



DURATION: TWO HOURS

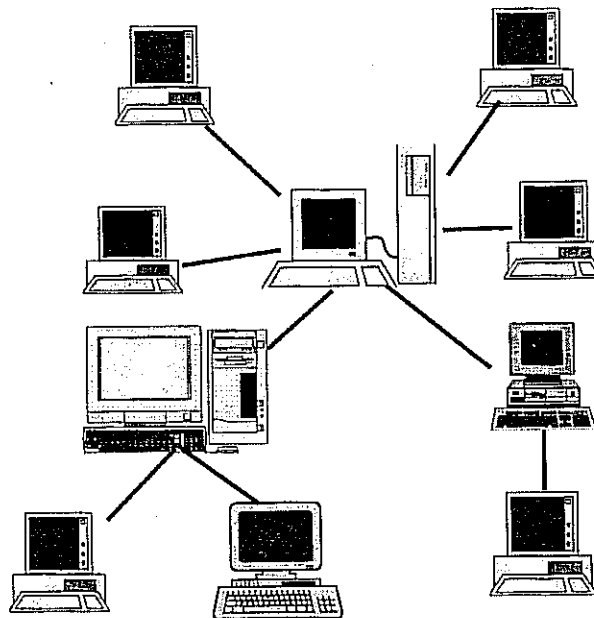
Date: 21st July, 2010

Time: 10.00 a.m. – 12.00 noon

Answer FOUR Questions ONLY.

Q1.

- Why do people use computer Networks? Describe in your own words.
- Clearly explain the *Client/Server* concept in networking using suitable examples.
- State the four network topologies and describe two of them.
- Identify the network topologies in the following network and sketch those topologies separately.



Q2

- Operational layers of a network contain the IP layer, Physical layer, Application layer and TCP Layer. Draw the layered architecture of the operational layer of Computer Networks and describe what is IP layer and Application layer.
- Write short notes for the following:
 - Direction of a transmission
 - Bandwidth of a transmission

A computer has the following network settings.

IP ADDRESS : 10.73.41.11
GATEWAY : 10.73.1.1

By using the above settings, answer the following questions;

- c. What is the subnet mask of the above computer? Assume that this computer is in the class B network.
- d. Suppose there is another computer in the same network. Give a method to check whether a computer is in the above network. Assume that IP address of the second computer is 10.73.41.15.

Q3.

- a. Explain why we need protocols for the Internet communication.
- b. Comparatively, write a short note on the following services on The Internet.
 - i. Email
 - ii. Ftp
 - iii. Telnet
- c. Briefly explain how TCP/IP enables the internet communication using packet terminology.

Q4.

- a. State whether the following statements are TRUE or FALSE.
 - i. The device which connects a computer to the network is called a network card.
 - ii. Microwave links are the most suitable communication media for LAN.
 - iii. Data transfer speed for telephone line is 64kbps
 - iv. The range of Data transfer speed for voice band is 110- 9600 bps
 - v. TCP/IP is a protocol but it does not need to connect to the internet
 - vi. RJ45 connectors are more expensive than BNC sockets
- b. "When the number of computers connected to network is increased, the network traffic will not increase" Do you agree with this statement. Briefly explain.
- c. What are the solutions you can provide to reduce the network traffic.

Q5.

- a. Describe the importance of Web technology in the context of education.
- b. Write what is meant by the following domain name extensions.
 - i. .lk
 - ii. .uk
 - iii. .edu
 - iv. .mil
- c. Write short notes on *the history* of the Internet.

- d. Describe the use of the Agent technology in the context of searching information on The Internet.

Q6.

- a. What is the general structure of a HTML document?
- b. Write suitable HTML code to display the following text on your web page.
- i. **Ozone (O₃)** is a *triatomic molecule*, consisting of three oxygen atoms.
- ii. Pass Marks = Marks < 100 & Marks > 40
- c. Write suitable HTML code to create the following table on your web page.

Exam Results		
Index No	Course Code	Grade
AS2001	CSU1159	A
	PSU1161	D
	PSU1160	B

- d. Write suitable HTML code to generate the following list into your web page.

<ol style="list-style-type: none">1. Introduction2. Computer Science<ul style="list-style-type: none">• Computer Skills• Programming<ol style="list-style-type: none">1. C++2. Java• Graphics Design3. Physics4. Chemistry
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