



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Computing Skills  
Session:2022 (Winter Semester)  
B. Voc. Program, 1<sup>st</sup> Semester,  
1<sup>st</sup> In-Sem. Examination

Course Code: ITN 1101

Course Name: Introduction to Computer

Time: 1 Hour

Max. Marks: 20

## Section – A

05X01 = 05 Marks

**Q1. Which of the following is the fastest?**

- A) CPU
- B) Magnetic tapes and disks
- C) Video terminal
- D) Sensors, mechanical controllers

**Q2. The heart of a computer is \_\_\_\_\_.**

- A) CPU
- B) Memory
- C) I/O Unit
- D) Disks

**Q3. If you want to improve the performance of your PC, you need to upgrade the \_\_\_\_\_.**

- A) CPU
- B) Monitor
- C) Keyboard
- D) Printer

**Q4. Which of the following is not used as secondary storage?**

- A) semiconductor memory
- B) magnetic disks
- C) magnetic drums
- D) magnetic tapes

**Q5. Notebook PCs fall into a category of devices called \_\_\_\_\_.**

- A) Mobile computer
- B) Desktop computers
- C) Hybrid computers
- D) Tabulators



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – B

03X02 = 06 Marks

- Q1. What is a Computer Virus?**
- Q2. What is a Graphics card?**
- Q3. What is Computer explaining in short?**

## Section – C

03X03 = 09 Marks

- Q1. Explain high level, middle level and low level languages.**
- Q2. Explain the different types of Computer Hardware.**
- Q3. What is the difference between Supercomputer and Mainframe Computer?**

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**Section – A**

05X01 = 05 Marks

Q1. ANS: A

Q2. Ans: (A)

Q3. Ans: A

Q4. Ans: (A)

Q5. Ans: A

**Section – B**

03X02 = 06 Marks

**Q1. What is a Computer Virus?**

ANS: A computer virus is a type of malicious code or program written to alter the way a computer operates and is designed to spread from one computer to another. A virus operates by inserting or attaching itself to a legitimate program or document that supports macros in order to execute its code. In the process, a virus has the potential to cause unexpected or damaging effects, such as harming the system software by corrupting or destroying data.

**Q2. What is a Graphics card?**

Ans: A Graphics Card is a piece of computer hardware that produces the image you see on a monitor. The Graphics Card is responsible for rendering an image to your monitor, it does this by converting data into a signal your monitor can understand.

**Q3. What is Computer explain in short?**

Ans: A computer is a machine that accepts data as input, processes that data using programs, and outputs the processed data as information. Many computers can store and retrieve information using hard drives. Computers can be connected together to form networks, allowing connected computers to communicate with each other.

**Section – C**

03X03 = 09 Marks

**Q1. Explain high level, middle level and low level languages.**

**A high-level language** is any programming language that enables development of a program in a much more user-friendly programming context and is generally independent of the computer's hardware architecture.

**Middle Level :** Being a Middle level language it combines elements of high level languages with the functionality of assembly language. C supports data types and operations on data types in much the same way as higher level languages as well as allowing direct manipulation of bits, bytes, words and addresses as is possible with low level languages.

**A low-level language** is a programming language that provides little or no abstraction of programming concepts and is very close to writing actual machine instructions. Two examples of low-level languages are assembly and machine code.

**Q2. Explain the different types of Computer Hardware.**

**ANS:** Given below are the types of computer hardware:

**1. RAM**

RAM (Random Access Memory) is a type of computer hardware that is used to store the information and then process that information.

**2. Hard disk**

The hard disk is another type of computer hardware that is used to store the data in it. The hard disk can be pre-installed in CPU or can be used as an external device.

**3. Monitor**

For the computer hardware, the hardware is another device that is used to display the output, videos and other graphics as it is directly connected to the CPU. The video displayed by the monitor uses the video card.

**4. CPU**

CPU (Central processing unit) is the core hardware part of the computer system which is used to interpret and execute most of the commands using other computer parts i.e. software and hardware.

**5. Mouse**

It is a hand operator input device that is used to point something on the screen. The mouse can be wired or wireless.

**Q3. What is the difference between Supercomputer and Mainframe Computer?**

**Ans:** Let's see the difference between Supercomputer and Mainframe Computer:

- |  |   |
|--|---|
| 1. Supercomputers are used for large and complex mathematical computations.  | While Mainframe computers are used as a storage for large database and serve as a maximum number of users simultaneously.           |
| 2. Supercomputer's speed is more than Mainframe computer. It can execute billions of instructions within a second. | Mainframe computer's speed is comparatively less than Supercomputers. In this millions of instructions are executed simultaneously. |
| 3. Supercomputers are the largest computers.   | Mainframe computers are smaller than supercomputers in size.  |
| 4. Supercomputers are the most costly in the world.  | Mainframe computers are less costly than supercomputers.  |
| 5. In the present, the supercomputers have Linux and their variant operating systems.                              | While Mainframe computers can have multiple operating systems simultaneously.   |
| 6. Super computers are mostly purpose-built for one or a few specific institutional tasks.                         | Mainframe computers are built to handle a large variety of tasks.   |
| 7. Seymour Cray invents the Supercomputer.   | The first successful mainframe computer is invented by IBM.   |
| 8. Supercomputers can have a processing speed in the range of 100 to 900 MIPS.                                     | Whereas Mainframe computers can have a processing speed in the range of 3-4 MIPS to as high as 100 MIPS.                            |



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B. Voc. Program, 1<sup>st</sup> Semester (2022)  
1<sup>st</sup> In-Sem. Examination

Course Code: ITN1104

Time: 1 Hour

Course Name: Basics of Networking

Max. Marks: 20

Instruction: Attempt all questions

## Section-A

05X01 = 05 Marks

**Q.1 What is The Full Form of MAC address:**

- (A) Media Access Control
- (B) Metro Access Control
- (C) Metropolitan Access Control
- (D) Both A & B

**Q.2 What kind of transmission medium is most appropriate to carry data in a computer network that is exposed to electrical interference's?**

- (a) Unshielded twisted pair
- (b) Coaxial cable
- (C) Optical fiber
- (D) Microwave

**Q.3 Which one of the following is not a network topology?**

- (b) Star
- (b) Peer to Peer
- (C) Bus
- (D) Ring

**Q.4 Several computers linked to a server to share programs and storage space:**

- (A) Library
- (B) Grouping
- (C) Network
- (D) Integrated system

**Q.5 Which network is suitable for a building?**

- (A) LAN
- (B) MAN
- (C) WAN
- (D) PAN

**Section - B**

**03X02 = 06 Marks**

**Q.1 What is The Network.?**

**Q.2 What do you mean by network topology?**

**Q.3 Which are the different factors that affect the performance of a network?**

**Section - C**

**03X03 =09 Marks**

**Q.1 Define the 7 different layers of the OSI Reference Model.**

**Q.2 Explain different types of Network Technology.**

**Q.3 Explain**

**(A) NIC**

**(B) RJ-45**

**(C) MAC Address**



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1<sup>st</sup> In-Sem. Examination

ITN1104 Basic of Networking

## Answers

### Section-A

Q:1

Answer (A) Media Access Control

Q:2

Answer (C) Optical fiber

Q:3

Answer (B) Peer to Peer

Q:4

Answer (C) Network

Q:5

Answer (A) LAN

### Section-B

Q:1

Answer:

A group of two or more similar things or people inter connected with each other is called network

Q:2

Answer: Network topology specifies the layout of a computer network. It shows how devices and cables are connected to each other.

The types of topologies are:

1. Bus
2. Star
3. Ring
4. Mesh
5. Tree
6. Hybrid

Q:3

**Answer: Factors that affect the performance of networks**

- the number of devices on the network.
- the bandwidth of the transmission medium.
- the type of network traffic.
- the number of transmission errors.

### **Section-C**

**Q:1**

**Answer:**

**OSI Model Explained: The OSI 7 Layers**

**Physical Layer.**

**Data Link Layer.**

**Network Layer.**

**Transport Layer.**

**Session Layer.**

**Presentation Layer.**

**Application Layer.**

**7. Application Layer**

The application layer is used by end-user software such as web browsers and email clients. It provides protocols that allow software to send and receive information and present meaningful data to users. A few examples of application layer protocols are the Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), Post Office Protocol (POP), Simple Mail Transfer Protocol (SMTP), and Domain Name System (DNS).

**6. Presentation Layer**

The presentation layer prepares data for the application layer. It defines how two devices should encode, encrypt, and compress data so it is received correctly on the other end. The presentation layer takes any data transmitted by the application layer and prepares it for transmission over the session layer.

**5. Session Layer**

The session layer creates communication channels, called sessions, between devices. It is responsible for opening sessions, ensuring they remain open and functional while data is being transferred, and closing them when communication ends. The session layer can also set checkpoints during a data transfer—if the session is interrupted, devices can resume data transfer from the last checkpoint.

**4. Transport Layer**

The transport layer takes data transferred in the session layer and breaks it into “segments” on the transmitting end. It is responsible for reassembling the segments on the receiving end, turning it back into data that can be used by the session layer. The transport layer carries out flow control, sending data at a rate that matches the connection speed of the receiving device, and error control, checking if data was received incorrectly and if not, requesting it again.

### 3. Network Layer

The network layer has two main functions. One is breaking up segments into network packets, and reassembling the packets on the receiving end. The other is routing packets by discovering the best path across a physical network. The network layer uses network addresses (typically Internet Protocol addresses) to route packets to a destination node.

### 2. Data Link Layer

The data link layer establishes and terminates a connection between two physically-connected nodes on a network. It breaks up packets into frames and sends them from source to destination. This layer is composed of two parts—Logical Link Control (LLC), which identifies network protocols, performs error checking and synchronizes frames, and Media Access Control (MAC) which uses MAC addresses to connect devices and define permissions to transmit and receive data.

### 1. Physical Layer

The physical layer is responsible for the physical cable or wireless connection between network nodes. It defines the connector, the electrical cable or wireless technology connecting the devices, and is responsible for transmission of the raw data, which is simply a series of 0s and 1s, while taking care of bit rate control.

Q:2

Answer:

Network Technology : Introduction

Network technology defines the concepts on which any network is structured. This concept can be applied on any network on the basis of:

1. Transmission.
2. Scale.

Further, network technology on the basis of transmission can be done using point to point and multipoint concept.

Data exchange and transmission can be done using network technology.

- PAN ( Personal Area Network)
- LAN (Local Area Network)
- MAN (Metropolitan Area Network)

- WAN (Wide Area Network)

Q:3

Answer:

#### Ethernet Card Ethernet card (NIC)

It also known as Network Interface Card (NIC card in short) is a network adapter used to set up a wired network. It acts as an interface between computer and the network. It is a circuit board mounted on the motherboard of a computer as shown in The Ethernet cable connects the computer to the network through NIC. Ethernet cards can support data transfer between 10 Mbps and 1 Gbps (1000 Mbps). Each NIC has a MAC address, which helps in uniquely identifying the computer on the network.

#### RJ-45

RJ 45 or Registered Jack-45 is an eight-pin connector that is used exclusively with Ethernet cables for networking. It is a standard networking interface that can be seen at the end of all network cables. Basically, it is a small plastic plug that fits into RJ-45 jacks of the Ethernet cards present in various computing devices.

#### MAC Address

A MAC address also known as a media access control address is a unique 48 bit number identifier assigned to network interfaces.