless network and a connection oriented network with regard to each of the following topics:
  - a. Call admission
  - b. Route computation
  - c. Bandwidth management
  - d. Connection-setup and takedown
  - e. Recovery from a link failure

2. Identify the appropriate reference model layer for each of the following:

a. Operation of a LAN hub

b. Forwarding datagrams

c. Use of HTTP

d. Sending an ARP

e. Use of UDP

3. Explain the difference (be specific) between each of the following:

a. LAN switch and a bridge

b. ATM switch and an IP router

c. Hub and a repeater (on a LAN)

