C.O.M.P.U.T.E.R.[COMPUTER FUNDAMENTALS]

👉 Common, Operating, Machine, Purposely, Used, for Technological, and Educational, Research

Definition :

English: A computer is an electronic device that accepts data, processes it, and produces information.

Hindi: कंप्यूटर एक इलेक्ट्रॉनिक उपकरण है जो डेटा को इनपुट के रूप में लेकर प्रोसेस करता है और सूचना देता है।

Explanation:

Computer works on IPO cycle – Input → Process → Output.

2. IPO Cycle (आईपीओ चक्र)

Definition:

IPO cycle shows the working process of a computer.

Steps (3):

1. **Input – Data is entered**
2. **Process – Data is processed**
3. **Output – Result is displayed**

Input → Process → Output

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3. Characteristics of Computer (कंप्यूटर की विशेषताएँ)

Definition:

Characteristics are special features of a computer.

Total Characteristics: 6

1. **Speed (गति): Performs tasks very fast**
2. **Accuracy (सटीकता): Gives correct results**
3. **Diligence (थकान रहित): Never gets tired**
4. **Storage (संग्रह): Stores large data**

5. **Automation (स्वचालन): Works automatically**
6. **Versatility (बहुउपयोगी): Used in many fields**

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4. Computer System Components (कंप्यूटर के घटक)

Definition:
Computer system consists of different units working together.
Components (4):

1. **Input Unit**
2. **CPU**
3. **Output Unit**
4. **Storage Unit**

Input → CPU → Output
↓
Storage

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5. Input Devices (इनपुट डिवाइस)

Definition:
Input devices are used to enter data into computer.
Examples

Keyboard, Mouse, Scanner, Microphone, Webcam, Joystick, Light Pen, Touch Screen

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6. Output Devices (आउटपुट डिवाइस)

Definition:
Output devices show processed information.
Examples
Monitor, Printer, Speaker, Headphone, Plotter, Projector

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7. CPU – Central Processing Unit

Definition:
CPU is the brain of the computer.
Parts of CPU (3):

1. **ALU: Performs arithmetic and logical operations**
2. **Control Unit: Controls all computer operations**
3. **Registers: Stores temporary data**

CPU
├— ALU
├— Control Unit
└— Registers

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8. Memory (मेमोरी)

Definition:
Memory stores data, instructions, and results.
Types of Memory (2):
(A) Primary Memory

- **RAM: Volatile, temporary**
- **ROM: Permanent, non-volatile**

(B) Secondary Memory
Hard Disk, SSD, Pen Drive, CD, DVD, Memory Card

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9. Hardware (हार्डवेयर)

Definition:
Hardware refers to physical components of computer.
Examples:
Keyboard, Mouse, CPU, Monitor, Printer

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10. Software (सॉफ्टवेयर)

Definition:
Software is a collection of programs that tells computer what to do.
Types of Software (2):

1. **SystemSoftware:**
   Operating System, Device Drivers
2. **ApplicationSoftware:**
   MS Word, Excel, PowerPoint, Browser

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11. Operating System (OS)

Definition:
Operating System is system software that manages computer resources.
Functions (5):

1. **Process Management**
2. **Memory Management**
3. **File Management**
4. **Device Management**
5. **Security**

Examples: Windows, Linux, macOS, Android

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12. Types of Computers

Definition:
Computers are classified based on working method.
Types (3):

1. **Analog Computer**
2. **Digital Computer**
3. **Hybrid Computer**

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13. Generations of Computer

Definition:

Generations classify computers based on technology.

Total Generations: 5

1. **First – Vacuum Tubes**
2. **Second – Transistors**
3. **Third – IC**
4. **Fourth – Microprocessor**
5. **Fifth – Artificial Intelligence**

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14. Programming Language

Definition:

Programming language is used to write instructions for computer.

Types (3):

1. **Machine Language**
2. **Assembly Language**
3. **High Level Language**

Examples: C, C++, Java, Python

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15. Data and Information

Definition:

- **Data: Raw facts and figures**
- **Information: Processed and meaningful data**

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16. Number System

Definition:

Number system represents numeric values.

Types(4):

Binary (2), Decimal (10), Octal (8), Hexadecimal (16)

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17. Computer Virus
Definition:
Computer virus is a harmful program that damages computer data.
Types(5):
Boot Virus, File Virus, Trojan Horse, Worm, Spyware

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18. Networking
Definition:
Networking connects computers to share data.
Types (3):
LAN, MAN, WAN
Devices (4):
Hub, Switch, Router, Modem

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19. Internet
Definition:
Internet is a global network of computers.
Services(5):
Email, WWW, FTP, Video Conferencing, Online Banking

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20. Cyber Security
Definition:
Cyber security protects computer systems from cyber threats.
Methods(5):
Antivirus, Firewall, Password, Encryption, Authentication

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21. Applications of Computer
Definition:
Computer is used in every field.

Fields(6):
Education, Banking, Healthcare, Business, Communication, Entertainment.

History of Computer – Definition
कंप्यूटर का इतिहास – परिभाषा
English:
The history of computer refers to the systematic development and evolution of calculating and computing devices from ancient times to modern digital computers.
Hindi:
कंप्यूटर का इतिहास प्राचीन गणना यंत्रों से लेकर आधुनिक डिजिटल कंप्यूटरों तक के विकास और परिवर्तन की क्रमबद्ध प्रक्रिया को दर्शाता है।

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3. Early Computing Devices
प्रारंभिक गणना उपकरण
Abacus
Definition:
Abacus is the oldest calculating device used for basic arithmetic operations.
परिभाषा:
अबेकस सबसे पुराना गणना यंत्र है जिसका उपयोग जोड़, घटाव, गुणा और भाग के लिए किया जाता था।

Napier's Bones
Definition:
Napier's Bones are calculating rods invented by John Napier to perform multiplication and division.

परिभाषा:
नेपियर बोन्स जॉन नेपियर द्वारा विकसित गणना छड़ियाँ थीं जिनका उपयोग गुणा और भाग के लिए किया जाता था।

Slide Rule
Definition:
Slide Rule is a mechanical calculating tool used for logarithmic and scientific calculations.
परिभाषा:
स्लाइड रूल एक यांत्रिक गणना उपकरण था जिसका उपयोग वैज्ञानिक गणनाओं में किया जाता था।

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4. Mechanical Computers
यांत्रिक कंप्यूटर
Pascaline
Definition:
Pascaline is a mechanical calculator invented by Blaise Pascal for addition and subtraction.
परिभाषा:
पास्कलाइन ब्लेज़ पास्कल द्वारा विकसित एक यांत्रिक कैलकुलेटर था जो जोड़ और घटाव करता था।

Leibniz Calculator
Definition:
Leibniz Calculator is a mechanical device capable of performing all arithmetic operations.
परिभाषा:
लाइबनिज कैलकुलेटर सभी गणितीय क्रियाएँ करने में सक्षम था।

5. Charles Babbage – Father of Computer
चार्ल्स बैबेज – कंप्यूटर के जनक

Definition:

Charles Babbage is known as the Father of Computer because he designed the first programmable computer.

परिभाषा:

चार्ल्स बैबेज को कंप्यूटर का जनक कहा जाता है क्योंकि उन्होंने पहला प्रोग्राम योग्य कंप्यूटर डिजाइन किया।

Analytical Engine

Definition:

Analytical Engine was the first design of a modern computer containing input, output, memory, and processor.

परिभाषा:

एनालिटिकल इंजन आधुनिक कंप्यूटर की पहली अवधारणा थी जिसमें इनपुट, आउटपुट, मेमोरी और प्रोसेसर शामिल थे।

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6. Ada Lovelace – First Programmer
एडा लवलेस – पहली प्रोग्रामर

Definition:

Ada Lovelace wrote the first algorithm for Charles Babbage's Analytical Engine.

परिभाषा:

एडा लवलेस ने एनालिटिकल इंजन के लिए पहला कंप्यूटर प्रोग्राम लिखा।

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7. Generation of Computers
कंप्यूटर की पीढ़ियाँ

First Generation (1940–1956)

Definition:
First generation computers used vacuum tubes for processing.
परिभाषा:
पहली पीढ़ी के कंप्यूटरों में वैक्यूम ट्यूब का उपयोग किया गया।
Examples: ENIAC, UNIVAC

Second Generation (1956–1963)
Definition:
Second generation computers used transistors, making them smaller and faster.
परिभाषा:
दूसरी पीढ़ी के कंप्यूटरों में ट्रांजिस्टर का उपयोग हुआ जिससे वे छोटे और तेज़ बने।

Third Generation (1964–1971)
Definition:
Third generation computers used integrated circuits (ICs).
परिभाषा:
तीसरी पीढ़ी के कंप्यूटरों में इंटीग्रेटेड सर्किट का प्रयोग हुआ।

Fourth Generation (1971–Present)
Definition:
Fourth generation computers are based on microprocessors.
परिभाषा:
चौथी पीढ़ी के कंप्यूटर माइक्रोप्रोसेसर पर आधारित हैं।

Fifth Generation (Present–Future)
Definition:
Fifth generation computers use Artificial Intelligence technologies.

परिभाषा:
पाँचवीं पीढ़ी के कंप्यूटर कृत्रिम बुद्धिमत्ता तकनीक पर आधारित हैं।

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8. Evolution of Computer – Definition
कंप्यूटर का विकास – परिभाषा
English:
Computer evolution is the continuous improvement in speed, size, accuracy, and intelligence of computers.
Hindi:
कंप्यूटर का विकास उसकी गति, आकार, क्षमता और बुद्धिमत्ता में निरंतर सुधार की प्रक्रिया है।

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9. Importance of Computer History
कंप्यूटर इतिहास का महत्व

- **Helps understand technological growth**
- **Explains modern computer concepts**
- **Important for academic studies**

कंप्यूटर का इतिहास तकनीकी विकास को समझने में सहायता करता है।

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10. Conclusion
निष्कर्ष
English:
The history of computers shows the remarkable journey from simple calculating devices to advanced intelligent machines.
NUMBER SYSTEM
(Binary, Octal, Decimal, Hexadecimal)

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1. What is a Number System?
संख्या पद्धति क्या है?

English:
A number system is a way of representing numbers using a set of digits.
Hindi:
संख्या पद्धति अंकों का उपयोग करके संख्याओं को दर्शाने की विधि है।

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2. Decimal Number System (Base-10)
दशमलव संख्या पद्धति
Definition:
The Decimal number system uses 10 digits (0–9).
Base: 10
English:
It is the most commonly used number system in daily life.
Hindi:
यह दैनिक जीवन में सबसे अधिक उपयोग की जाने वाली संख्या पद्धति है।
Example:

- 245_{10}

Place Values:
$245 = 2\times10^2 + 4\times10^1 + 5\times10^0$

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3. Binary Number System (Base-2)
द्विआधारी संख्या पद्धति
Definition:
The Binary number system uses only two digits: 0 and 1.
Base: 2
English:
Computers use the binary system because electronic circuits have only two states (ON/OFF).

Hindi:
कंप्यूटर बाइनरी सिस्टम का उपयोग करता है क्योंकि इसमें केवल ON और OFF अवस्थाएँ होती हैं।

Example:

- 1011_2

Conversion to Decimal:

$$1011_2 = 1\times2^3 + 0\times2^2 + 1\times2^1 + 1\times2^0$$
$$= 8 + 0 + 2 + 1 = 11_{10}$$

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4. Octal Number System (Base-8)

अष्टाधारी संख्या पद्धति

Definition:

The Octal number system uses 8 digits (0–7).

Base: 8

English:

Octal is sometimes used in computer programming as a shorthand for binary.

Hindi:

ऑक्टल का उपयोग कंप्यूटर प्रोग्रामिंग में बाइनरी को सरल बनाने के लिए किया जाता है।

Example:

- 157_8

Conversion to Decimal:

$$157_8 = 1\times8^2 + 5\times8^1 + 7\times8^0$$
$$= 64 + 40 + 7 = 111_{10}$$

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5. Hexadecimal Number System (Base-16)

षोडश संख्या पद्धति

Definition:

The Hexadecimal number system uses 16 symbols:

- **Digits: 0–9**
- **Letters: A–F**

Base: 16

Hex	Decimal
A	10
B	11
C	12
D	13
E	14
F	15

English:

Hexadecimal is widely used in computers to represent large binary numbers.

Hindi:

हेक्साडेसिमल का उपयोग बड़े बाइनरी नंबर को छोटे रूप में दिखाने के लिए किया जाता है।

Example:

- $2F_{16}$

Conversion to Decimal:

$2F_{16} = 2\times16^1 + 15\times16^0$

$= 32 + 15 = 47_{10}$

---

6. Comparison Table

तुलना तालिका

Number System	Base	Digits Used
Binary	2	0, 1
Octal	8	0–7
Decimal	10	0–9
Hexadecimal	16	0–9, A–F

7. Why Different Number Systems Are Used?
अलग-अलग संख्या पद्धति क्यों?

- **Binary → Used by computers**
- **Decimal → Used by humans**
- **Octal & Hexadecimal → Short form of binary, easy for programmers**

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8. Real-Life Examples
वास्तविक जीवन के उदाहरण

- **Binary → Computer memory & CPU**
- **Decimal → Money, counting**
- **Octal → Unix file permissions**
- **Hexadecimal → Color codes (#FF0000), memory addresses**

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9. Conclusion
निष्कर्ष

English:

Different number systems help humans and computers represent and process data efficiently.

Hindi:

विभिन्न संख्या पद्धतियाँ कंप्यूटर और मनुष्य दोनों के लिए डेटा को आसान रूप में प्रस्तुत करती हैं।

ARTIFICIAL INTELLIGENCE (AI)
Definition & History (Hindi / English)

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1. Artificial Intelligence (AI) – Definition
कृत्रिम बुद्धिमत्ता – परिभाषा

English Definition:

Artificial Intelligence (AI) is a branch of computer science that deals with the creation of intelligent machines that can think, learn, reason, and make decisions like humans.

Hindi Definition:

कृत्रिम बुद्धिमत्ता (AI) कंप्यूटर विज्ञान की वह शाखा है जिसमें ऐसी मशीनों का विकास किया जाता है जो मनुष्यों की तरह सोचने, सीखने, तर्क करने और निर्णय लेने में सक्षम हों।

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2. Simple Definition of AI

सरल परिभाषा

English:

AI is the ability of a machine to perform tasks that normally require human intelligence.

Hindi:

AI मशीन की वह क्षमता है जिसके द्वारा वह मानव बुद्धिमत्ता वाले कार्य कर सकती है।

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3. Objectives of Artificial Intelligence

AI के उद्देश्य

- **Learning from experience (अनुभव से सीखना)**
- **Reasoning and problem solving (तर्क और समस्या समाधान)**
- **Decision making (निर्णय लेना)**
- **Understanding natural language (भाषा को समझना)**
- **Vision and speech recognition (देखना और सुनना)**

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4. History of Artificial Intelligence

कृत्रिम बुद्धिमत्ता का इतिहास

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1. Early Foundations (Before 1950)

English:
Philosophers and mathematicians started exploring the idea of artificial thinking machines.
Hindi:
दार्शनिकों और गणितज्ञों ने सोचने वाली मशीनों की अवधारणा पर कार्य शुरू किया।

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2. Alan Turing (1950)
Contribution:
Proposed the Turing Test to measure machine intelligence.
English:
If a machine can think like a human, it can be considered intelligent.
Hindi:
यदि कोई मशीन मानव की तरह सोच सके तो उसे बुद्धिमान कहा जा सकता है।

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3. Birth of AI – 1956
AI का जन्म
English:
The term Artificial Intelligence was coined by John McCarthy in 1956 at the Dartmouth Conference.
Hindi:
जॉन मैकार्थी ने 1956 में डार्टमाउथ सम्मेलन में Artificial Intelligence शब्द दिया।

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4. Early AI Programs (1950s–1960s)

- **Logic Theorist**
- **ELIZA (first chatbot)**

Machines could solve math and language problems.

5. AI Winter (1970s–1980s)

AI विंटर

English:

Due to lack of computing power and funding, AI research slowed down.

Hindi:

कंप्यूटिंग शक्ति और धन की कमी के कारण AI अनुसंधान धीमा पड़ गया।

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6. Expert Systems Era (1980s)

English:

AI systems that mimicked human experts.

Example:

MYCIN (medical diagnosis)

Hindi:

मानव विशेषज्ञों की तरह काम करने वाले सिस्टम विकसित किए गए।

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7. Machine Learning Era (1990s–2000s)

English:

Machines started learning from data.

Example:

IBM Deep Blue defeated chess champion Garry Kasparov (1997).

Hindi:

मशीनें डेटा से सीखने लगीं।

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8. Modern AI (2010–Present)

आधुनिक AI

Technologies:

- **Deep Learning**

- **Neural Networks**
- **Big Data**

Examples:

- **Google Assistant**
- **ChatGPT**
- **Self-driving cars**

---

5. Timeline of AI History

Year	Event
1950	Turing Test
1956	Term “AI” coined
1970	AI Winter
1997	Deep Blue wins chess
2010+	Deep Learning boom

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6. Importance of AI

AI का महत्व

- **Automation**
- **Healthcare**
- **Education**
- **Business and Industry**
- **Robotics**

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7. Conclusion

निष्कर्ष

English:

Artificial Intelligence has evolved from a theoretical concept into a powerful technology shaping modern life.

Hindi:
कृत्रिम बुद्धिमत्ता एक सैद्धांतिक विचार से विकसित होकर आज की सबसे प्रभावशाली तकनीक बन चुकी है।

COMPUTER NOTEPAD

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1. Introduction to Notepad

Notepad is a basic text-editing application that comes free with the Microsoft Windows operating system. It is used to create, open, and edit plain text files. Notepad does not support advanced formatting like fonts, colors, images, or tables.

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2. Definition of Notepad

Notepad is a simple word processing program used to type and save unformatted text. It is mainly used for quick notes, simple programs, and text editing.

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3. History of Notepad

- **Notepad was introduced with Microsoft Windows 1.0.**
- **It is one of the oldest Windows applications.**
- **It has remained popular due to its simplicity and speed.**

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4. Features of Notepad

Notepad has the following important features:

1. **Plain Text Editor – No formatting options.**

2. **Lightweight Software – Uses very little memory.**
3. **Fast Performance – Opens quickly.**
4. **File Handling – Can create, open, save, and print files.**
5. **Editing Tools – Cut, copy, paste, delete.**
6. **Search Tools – Find, replace, and go to line.**
7. **Word Wrap – Automatically moves text to the next line.**
8. **Font Selection – Change font style and size (text only).**

---

5. Components of Notepad Window

The Notepad window contains:

a) Title Bar

- **Displays the file name and program name.**

b) Menu Bar

Contains the following menus:

- **File**
- **Edit**
- **Format**
- **View**
- **Help**

c) Text Area

- **The main area where text is typed.**

d) Scroll Bars

- **Used to move the page up, down, left, or right.**

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6. Menu Options in Notepad

a) File Menu

- **New**
- **Open**
- **Save**
- **Save As**

- **Page Setup**
- **Print**
- **Exit**

b) Edit Menu

- **Undo**
- **Cut**
- **Copy**
- **Paste**
- **Delete**
- **Find**
- **Replace**
- **Go To**
- **Select All**
- **Time/Date**

c) Format Menu

- **Word Wrap**
- **Font**

d) View Menu

- **Zoom In**
- **Zoom Out**
- **Restore Default Zoom**
- **Status Bar**

e) Help Menu

- **View Help**
- **About Notepad**

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7. Uses of Notepad

Notepad is used for:

- **Writing short notes**
- **Creating to-do lists**

- **Writing HTML and CSS code**
- **Writing simple computer programs**
- **Editing system and configuration files**
- **Saving text data**

---

8. Advantages of Notepad

- **Simple and easy to use**
- **Free and pre-installed**
- **Requires low system resources**
- **Good for beginners**
- **Useful for coding practice**

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9. Limitations of Notepad

- **No text formatting**
- **Cannot insert images**
- **No spell check**
- **Not suitable for long documents**

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10. How to Open Notepad

1. **Click Start Menu**
2. **Type Notepad**
3. **Press Enter**

OR

- **Press Windows + R**
- **Type notepad**
- **Press Enter**

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11. File Extension Used

- **Default file extension: .txt**

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12. Notepad vs Word (Difference)

Notepad	MS Word
Plain text editor	Advanced word processor
No formatting	Supports formatting
Lightweight	Requires more memory
Free	Paid software

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13. Importance of Notepad

Notepad helps beginners understand:

- Basic typing
- File handling
- Programming basics
- Text editing skills

---

14. Conclusion

Notepad is a simple but powerful tool for basic text editing. Though it lacks advanced features, it remains useful for quick notes, learning programming, and editing plain text files.

COMPUTER NOTEPAD – FULL NOTES

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1. Introduction to Notepad

Notepad is a basic text-editing application that comes free with the Microsoft Windows operating system. It is used to create, open, and edit plain text files. Notepad does not support advanced formatting like fonts, colors, images, or tables.

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2. Definition of Notepad

Notepad is a simple word processing program used to type and save unformatted text. It is mainly used for quick notes, simple programs, and text editing.

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3. History of Notepad

- Notepad was introduced with Microsoft Windows 1.0.
- It is one of the oldest Windows applications.
- It has remained popular due to its simplicity and speed.

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4. Features of Notepad

Notepad has the following important features:

1. Plain Text Editor – No formatting options.
2. Lightweight Software – Uses very little memory.
3. Fast Performance – Opens quickly.
4. File Handling – Can create, open, save, and print files.
5. Editing Tools – Cut, copy, paste, delete.
6. Search Tools – Find, replace, and go to line.
7. Word Wrap – Automatically moves text to the next line.
8. Font Selection – Change font style and size (text only).

---

5. Components of Notepad Window

The Notepad window contains:

a) Title Bar

- Displays the file name and program name.

b) Menu Bar

Contains the following menus:

- File
- Edit
- Format
- View

- **Help**

c) Text Area

- **The main area where text is typed.**

d) Scroll Bars

- **Used to move the page up, down, left, or right.**

---

6. Menu Options in Notepad

a) File Menu

- **New**
- **Open**
- **Save**
- **Save As**
- **Page Setup**
- **Print**
- **Exit**

b) Edit Menu

- **Undo**
- **Cut**
- **Copy**
- **Paste**
- **Delete**
- **Find**
- **Replace**
- **Go To**
- **Select All**
- **Time/Date**

c) Format Menu

- **Word Wrap**
- **Font**

d) View Menu

- **Zoom In**
- **Zoom Out**
- **Restore Default Zoom**
- **Status Bar**

e) Help Menu

- **View Help**
- **About Notepad**

---

7. Uses of Notepad

Notepad is used for:

- **Writing short notes**
- **Creating to-do lists**
- **Writing HTML and CSS code**
- **Writing simple computer programs**
- **Editing system and configuration files**
- **Saving text data**

---

8. Advantages of Notepad

- **Simple and easy to use**
- **Free and pre-installed**
- **Requires low system resources**
- **Good for beginners**
- **Useful for coding practice**

---

9. Limitations of Notepad

- **No text formatting**
- **Cannot insert images**
- **No spell check**
- **Not suitable for long documents**

---

10. How to Open Notepad

1. Click Start Menu
2. Type Notepad
3. Press Enter

OR

- Press Windows + R
- Type notepad
- Press Enter

---

11. File Extension Used

- Default file extension: .txt

---

12. Notepad vs Word (Difference)

Notepad	MS Word
Plain text editor	Advanced word processor
No formatting	Supports formatting
Lightweight	Requires more memory
Free	Paid software

---

13. Importance of Notepad

Notepad helps beginners understand:

- Basic typing
- File handling
- Programming basics
- Text editing skills

---

14. Conclusion

Notepad is a simple but powerful tool for basic text editing. Though it lacks advanced features, it remains useful for quick notes, learning programming, and editing plain text files.

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WORDPAD

1. Introduction to WordPad

WordPad is a basic word processing application that comes free with the Microsoft Windows operating system. It is more powerful than Notepad but simpler than Microsoft Word. WordPad allows users to create, edit, format, and print documents.

2. Definition of WordPad

WordPad is a word processing program used to type and format text. It supports fonts, colors, alignment, images, and basic document formatting, unlike Notepad.

3. History of WordPad

- **WordPad was introduced with Windows 95.**
- **It replaced an older program called Write.**
- **It is designed for simple document creation without complex features.**

4. Features of WordPad

WordPad provides the following features:

1. **Text Formatting – Bold, italic, underline**
2. **Font Options – Font style, size, and color**
3. **Paragraph Formatting – Alignment (left, center, right)**
4. **Insert Images – Pictures can be added**
5. **Bullet Lists – Create simple lists**
6. **Spell Checking (limited)**

7. File Handling – Create, open, save, print files
8. Zoom Option – Adjust text size on screen

---

5. Components of WordPad Window

a) Title Bar

- Displays document name and program name

b) Quick Access Toolbar

- Contains shortcuts like Save, Undo, Redo

c) Ribbon

- Main tool area with tabs:
  - Home
  - View

d) Document Area

- Area where text and images are typed

e) Scroll Bars

- Used to move through the document

---

6. Ribbon Tabs in WordPad

a) Home Tab

Contains:

- Clipboard (Cut, Copy, Paste)
- Font (Font style, size, bold, italic)
- Paragraph (Alignment, bullets, spacing)
- Insert (Picture, Paint drawing)
- Editing (Find, Replace)

b) View Tab

Contains:

- Zoom in / Zoom out
- Ruler
- Status bar

7. File Menu Options

- New
- Open
- Save
- Save As
- Print
- Page Setup
- Exit

---

8. File Formats Supported by WordPad

- .rtf (Rich Text Format – default)
- .txt
- .docx
- .odt

---

9. Uses of WordPad

WordPad is used for:

- Writing letters
- Creating short reports
- Making notices
- Creating school assignments
- Adding pictures to documents

---

10. Advantages of WordPad

- Easy to use
- Free with Windows
- Supports text formatting
- Good for beginners
- Faster than MS Word

11. Limitations of WordPad

- Limited formatting features
- No advanced spell check
- Not suitable for long or professional documents
- No templates or mail merge

---

12. How to Open WordPad

1. Click Start Menu
2. Type WordPad
3. Press Enter

OR

- Press Windows + R
- Type wordpad
- Press Enter

---

13. WordPad vs Notepad

WordPad	Notepad
Supports formatting	Plain text only
Can insert images	No images
Uses RTF files	Uses TXT files
More features	Very basic

---

14. WordPad vs MS Word

WordPad	MS Word
Basic word processor	Advanced word processor
Free	Paid
Limited features	Professional features

---

15. Importance of WordPad

WordPad helps users:

- **Learn document formatting**
- **Create neat documents**
- **Understand basic word processing**

---

16. Conclusion

WordPad is a simple and useful word processing tool for basic document creation. It is ideal for students and beginners who need formatting but do not require advanced features.

WINDOW OPERATING SYSTEM

1. Operating System (OS) क्या है?

Operating System एक system software है जो User और Computer Hardware के बीच interface का काम करता है।

Operating System is system software that acts as an interface between user and computer hardware.

Examples:

- **Windows**
- **Linux**
- **macOS**
- **Android**

---

2. Windows Operating System क्या है?

Windows OS को Microsoft Company ने develop किया है।
यह Graphical User Interface (GUI) पर आधारित Operating System है।

Windows is a GUI-based operating system developed by Microsoft.

3. Windows के Versions (संस्करण)

Version	Year
Windows 95	1995
Windows XP	2001
Windows 7	2009
Windows 8 / 8.1	2012
Windows 10	2015
Windows 11	2021

4. Features of Windows OS
(Windows OS की विशेषताएँ)

1. User Friendly Interface – इस्तेमाल करना आसान
2. Multitasking – एक साथ कई काम
3. GUI (Graphical User Interface)
4. Plug and Play – Device अपने आप detect
5. Networking Support
6. Security Features (Password, Firewall)
7. File Management System

5. Components of Windows OS
(Windows के मुख्य भाग)

1. Desktop

- Computer start होने पर दिखने वाली main screen
- Icons, Taskbar, Wallpaper होते हैं

2. Icons

- छोटे graphical symbols
- Files, Folders, Applications को represent करते हैं

3. Taskbar

- **Screen के नीचे होती है**
- **Start Button, Running Programs, Clock**

4. Start Menu

- **Programs, Settings, Shut down options**
- **Windows का main control center**

---

6. File and Folder

File:

- **Data का collection**
- **Example: .docx, .jpg, .mp3**

Folder:

- **Files को store करने का container**
- **Folder के अंदर sub-folder हो सकते हैं**

---

7. Windows Explorer / File Explorer

- **Files और folders को manage करने के लिए**
- **Copy, Move, Delete, Rename**

---

8. Control Panel

Control Panel से system settings change की जाती हैं:

- **Date & Time**
- **Hardware & Sound**
- **User Accounts**
- **Network Settings**

---

9. Windows Settings

Modern Windows में Control Panel का advanced version है:

- **System**
- **Devices**
- **Network & Internet**

- **Privacy**
- **Update & Security**

---

10. Multitasking

Multitasking का मतलब है:
एक ही समय में एक से अधिक program चलाना

Example:

- **Music सुनते हुए Word में typing**

---

11. Booting

Booting computer start होने की process है।

Types of Booting:

1. **Cold Booting – Power ON करके start**
2. **Warm Booting – Restart करना**

---

12. Recycle Bin

- **Deleted files अस्थायी रूप से यहाँ जाती हैं**
- **Permanent delete करने के लिए Empty Recycle Bin**

---

13. Windows Security

- **Password Protection**
- **Windows Defender**
- **Firewall**
- **Antivirus Support**

---

14. Advantages of Windows OS (फायदे)

- **Easy to use**
- **Large software support**
- **Hardware compatible**

- **Widely used OS**

---

15. Disadvantages of Windows OS (नुकसान)

- **Virus attacks का खतरा**
- **Paid license**
- **Heavy system requirements**

---

16. Common Shortcut Keys (महत्वपूर्ण शॉर्टकट की)

Shortcut	Function
Ctrl + C	Copy
Ctrl + V	Paste
Ctrl + X	Cut
Ctrl + Z	Undo
Alt + F4	Close Window
Windows + E	File Explorer
Windows + D	Show Desktop

---

17. Uses of Windows OS (उपयोग)

- **Education**
- **Office Work**
- **Internet Browsing**
- **Gaming**
- **Programming**

Conclusion (निष्कर्ष)

Windows Operating System एक powerful, user-friendly और widely used OS है जो personal और professional दोनों कामों के लिए उपयुक्त है।

Definition of MS Paint

English:

MS Paint is a basic graphics drawing program included with Microsoft Windows. It is used to create, edit, and color images.

Hindi:

MS Paint माइक्रोसॉफ्ट विंडोज़ में उपलब्ध एक सरल ग्राफिक्स प्रोग्राम है, जिसका उपयोग चित्र बनाने, संपादित करने और रंग भरने के लिए किया जाता है।

---

2. Features of MS Paint

MS Paint की विशेषताएँ

- **Easy to use**
- **Drawing and coloring tools**
- **Image editing**
- **Free with Windows**
- **Supports many image formats**

---

3. How to Open MS Paint

MS Paint कैसे खोलें?

Steps:

1. **Click on Start Menu**
2. **Type Paint**
3. **Press Enter**

---

4. Components of MS Paint Window

MS Paint विंडो के मुख्य भाग

1. Title Bar

- Shows file name and program name

फाइल और प्रोग्राम का नाम दिखाता है।

2. Ribbon

Contains all tools and commands.

इसमें सभी टूल और कमांड होते हैं।

Tabs:

- Home
- View

3. Drawing Area

- White blank area where we draw pictures

चित्र बनाने का मुख्य स्थान।

4. Status Bar

- Shows image size and cursor position

5. Tools in MS Paint

MS Paint के टूल्स

1. Pencil Tool

Use: Freehand drawing

उपयोग: हाथ से चित्र बनाना

2. Brush Tool

Use: Thick and artistic drawing

उपयोग: मोटी और कलात्मक ड्राइंग

3. Eraser Tool

Use: Remove unwanted parts

उपयोग: गलत हिस्से मिटाना

---

4. Fill with Color

Use: Fill color in shapes

उपयोग: आकृति में रंग भरना

---

5. Color Picker

Use: Pick color from image

उपयोग: चित्र से रंग चुनना

---

6. Text Tool

Use: Insert text

उपयोग: टेक्स्ट लिखना

---

7. Shapes Tool

Use: Draw shapes like:

- **Line**
- **Rectangle**
- **Circle**
- **Triangle**

आकृतियाँ बनाने के लिए।

---

8. Magnifier Tool

Use: Zoom in or zoom out

उपयोग: चित्र बड़ा या छोटा देखना

---

6. Colors in MS Paint

MS Paint में रंग

- **Color 1 → Foreground color**
- **Color 2 → Background color**

Colors palette से रंग चुना जाता है।

---

7. File Menu Options
फाइल मेनू विकल्प

- **New → New picture**
- **Open → Open existing file**
- **Save → Save file**
- **Save As → Save in different format**
- **Print → Print image**

---

8. Image Menu Options
इमेज विकल्प

- **Resize**
- **Rotate**
- **Crop**
- **Flip**

---

9. Image File Formats
फाइल फॉर्मेट

- **.BMP**
- **.JPEG / .JPG**
- **.PNG**
- **.GIF**

---

10. Uses of MS Paint
MS Paint के उपयोग

- **Drawing pictures**
- **Coloring images**

- **Making posters**
- **Editing photos**
- **Learning basic computer skills**

---

11. Advantages of MS Paint
फायदे

- **Simple and easy**
- **No internet required**
- **Free with Windows**

---

12. Disadvantages of MS Paint
नुकसान

- **Limited features**
- **Not suitable for professional editing**

---

13. Shortcut Keys in MS Paint
शॉर्टकट की

Shortcut	Function
Ctrl + N	New
Ctrl + O	Open
Ctrl + S	Save
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + A	Select All

---

14. Conclusion
निष्कर्ष

MS Paint is a simple and useful drawing tool for beginners and students.

Hindi:

{ End of fundamental/Notepad/Wordpad/M.S Paint }

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