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(2)

Q1 = Discuss six types of computers that are designed for use by a single person.

The computers which are designed to use by a single person are:

- i, Desktop Computers
- ii, Workstations
- iii, Notebook Computers
- iv, Tablet
- v, Handheld Computers
- vi, Smart phones.

## i - Desktop Computers:

A desktop computer is a computer designed for regular use at a single location or near a desk or table due to its size and power requirements. The most common configuration has a case that houses the power supply, motherboard, memory, and other electronic components.

## ii - Workstations:

A workstation computer is a personal computer that is designed to accomplish professional tasks. Unlike standard computers, workstations typically

have specialized components that were designed to handle heavy computational or graphical task.

### iii- Notebook Computers:

A notebook computer is a battery - or AC - powered personal computer generally smaller than a briefcase that can easily be transported and conveniently used in temporary spaces such as airplanes, libraries, meetings etc.

### iv- Tablet :

Tablet computer is a computer that is intermediate in size between a laptop computer and a smartphone. Early tablet computers used either a keyboard or a stylus to input information, but these methods were subsequently displaced by touch screens.

### v- Hand-held Computers :

A hand-held computer is a computer that can conveniently be stored in a pocket and used while you are holding it. They are also called PDA (Personal Digital Assistant).

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## iv. Smartphones:

Smartphones are the computers which can perform many of the functions of a computer, typically having a touchscreen interface, internet access and an operating system capable of running downloaded apps.

Q2 = Most standard keyboards include six major groups of keys. List them.

The six major groups of keys are given below:

### 1- Alphanumeric Keys:-

The area of a keyboard that looks

- like a typewriter's keys, are arranged the same way on almost every keyboard. Sometimes this common arrangement is called QWERTY.

### 2 - The Modifier Keys:-

The SHIFT, ALT and CTRL keys are called modifier keys because they modify the input of other keys. For example, if you press the J key, you input a small letter j. But if you hold down the SHIFT key while pressing the J key, you input a capital J.

### 3 . The Numeric Keypad:-

The numeric keypad is usually located on the right side of the keyboard. It looks like a calculator.

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lator, with 10 digits and mathematical operators (+, -, \*, /).

#### 4- The Function Keys:

The function keys, which are labeled F1, F2 and so on, are usually arranged in a row along the top of the keyboard. Each function key's purpose depends upon the program you are using.

#### 5- Cursor-Movement Keys:

Most standard keyboards also include a set of cursor-movement keys, which let you move around the screen without using a mouse.

#### 6- Special Purpose Keys:

Special purpose keys perform a specific functions. These key include the START key and SHORTCUT key.

Start key features the Windows logo, open the start menu on most computers.

Shortcut key features the image of a menu, open an onscreen shortcut menu in Windows-based applications programs.

Q3 Describe the variants of the mouse.

### Variants of Mouse:

#### Trackballs:

A trackball is a pointing device that works like an upside-down mouse. You rest your index finger or thumb on an exposed ball, then place your other fingers on the buttons. To move the pointer on the screen, you roll the ball. Trackballs gained the popularity with the advent of laptops.

#### Trackpads:

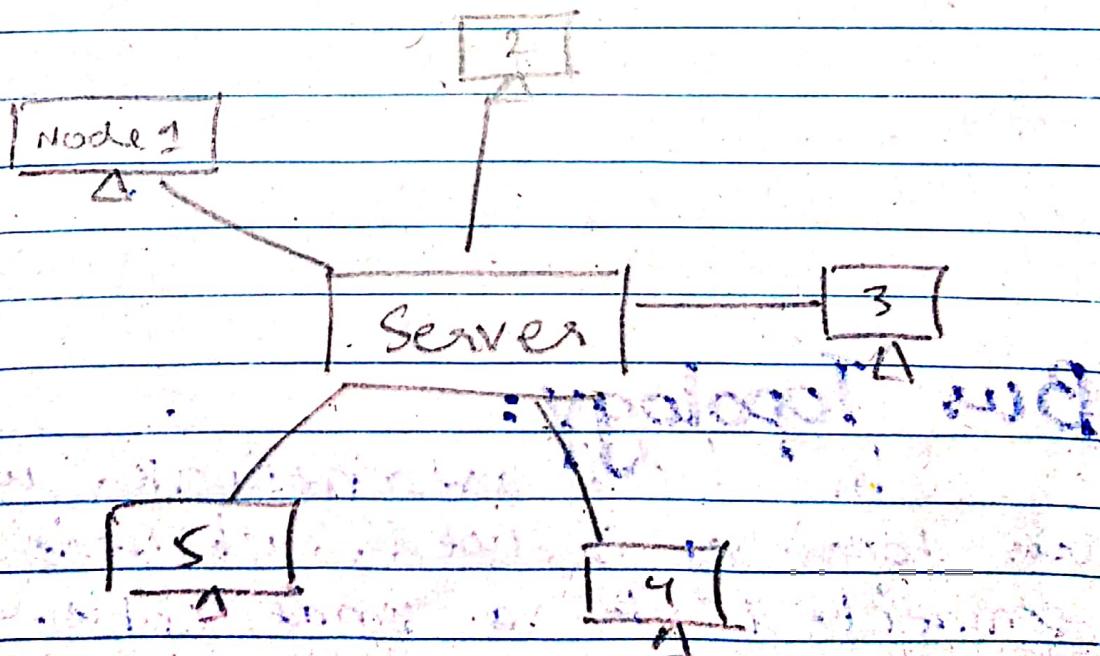
The trackpad is a stationary pointing device that many people find less tiring to use than a mouse or trackball. Trackpads include two or three buttons that perform the same functions as mouse button. Some trackpads are also "strike sensitive" meaning you can tap the pad ~~by~~ with your fingertip instead of using its button.

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Q4: Describe the two different Network Topologies.

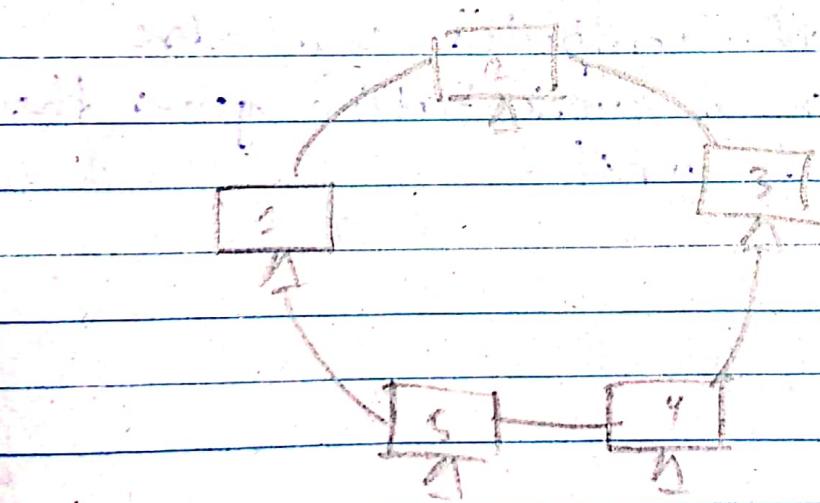
## Star Topology:

A star network is a local area network (LAN) in which all nodes are directly connected to a common central computer (server). Every workstation is indirectly connected to every other through the central computer. In some star networks, the central computer can also operate as a workstation goes through the central unit.



## Ring Topology:

In Ring Topology, all the nodes are connected to each other in such a way that they make a closed loop. Each workstation is connected to two other components on either side, and it communicates with these two adjacent neighbours. Data travels around the network in one direction.

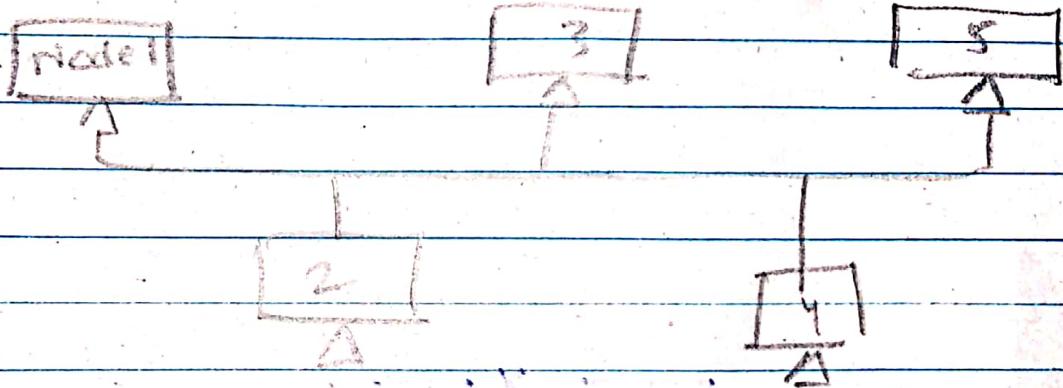


## Bus Topology:

In local area network, where bus topology is used, each node is connected to a single cable. Each computer or server is connected to the single bus cable. A signal from

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the source travels in both directions to all machines connected on the bus cable until it finds the intended recipient. They are initially less expensive than other topologies.

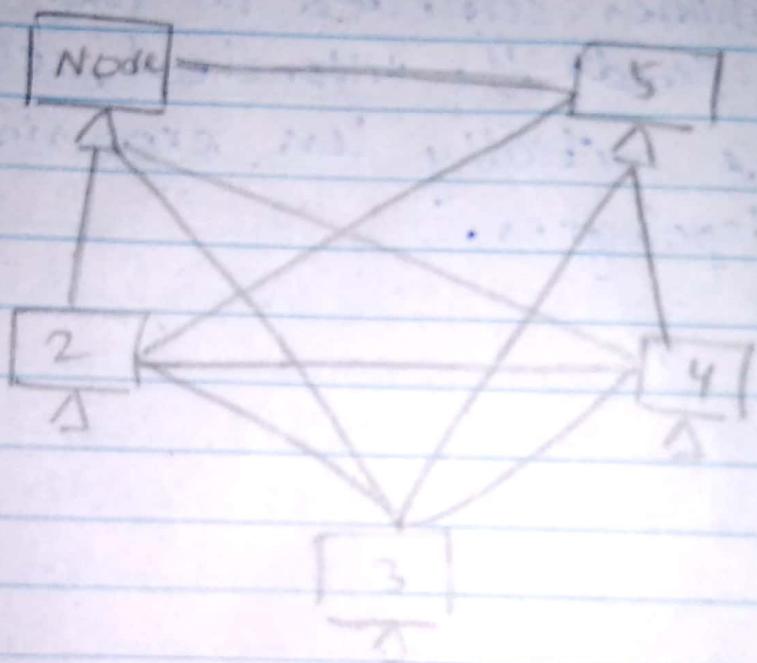


## Mesh topology:

A mesh topology is a network setup where each computer and network device is interconnected with one another. This topology setup allows for most transmissions to be distributed even if one of the connections goes down. This topology manages high amount of traffic, because multiple devices can transmit data simultaneously.

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## Mesh Topology



Explain mesh

Q5: Describe, with examples, impact and non-impact printers.

## Impact Printers:-

Impact printers work like a typewriter. They print by making physical contact of ribbon against paper and may produce carbon copies. They produce much noise and are called noisy printers. For example:

- i, Daisy-wheel Printers
- ii, Dot-Matrix Printers.
- iii, Chain Printers.

### i, Dot-Matrix Printers:-

Dot-Matrix printers are printers that write using one or two columns of tiny dots on a print head. The dot hammer moves serially across the paper. It lies on inked-ribbon and creates image on paper.

### ii, Daisy Wheel:-

It uses a mechanism that uses any kind of hub(wheel) having a set of spokes at the margin of

the hub. When the wheel is turned and the required character is aligned to the print hammers, the character is then struck into a ribbon and onto a paper with the hammers.

### iii) Chain Printers:

It uses a mechanism that uses character typefaces linked together in a chain. This printer is not commonly found around microcomputers, because they are very expensive.

### Non-Impact Printers:

Non-Impact printers are the printers that print without making contact with the paper. They are faster and noisier printers. They include:

#### i, Ink-Jet Printers:

Ink-jet is a printer mechanism that sprays one or more color of ink at high speed onto the paper and produce high-quality printing with cost is low.

## ii) Laser Printer:

A laser printer is a printer that uses the electrophotographic method used on a copy machine. The printer uses a laser beam light source to create images on a photographic drum. Then the images on the drum are treated with a magnetically charged toner and then are transferred onto a paper.

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