



पुर्णा International School

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CLASS - IV

COMPUTER

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INDEX

SR.NO	SUBJECT	PAGES
1	Ch- 1 History of Computers (April) / {May}	Pg.no:- 7
2	Ch- 2 Input and Output Devices { June}	Pg.no:- 14
3	Ch - 3 Computer Memory and Storage { June}	Pg.no:- 24

1. HISTORY OF COMPUTERS

➤ Keywords

1. **Mechanical Device** - A device that is operated by hand or uses power from an engine.
2. **Electronic Device** - A device that runs on electricity and has many small parts.
3. **ENIAC** - Electronic Numerical Integrator and Computer
4. **Vacuum tubes** - An electronic component

EXERCISE CORNER

A. Tick (✓) the correct answer: -

1. Which was the first mechanical calculating device?
a. Napier Bones b. Pascal Adding Machine c. **Abacus**
2. In which of the following was the concept of punched cards used?
a. Pascaline b. Napier's bones c. **Jacquard Loom**
3. Which of the following was invented by Babbage?
a. Loom b. **Analytical Engine** c. Mark 1
4. Which of the following was the first electronic computer?
a. Mark I b. UNIVAC c. **ENIAC**
5. In which year was the first UNIVAC computer delivered to US Census Bureau?
a. 1944 b. 1946 c. **1951**

B) Fill in the blanks. Compare your answers with your classmates' answers:-

Information	dials	large	arithmetic	IPO	small
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1. Early means were helpful to count **small** numbers only.

2. An abacus could count **large** numbers and perform arithmetic calculations.
3. In Pascaline, **dials** were moved clockwise to enter numbers for calculations.
4. A punched card was a piece of paper that could store **information** for doing calculations.
5. The Analytical Engine was based upon the concept of **IPO (Input-Process- output) .**

C) State 'True' or 'False':-

1. Calculations are done on an abacus by sliding beads across the rods. **T**
2. Pascaline is known as the first gear - driven calculator. **T**
3. Mark 1 was developed for Army Ordnance to computer World War II ballistic firing tables. **F**
4. Apple II was the first personal computer with colour monitor. **T**
5. Mark 1 was the first electromechanical computer. **T**

D) Answer the following questions: -

Q1) What is abacus?

Ans: -Abacus is the first mechanical device, developed by the Chinese around 5000 years ago .

Q2) Describe punched card?

Ans:-A punched card was a piece of paper that could store information for during calculations.

Q3) What does IPO stand for?

Ans:-IPO stands for Input - Process - Output cycle .

Q4) In which year was Pascaline developed?

Ans:-Pascaline was developed in 1642.

Q5) Mark 1 was the first electromechanical computer?

Ans:-Charles Babbage is known as the 'Father of Computer' .

E) Long answer questions: -

Q 1) Describe any two early developments?

Ans:- i. **Abacus** : It was the first mechanical calculating device used for counting large numbers and doing arithmetic calculations.

ii. **Napier's Bones** : It was a manually operated calculating device used to perform multiplications.

Q 2) Why is Charles Babbage known as the 'Father of Computer'?

Ans: - The present-day computer took shape from the designs of Charles Babbage, so Babbage is known as the 'Father of Computer'.

Q 3) Write notes on the following: -

Ans: - a. **Mark 1** - It was the first electromechanical computer. It was huge and heavy. It consisted of about 750,000 different part .

b. **ENIAC** - It stands for Electronic Numerical Integrator and Computer. It was the first electronic general-purpose computer. It was faster than the Mark-I .

c. **UNIVAC** - It stands for Universal Automatic Computer. It was the world's first commercially available computer.

Brain teaser

➤ Expand the following terms: -

1. ENIAC - Electronic Numerical Integrator and Computer

2. UNIVAC - Universal Automatic Computer

3. IPO - Input-Process-Output

2. INPUT AND OUTPUT DEVICES

➤ Keywords

1. **Barcode** - A code in the form of a pattern of parallel lines of varying widths.
2. **OCR** - The technology that converts scanned documents into editable files.
3. **OMR** - The technology that recognizes pre-specified type of marks made by a person on the OMR sheets.
4. **MICR** - A device that recognizes data printed with magnetically – charged ink.

EXERCISE CORNER

A. Tick (✓) the correct answer:-

1. Which of the following is NOT an input device?
a. touchpad b. **projector** c. MICR
2. What does OCR stand for ?
a. **Optical Character Recognition**
b. Oriented Character Recognition
c. Jacquard Loom
3. A plotter prints on paper by using _____?
a. a stylus b. pencils c. **pens**
4. Which of the following is an output device?
a. projector b. laser printer c. **both a and b**

B) Fill in the blanks. Compare your answers with your classmates' answers:-

Picture	barcode	biometric	projection	MICR	typeface
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1. A **barcode** is a pattern of parallel lines of varying widths printed on different products.

2. OCR does not treat the text as **picture**.
3. A projector projects an image (or moving images) into a large surface known as **projection** screen.
4. The MICR technology recognizes the data printed in the **MICR type face**.
5. A **biometric** device uses fingerprint, facing scans or voice recognitions to identify users.

C) Short answer questions:-

1. What are input devices?

Ans:- **The devices that are used to enter instructions into the computer are called input devices .**

2. What are the full forms of OCR and OMR?

Ans:- **OCR- Optical Character Recognition**

OMR- Optical Mark Recognition

3. Give names of any two output devices?

Ans:- **Mouse, Keyboard** .

4. Give names of any two output devices?

Ans: - **Monitor, Printer**

5. List names of any two non- impact devices?

Ans:- **Inkjet, Laser**

6. What are impact printers?

Ans:- **An impact printer makes contact with the paper. It usually forms the print image by pressing an inked ribbon against the paper using a hammer or pins.**

7. What is ALU?

Ans:- **The ALU is a part of CPU which does all the arithmetic calculations and takes logical decisions.**

8. What is CU?

Ans:- **The CU is a part of CPU which controls all the operations carried out on a computer.**

D) Long answer questions:-

Q1) What is a scanner? Describe its types.

Ans:- A scanner allows you to scan information printed on paper or some other media. The types of scanner are:

a. Flatbed scanner- It is great for scanning the occasional newspaper articles, book chapter or photographs.

b. Hand-held scanner- It is moved by hand over the information which is to be scanned.

Q2) Distinguish between impact and non-impact printers. Give examples of each?

Ans:- **Impact printer** - It makes contact with the paper and forms the print image by pressing an inked ribbon against the paper using a hammer or pins. For e.g. Dot-Matrix Printer, Daisy Wheel printer .

Non-Impact printer - It does not make contact with the paper. It prints without the use of a striking device to hammer against the paper to produce characters. For e.g. laser printer, inkjet printer.

Brain teaser

➤ Write the following devices under correct headings:-

INPUT DEVICE	OUTPUT DEVICE	INPUT DEVICE	OUTPUT DEVICE
Keyboard	monitor	Touchpad	plotter
Scanner	speaker	Touch screen	projector
OCR	GPS	webcam	printer
Light pen	headphones	microphone	Sound card

3 COMPUTER MEMORY AND STORAGE

➤ Keywords

1. **Bit** - The smallest amount of data.
2. **Volatile memory** - It requires power to maintain the stored information.
3. **Non-Volatile memory** - It does not require power to maintain the stored information.
4. **Magnetic storage media** - It uses magnetic material to store data.

EXERCISE CORNER

A. Tick (✓) the correct answer: -

1. 1024 bytes = _____
a. 1 MB b. 1 GB c. **1 KB**
2. Which of the following is an optical storage media?
a. hard disk b. **CD** c. RAM
3. Which of the following stores high definition videos?
a. CD b. DVD c. **Mark 1**
4. The CPU directly retrieves information or data from the _____?
a. hard disk b. CD c. **RAM**
5. Which of the following is a secondary storage device?
a. ROM b. cache c. **hard disk**

B) Fill in the blanks. Compare your answers with your classmates' answers: -

1024 secondary memory primary memory hard disk bit

1. A **hard disk** can store 2 TB to 5 TB data.
2. The **primary** memory comprises of RAM and ROM.

3. The **secondary** memory is also known as auxiliary storage.

4. One GB is equal to **1024 MB**.

5. Individually, a binary number is known as **bit**.

C) State 'True' or 'False':-

1. RAM is faster than secondary storage devices.

T

2. Bits and bytes are units of computer memory.

T

3. A portable hard disk is generally used for taking back-up

F

4. The instructions that are written into ROM cannot be altered.

T

D) Match the columns:-

Column A

1. 1 MB
2. Pen drive
3. ROM
4. Operating system
5. Hard disk

Column B

- a. Magnetic secondary storage
- b. 1024 KB
- c. Secondary memory
- d. Primary memory
- e. Loaded into the main memory

- 5**
- 1**
- 2**
- 3**
- 4**

E) Short Answer questions: -

Q1) What is a bit?

Ans: - **Bit is the smallest amount of data in a computer. It has a single binary value, either 0 or 1.**

Q2) What is machine language?

Ans: - **A machine language consists of binary digits, i.e. 0 and 1. A computer understands and stores, data and information in the form of machine language (i.e. 0 and 1) .**

Q3) Write types of RAM?

Ans: - **Static RAM (SRAM), Dynamic RAM (DRAM) .**

Q4) What is computer memory?

Ans:- **A storage space where data and instructions are stored either for processing or the further use is called computer memory .**

Q5) What is storage devices?

Ans: - **The maximum amount of data that can be stored in a computer is called its storage capacity.**

Q 6) Describe cache memory.

Ans: - **Cache memory is an extremely fast memory type that acts as a buffer between RAM and the CPU. It is used to reduce the average time to access data from the Main memory**

E) Long answer questions: -

Q 1) What is primary memory? Describe RAM and ROM?

Ans:- **A primary memory is also known as the main memory or internal memory of a computer which is in built memory of a computer in which data and instructions are stored for processing.**

RAM - Random Access Memory holds the data and instructions on which computer is currently working.

ROM - Read Only Memory, information can only be read from this type of memory. One data is written on ROM, it cannot be changed or altered.

Q 2) Describe secondary memory?

Ans:- **A secondary memory is also called auxiliary memory or external memory. It stores the large amount of data permanently until someone deletes it purposely. A secondary memory is important for a computer because the internal memory has less capacity to store data.**

Q 3) Define the following:-

Ans:- a. **Hard Disk- A hard disk is a type of magnetic secondary storage media. It is the main secondary storage for the computers. It can store upto 2 TB to 5 TB data**

b. **Pen drive- It is also known as flash drive. It is portable and used to store large amount of information. Its storage capacity varies from 1 GB to 256 GB.**

c. **CD- It is a type of secondary storage media. It is circular in shape and small in size. It is portable. It can store around 700 MB data.**