



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2018/2019**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE  
SCHOOL OF ARTS AND SOCIAL SCIENCES WITH  
INFORMATION TECHNOLOGY**

**MAIN CAMPUS**

**UCI 102: COMPUTER COMMUNICATIONS SYSTEMS**

Date: 1<sup>st</sup> April, 2019

Time: 12.00 - 3.00 pm

**INSTRUCTIONS:**

- SECTION A: Attempt question ONE which is compulsory. Write ONLY the option (A,B,C,D or E) as appropriate
- SECTION B: Attempt any TWO questions (20 marks each)
- Start each question on a new page
- Mobile phones WHETHER ON OR OFF are prohibited in the Examination room





## SECTION A-Compulsory

### Question 1

#### SECTION A: COMPULSORY-30 MARKS

- i. If a computer in a network accesses resources that are shared by other computers it is called a
- A. server
  - B. client
  - C. receiver
  - D. sender
- ii. In computer communication systems, DSL stands for
- A. direct service lease
  - B. domain server link
  - C. distant service line
  - D. digital subscriber line
- iii. Network topology in which you connect each node to network along a single piece of network cable is called
- A. bus topology
  - B. ring topology
  - C. star topology
  - D. mesh topology
- iv. Computer software which combines audio and video application sharing over a communications network is known as
- A. teleconferencing software
  - B. data sharing software
  - C. project sharing software
  - D. Skype software
  - E. multimedia software
- v. The collection of documents stored on computers that are permanently connected onto the Internet is called
- A. Telnet
  - B. WWW
  - C. LAN
  - D. FTP
- vi. Each end of a bus in computer bus network topology is termed as
- A. node
  - B. switch
  - C. sensor
  - D. terminator
  - E. repeater



vii. Layer of computer OSI model which is concerned with addressing and routing is called

- A. network
- B. data link
- C. physical
- D. transport

viii. In computer, FTP stands for

- A. file transfer protocol
- B. finite telecommunication path
- C. file transfer path
- D. file transfer process

ix. Network in which every computer is capable of playing role of client, server or both at same time is called

- A. peer-to-peer network
- B. local area network
- C. dedicated server network
- D. wide area network

x. In computer, two dissimilar networks can be connected by a

- A. gateway
- B. bridge
- C. bus
- D. ring

xi. Layer of computer OSI model which performs data compression is

- A. network
- B. data link
- C. presentation
- D. physical

xii. If a computer in a network shares resources which can be accessed by other computers it is called a

- A. server
- B. client
- C. sender
- D. receiver

xiii. Which of following is a governing body that approves computer network standards?

- A. IEEE
- B. EIA
- C. ANSI
- D. all of these



xiv. To share a printer in a network you physically connect printer to a computer acting as a

- A. server
- B. client
- C. sender
- D. receive

xv. Layer of computer OSI model which furnishes electrical connections and signaling is known as

- A. application
- B. physical
- C. session
- D. network

xvi. Software application which is used for retrieving, presenting and traversing information resources on World Wide Web is called

- A. gateway
- B. EFT
- C. browser
- D. teleconferencing

xvii. Protocol that enables user to transfer data between computers that have different architectures and operating system is known as

- A. TCP/IP
- B. DoD
- C. PDN
- D. ISDN

xviii. In computer, FTP facility is used to

- A. transfer protocol
- B. transfer file
- C. connect to internet
- D. check PC

xix. A device which is used to connect two computers via an ordinary telephone line is

- A. ethernet card
- B. graphic card
- C. modem
- D. spend card

xx. Collection of related computer web pages is called

- A. http
- B. website
- C. portal
- D. Wikipedia
- E. browser



SECTION B-Attempt any TWO questions from this section

Question 2

- i. Using a well labelled diagram, discuss the OSI model, explaining the functions/services provided at each layer. (15 Marks)
- ii. Define the following terms as used in computer networks (5 Marks)
  - a. Media
  - b. Physical Topology
  - c. IP Address
  - d. Standard
  - e. End device

Question 3

- i. Explain the functions of each of the following on a network. (6 marks)
  - a. Router
  - b. Repeater
  - c. Gateway
- ii. Computer communications systems have revolutionized the way we learn. Discuss. (4 Marks)
- iii. In networking systems, a strong password is one way of enhancing security. Explain any four measures that can help improve password security. (8 Marks)

Question 4

- i. Illustrate a well labeled broadcast star topology and briefly explain its operation. (6 Marks)
- ii. Describe any four considerations that are necessary when selecting network topology (8 Marks)
- iii. One way of classifying networks is by topology. With the aid of simple diagrams briefly discuss the following topologies. (6 Marks)
  - a. Bus
  - b. Ring

Question 5

- i. Using a suitable diagram, discuss the elements of a basic communications model. (6 Marks)
- ii. In the context of computer communication systems, outline any THREE roles of:- (6 marks)
  - a. Protocols
  - b. Intermediary devices
- iii. Discuss any THREE ideal situations where you would opt for following network topologies. (6 marks)
  - a. Bus
  - b. Star
- iv. What is a protocol reference model? (2 marks)