

COMPUTER SCIENCE NOTES FOR 7TH CLASS (FOR ISLAMABAD)

Unit 1

ICT FUNDAMENTALS

Solution to Exercise

Q.1: Multiple choice questions:

1. System unit is the casing that contains following electronic components of computer system.

- a. Motherboard, power supply, RAM, CPU
- b. Keyboard, Monitor, Touchpad, CD
- c. Printer, Scanner, Joystick, HDD
- d. Motherboard, Display screen, Speaker, Projector

2. Which of the following is volatile memory?

- a. Optical Memory
- b. Read Only Memory
- c. Random Access Memory
- d. Flash Memory

3. Which of following is permanent memory?

- a. Read Only Memory
- b. Register
- c. Random Access Memory
- d. Cache Memory

4. Identify the correct order of memory units:

- a. TB>MB>GB>KB
- b. MB>GB>TB>KB
- c. TB>GB>MB>KB
- d. GB>MB>KB>TB

5. Which device is used to input audio into the computer?

- a. Mouse
- b. Webcam
- c. Microphone
- d. Scanner

6. The device used to obtain text, images and graphics on paper is:

- a. Monitor
- b. Printer
- c. Scanner
- d. Keyboard

7. The device used to stream live video in real time is:

- a. Printer
- b. Microphone
- c. Scanner
- d. Webcam

8. Which technology uses fingerprint for identification purpose?

- a. Robotics
- b. Vision Enhancement
- c. Biometrics
- d. Virtual Reality

9. Which technology is related with creation of computer systems that behave like humans?

- a. Virtual Reality
- b. Artificial Intelligence
- c. Biometrics
- d. Augmented Reality

10. A computer that accesses the shared resources of a server is called:

- a. Personal Computer
- b. Server
- c. Client
- d. Remote Computer

11. The device used for authentication is:

- a. Microphone
- b. Biometric
- c. Switch
- d. Multimedia

12. _____ is technical innovations that represent new developments within particular fields.

- a. Information Technology
- b. Emerging Technology
- c. New Technology
- d. Virtual Reality

❖ **Short response questions:**

Q. 1: What is system unit?

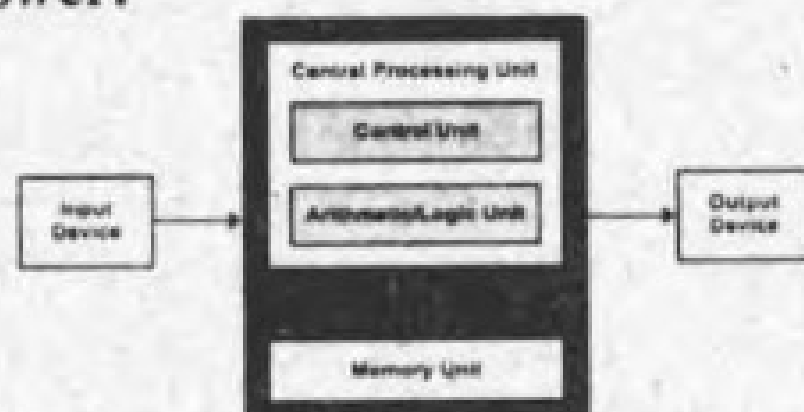
Answer: A system unit is the part of a computer that houses the primary devices that perform operations and produce results for complex calculations. It includes the motherboard, CPU, RAM and other components, as well as the case in which these devices are housed.

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This unit performs the majority of the functions that a computer is required to do.

Q. 2: Draw a block diagram of a computer.

Answer:



Q. 3: State the use of any two ports that are used to connect external devices.

Answer:

HDMI (High Definition Multimedia Interface) is a specification that combines video and audio into a single digital interface.



A card reader is a small plug and play device that can read and write to a memory card or memory stick.



Q. 4: What is artificial intelligence?

Answer: Artificial Intelligence is the branch of computer science concerned with the use of computer systems to solve real world problems that need human intelligence to solve.

Q. 5: Differentiate between RAM and ROM.

Answer:

RAM	ROM
RAM stores operating system,	ROM contains programs used for

application programs, and data in use.

Data in RAM can be modified.

RAM is volatile memory.

Types of RAM:

- Static RAM
- Dynamic RAM

booting up the computer and BIOS.

Data in ROM cannot be modified.

ROM is non-volatile memory.

Types of ROM:

- PROM (Programmable ROM)
- EPROM (Erasable PROM)
- EEPROM (Electrically Erasable PROM)
- UVEPROM (Ultra Violet Erasable PROM)

Q. 6: What type of tasks can be performed by robots?

Answer: Robotics deals with the design, operation and application of robots to perform tasks done traditionally by human beings. Robots are widely used in automobile manufacturing, packaging, medical, laboratory research and cleaning home, space exploration, surgery, weaponry, etc.



Q. 7: Define peripherals with the help of examples

Answer: All the input and output devices of a computer are known as peripheral. Commonly used peripheral devices are keyboard, mouse, scanner, printer, display screen etc.

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Q. 8: Write down the use of a scanner.

Answer: A scanner is a device usually connected to a computer. Its main function is to scan or take a picture of the document, digitize the information and present it on the computer screen.



Scanner

Q. 9: What is the purpose of using a multimedia projector?

Answer: Using a multimedia projector, you can show a DVD, video, slide show or television program on a large screen with color and sound. Multimedia projectors allow for presentations that can be used for work functions, classroom instruction or enjoyment of films and television at home.



Multimedia Projector

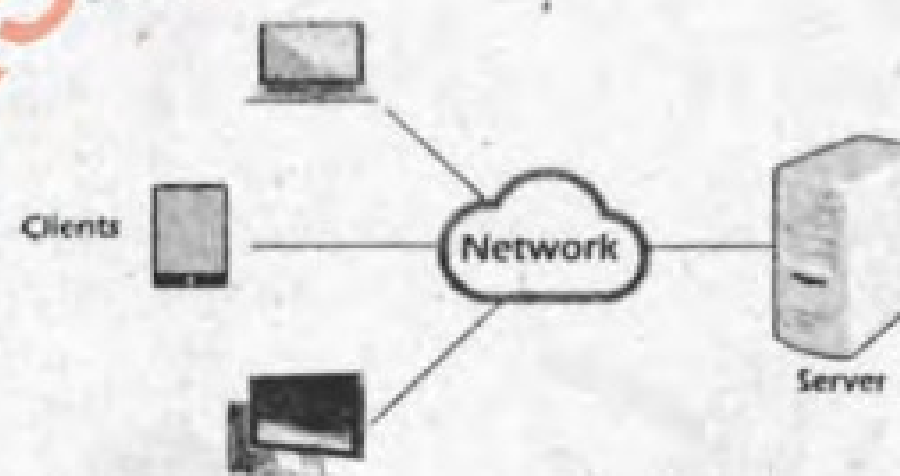
Q. 10: Differentiate between server and client.

Answer:

Client: A client can be a device or a machine. A client program runs on the local machine, requesting service from the server. A client program is a finite

program means that the service is started by the user and terminates when the service is completed. For instance, web browser. A client device is a machine that the end-user uses to access the web. Examples of clients are smartphones, desktops, laptops, etc.

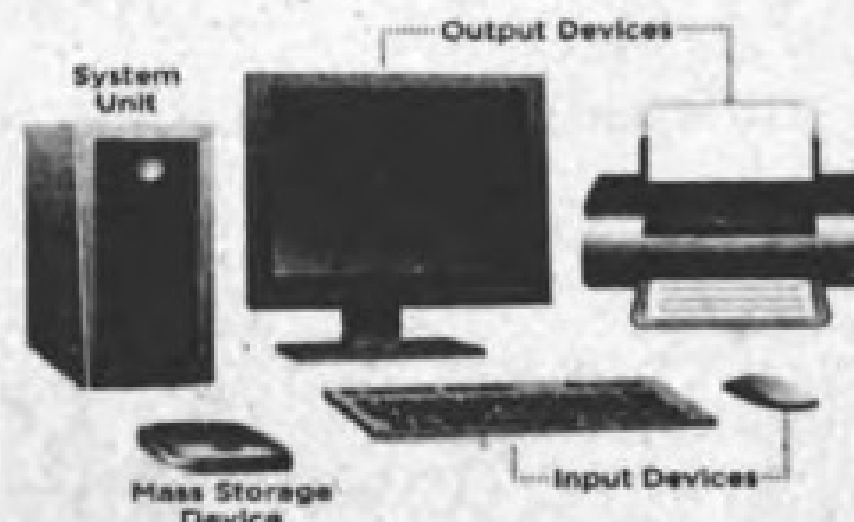
Server: A server is like a computer program, which is used to provide functionality to other programs. It can be any computerized process called by a client to distribute the work and share the resources. It receives and responds to requests made over a network. Server receives the request from the client for a web document, and it sends the requested information to the client's computer.



Some Extra Questions/Answers

Q. What is Computer?

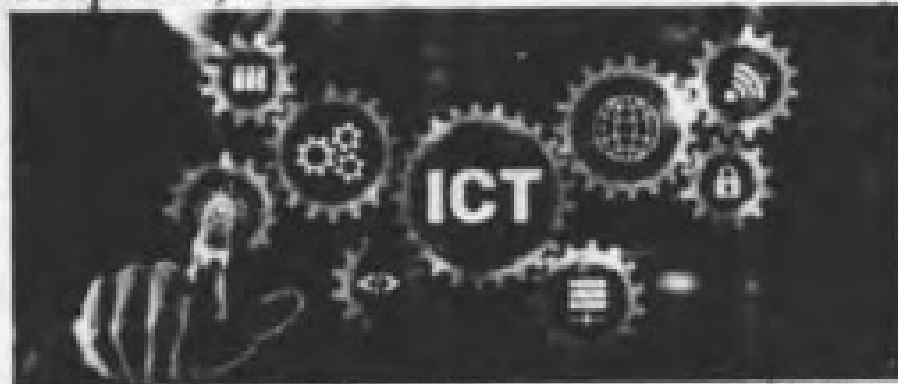
Answer: "It is an electronic machine which accepts data as input, processes it into useful information, store and retrieves it in an accurate way for the future use."



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Q. Define ICT.

Answer: Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. ICT devices have become an integral part of our daily life. We can find them almost everywhere, at school, hospital, homes, shopping malls, workplace, etc.



Q. What are the daily usage of ICT?

Answer: Information and Communication Technology has changed the way people live their everyday life. It has changed the way we communicate and perform day-to-day tasks. Information Technology is used daily in business, commerce, banking, transportation, industries and education. ICT devices help people live their lives more conveniently.



Q. Define virtual reality.

Answer: Virtual Reality (VR) is a computer-generated environment with scenes and objects that appear to be real,

making the user feel they are immersed in their surroundings.



Q. What are the uses of machine learning?

Answer: Uses of machine learning are Image Recognition, Voice Recognition, Predictions, Videos Surveillance, Social Media Platform, Spam and Malware, Customer Support etc.



Q. Define vision enhancement.

Answer: Vision enhancement is used to help people to see objects better by using zoom facilities or enlarged text e.g. night vision goggles can send images to ICT devices to be processed and enhanced.

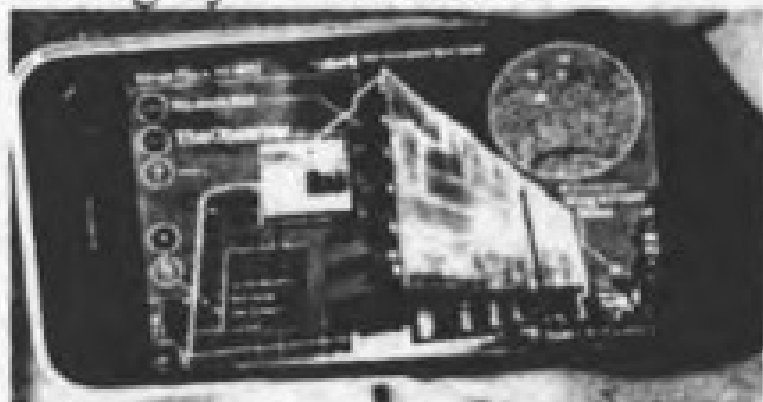


Q. Define augmented reality.

Answer: Augmented reality enhanced or augments our experience of the world around us. It is not a simulation of reality rather it superimposes digital information over a natural existing

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environment. For example, weather forecasting by TV channels.



Q. Define cloud storage.

Answer: Cloud storage is a cloud computing model in which data is stored on remote servers accessed via the Internet or cloud. It works through data center vitalization, providing end-users and applications with virtual storage.



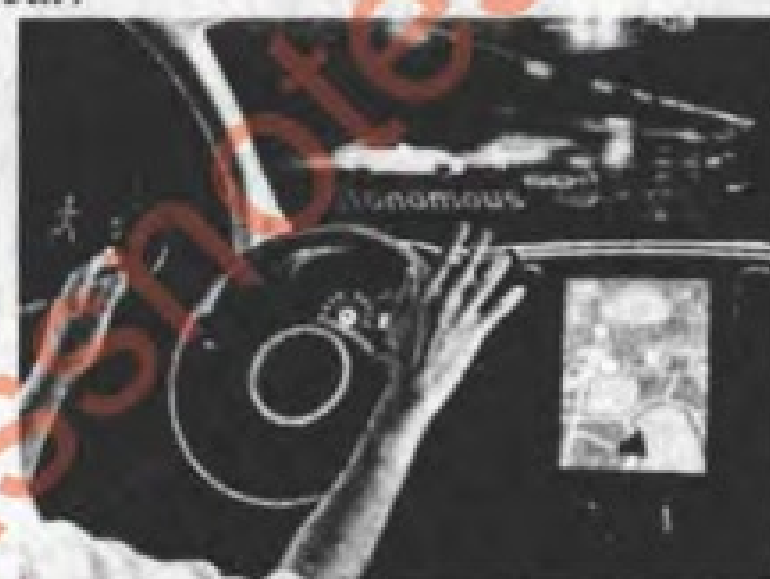
Q. Define 3D printing.

Answer: 3D printing, in full three-dimensional printing, in manufacturing, any of several processes for fabricating three-dimensional objects by layering two-dimensional cross sections sequentially, one on top of another. It can be done in a variety of processes in which material is deposited, joined, or solidified under computer control, with the material being added together, typically layer by layer.



Q. What do you know about self-driving cars?

Answer: Self-driving cars use technology to replace driver assistance with automated safety features to navigate roads. A mixture of sensors, software, radar, GPS, laser beams and cameras monitor road conditions to operate and navigate an autonomous vehicle. The car actuators control the steering, braking, speed and parking of the car.



Q. What is meant by open-source software?

Answer: Open-source software is computer software that is released under a license in which the copyright holder grants users the rights to use, study, change, and distribute the software and its source code to anyone and for any purpose. Open-source software may be developed in a collaborative public manner.



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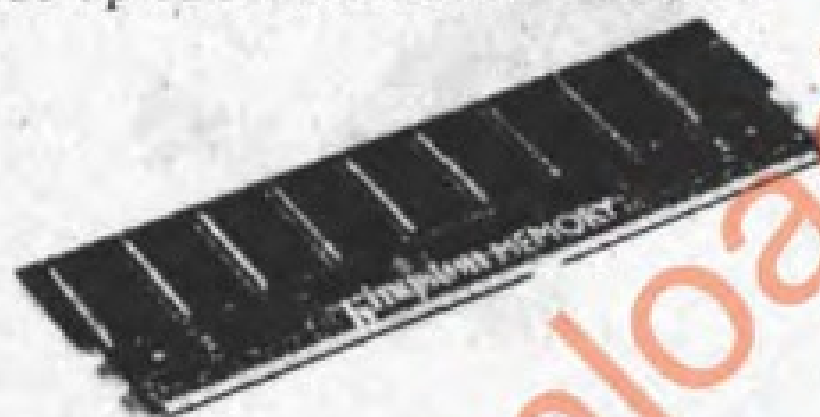
Q. Draw a table for units of computer memory measurement.

Answer:

1 Bit	= Binary Digit
8 Bits	= 1 Byte
1024 Bytes	= 1 KB (Kilo Byte)
1024 KB	= 1 MB (Mega Byte)
1024 MB	= 1 GB (Giga Byte)
1024 GB	= 1 TB (Terra Byte)
1024 TB	= 1 PB (Peta Byte)
1024 PB	= 1 EB (Exa Byte)

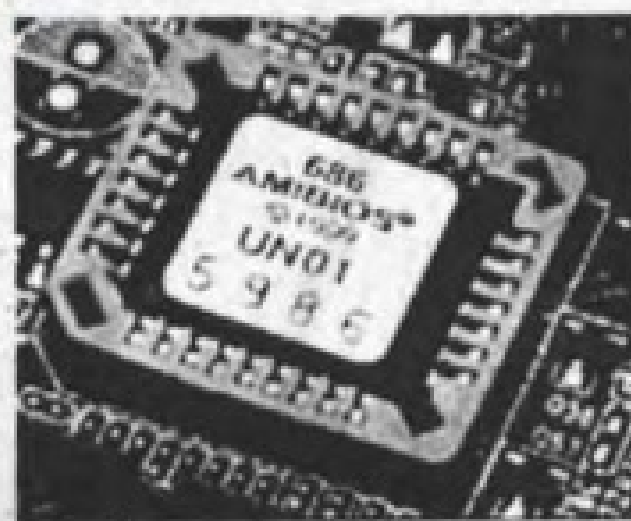
Q. Define RAM.

Answer: Random Access Memory: RAM is read/write memory it holds only those data and instructions on which computer is currently working. RAM is also known as volatile memory. It has limited capacity and data is lost when power is switched off. It is generally made up of semiconductor device.



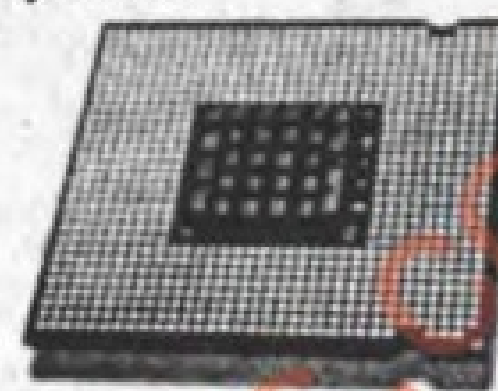
Q. Define ROM.

Answer: Read Only Memory: ROM is a permanent memory; once data has been written onto a ROM it cannot be removed. It is fixed on motherboard of a computer system. It is also called a non-volatile memory and data is not lost when power is switched off.



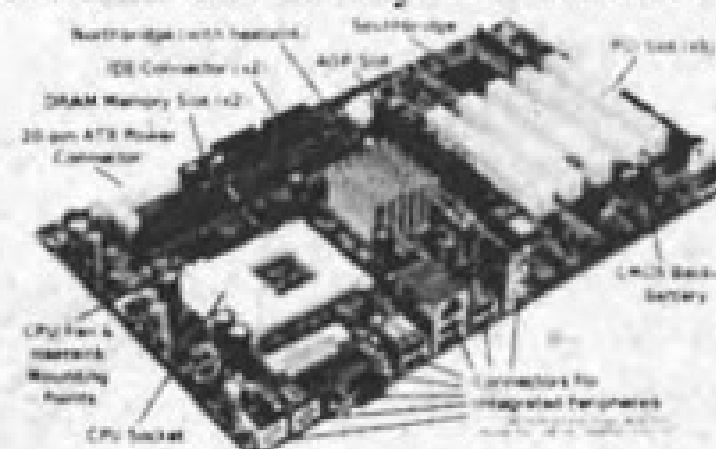
Q. What is CPU?

Answer: The main unit inside the computer is the system unit or Central Processing Unit (CPU). It is the brain of computer system.



Q. What is Motherboard?

A motherboard is the piece of computer hardware it is most essential part of a computer that can be thought of as the "backbone" of the computer system. All devices are attached with motherboard. It allows all components of computer to communicate with each other. It is also called Main board/ System board.



Q. Differentiate between input devices and output devices.

Answer:

Input Devices	Output Devices
The devices which are used to input the data and programs in the computer are known as "Input Devices". Commonly used	Output device used to show the final results of data processing into human understandable form. Commonly used output devices

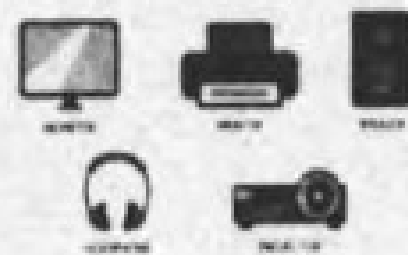
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input devices are following:
Keyboard, Mouse, Scanner, etc.



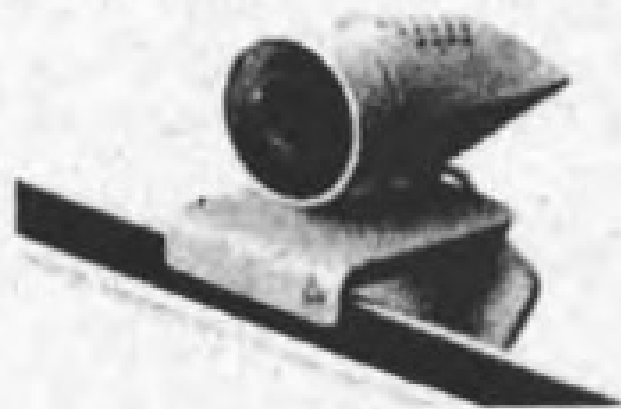
are following:
Monitor, Printer, Speakers, etc.

OUTPUT DEVICES



Q. Write the uses of webcam.

Answer: Webcam is a video camera; it is an input device used to stream live video in real time. It is also used in online meeting, video conferencing and online learning.



Q. What is transmission media?

Answer: Transmission Media is the channel or pathway through which the data or information is transferred from one place to another in a computer network. Networks are connected by wired or wireless transmission medium. The transmission media used with wired computer networks are twisted-pair cable, coaxial cable,



fiber-optic cables etc., whereas satellite, microwaves and WiFi (wireless fidelity) are commonly used for wireless computer networks.

Q. List different connecting devices.

Answer: NIC, Switch, Router, WAP (Wireless Access Point).

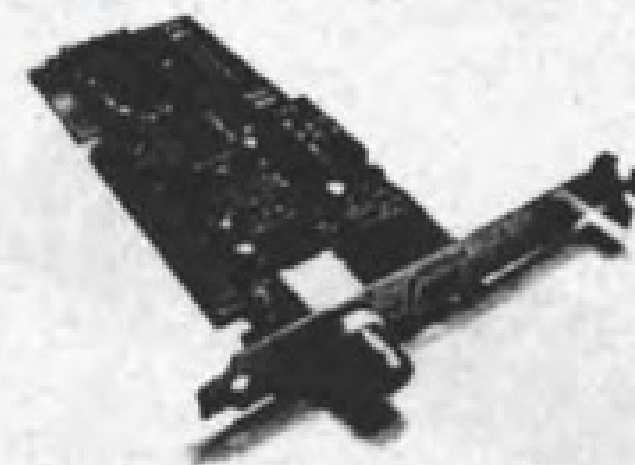


Q. What are the functions of NIC?

Answer:

The important functions of NIC are:

- To send the data to another host.
- To receive the incoming data and translate it into machine language.
- To prepare data from the computer for the network cable.
- To control the flow of data.



Q. Define Wireless Access Point (WAP).

Answer: A Wireless Access Point (WAP) is a networking hardware device that allows other Wi-Fi devices to connect to a wired network.

