

Complete Notes on



COMPUTER

Common Book for All Competitive Exams.

For
all Exams of
RSSB & RPSC

SSC, Bank, Railway (RRB)
and for all Competitive Exams.
organized by various Boards/Departments.

English Edition
Page to Page 100% Translation
of Hindi Book



- **Complete Theory**
- **Chapterwise Previous Year Questions**
- **More than 2600 Topicwise Obj. Questions**

Buy Online at :

WWW.DAKSHBOOKS.COM

Author : **Manisha Yadav**
:: Guided by ::
Dharmendra Kumar Yadav

परीक्षा से सम्बन्धी

गार्इडेन्स एवं पुस्तक के बारे में

अधिक जानकारी या PDF प्राप्त करने हेतु

9783824602

पर WhatsApp Message करें

Complete Notes on



Computer

For (Graduate Level) **CET⁽¹⁰⁺²⁾**, **Statistical Officer, Rajasthan Police, Delhi Police, Patwari, Hostel Superintendent, VDO, Accountant and All Competitive Examinations conducted by RPSC, RSSB, SSC, Bank, Railway.**

- **Complete Theory**
- **Chapterwise Previous Year Questions**
- **More than 2600 Topicwise Obj. Questions**

Author

Manisha Yadav

Guided by

Dharmendra Kumar Yadav

For any guidance / doubt related to this book, to attempt online Computer tests and to obtain content, please send a WhatsApp message to 9783824602.

DAKSH PUBLICATIONS

(A Unit of College Book Centre)

WWW.DAKSHBOOKS.COM

Preface

In the present time, technology-based education is most important. In technical education, the importance of Computer subject is increasing day by day. Nowadays, most of the work in government departments is also performed through computers.

In competitive examinations conducted by SSC, IBPS, RPSC, RSB and various boards, corporations, departments, many questions related to Computer subject are asked.

This book has been written considering the absolute necessity of a book with simple and easy-to-understand language for competitive exams to comprehend the Computer subject.

The book includes questions according to each topic of every chapter. The main features of this book are exam-oriented study material, simple and easy-to-understand language, explanation through pictorial style, etc.

In the book, words from both Hindi and English languages have been used as required, and questions asked in previous years from each chapter are available with solutions.

It is hoped that this fifth edition of the book will play an important role in the success of the competitors. Suggestions from all readers are always invited.



Manisha Yadav



हमसे टेलीग्राम पर जुड़ने हेतु यहाँ स्कैन करे—

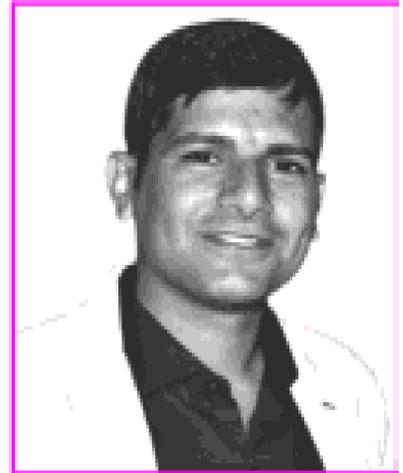


From the Pen of the Guide...

In the selection of competitive exams, the role of the content studied by them is highly important. For the preparation of competitive examinations, what to study? Along with this, it is also important what not to study? This book has been prepared keeping the above fact in mind. In this book, special attention has been given to the changing examination pattern of examinations currently conducted by SSC, IBPS, RPSC, RSSB, Railway, etc. Each chapter in the book has been explained using a pictorial style, and it is hoped that this book will prove to be a 'milestone' in the success of competitive examinees.

With best wishes!

Dharmendra Kumar Yadav



Introduction



The author was born in Navalpura village, Shahpura Tehsil, Jaipur district of Rajasthan. Her educational qualification is Post-Graduation. Due to her interest in writing and technical knowledge, she has been engaged in writing for the past many years. Thousands of competitive exams have received guidance by studying the books written and compiled by her.

Manisha Yadav

Computer Expert

Content

<i>Chp No.</i>	<i>Chapter/Subject's Name</i>	<i>Page No.</i>
1	Computer : Introduction, Development & Working	7
❖	Full Forms	22
❖	Must Read : Exam Booster	22
❖	Multiple Choice Questions	24
❖	Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	36
2	Input and Output Devices.....	40
❖	Full Forms	56
❖	Must Read : Exam Booster	57
❖	Multiple Choice Questions	58
❖	Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	69
3	Hardware and Software (Operating System)	74
❖	Full Forms	90
❖	Must Read : Exam Booster	90
❖	Multiple Choice Questions	91
❖	Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	98
4	Memory	106
❖	Full Forms	106
❖	Must Read : Exam Booster	116
❖	Multiple Choice Questions	117
❖	Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	126
5	Microsoft Word	129
❖	Must Read : Exam Booster	145
❖	Multiple Choice Questions	146
❖	Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	159

<i>Chp No.</i>	<i>Chapter/Subject's Name</i>	<i>Page No.</i>
6	Microsoft Excel	163
	❖ Must Read : Exam Booster	179
	❖ Multiple Choice Questions	180
	❖ Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	192
7	Microsoft Power Point	196
	❖ Must Read : Exam Booster	202
	❖ Multiple Choice Questions	202
	❖ Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	208
8	[Computer Network and Internet]	211
	❖ Full Forms	225
	❖ Must Read : Exam Booster	226
	❖ Multiple Choice Questions	226
	❖ Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	238
9	Number System.....	242
	❖ Must Read : Exam Booster	251
	❖ Multiple Choice Questions	251
	❖ Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	253
10	Information Technology Act 2000 and Digitalization	254
	❖ Must Read : Exam Booster	258
	❖ Multiple Choice Questions	259
	❖ Questions Asked in Previous Recruitment Examinations Questions asked by (RPSC) and (RSSB)	261
	Computer Related Full Form	262

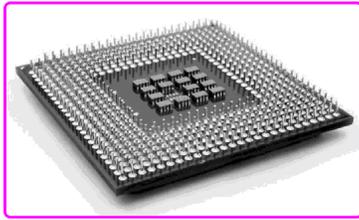


Figure: Microprocessor

- ❖ The **microprocessor** was used as a switching device in the **fourth generation of computer** development.
- ❖ The microprocessor is also called the **logic chip**.
- ❖ A computer with a microprocessor is called a **microcomputer**.

- ❖ The **world's first microprocessor** was **Intel 4004**, which was a **4 Bit processor** and was made by the **Intel company**.
- ❖ **India's first indigenous microprocessor** is **Shakti**, which was made by **IIT Madras**.

- ❖ **Pentium** is a high-speed microprocessor, which is also developed by **Intel**.
- ❖ The **headquarters of the Intel** company is in **California, America**.
- ❖ The team that invented the microprocessor was Marcian Ted Hoff and his team.
- ❖ Each instruction given to the computer reaches the microprocessor and it does data processing.
- ❖ The architecture of the microprocessor is mainly of two types—
 - (i) **CISC** (Complex Instruction Set Computing)
 - (ii) **RISC** (Reduced Instruction Set Computing)

Fifth Generation (1989 to Present)

- ❖ In the fifth generation, **ULSI (Ultra Large Scale Integration)** is used as a switching device and **optical disks** are used for storage.

- ❖ The operating system used in this generation is **Artificial Intelligence (AI)**. AI-based devices like robots, satellites, voice recognition, etc. were used in this generation.



- ❖ In this generation, the development of **artificial intelligence (AI)** and the development of the **concept of information technology and the information highway**, and high speed, high storage capacity exist. **Examples**—PARAM8000.

- ❖ **India's first artificial intelligence-based computer** was established at **IIT Jodhpur**.
- ❖ **The father of Artificial Intelligence** is **John McCarthy**.

- ❖ Alan Turing also made an important contribution to the development of AI.

Note:—

- (i) The system used in fifth generation computers is also called **Knowledge Information Processing System (KIPS)**.
- (ii) In this generation, the language PROLOG (Programming in Logic) was used.
- (iii) To implement the fifth generation, **ICOT** (Institute for New Generation Computer Technology) was established.

Comparative Description of Generations of Computer Development

Feature/Quality	First Generation	Second Generation	Third Generation	Fourth Generation	Fifth Generation
Time Period	1942-55	1955-64	1964-75	1975-89	1989-Present
Processing Device	Vacuum Tube	Transistor	IC	Microprocessor / VLSI	ULSI
Memory	Magnetic Drum	Magnetic Tape and Disc	High Memory Device	CD, DVD	AI Optical Disc
Programming Language	Assembly Language	High Level Language (Fortran, Cobol)	C, C++	C, C++, Java	High Level Language LISP, OPS5
Operating System	—	Batch Processing OS	Multi Programming Time Sharing	Windows	KIPS
Example	ENIAC EDVAC UNIVAC EDSAC IBM 700 IBM 701 MARK-1	DEC18404 CDC3600 IBM 1400 IBM 1401 IBM 1600 IBM 7094 HONEYWELL	PDP10 IBM 360 IBM 370 VAX 750 UNIVAC 1108 CDC 6600	CRAY-I APPLE-II IBM 4341 DESKTOP	PARAM 8000

- ❖ Supercomputers are used in **weather forecasting, mathematical calculations, scientific applications, nuclear energy research, military applications, genetic engineering**, etc.
- ❖ Supercomputers are used for big research and scientific use. For example, NASA (NASA) uses supercomputers to **launch space shuttles**, control them and explore space.

Super Computer in The World.

- ❖ The world's **first supercomputer CDC 6600** was created in **1964** by the American supercomputing company CDC (Control Data Corporation) with the help of scientist **Seymour Cray**.

❖ In the **development of supercomputers, Cray-1 was the world's first successful supercomputer** made by Seymour Cray in **1976**.

❖ **Seymour Cray** was called the **Father of Super Computer/Father of Supercomputing/ Father of Super Computer/Father of Super Computer**.

- ❖ **CRC (Cray Research Center)** has made an important contribution to the construction of supercomputers.
- ❖ The shape of the world's first supercomputer was **cylindrical**.
- ❖ Watson is a supercomputer developed by IBM that works as a **'question-answer'** machine using artificial intelligence (AI)."
- ❖ **LUMI** is a peta-scale supercomputer located at CSC data centre in Kajani, Finland, It stands for **Large Unified Modern Infrastructure**.

Super Computer in India

- ❖ The prototype of a supercomputer in India was made in 1990 by CDAC.

❖ India's first supercomputer **PARAM-8000** was made by C-DAC in 1991.

- ❖ The **PARAM** series of supercomputers in India were also manufactured by **CDAC**.

❖ C-DAC stands for Centre for development of Advanced Computing, which was established in 1988 and its headquarters is in Pune.

- ❖ Dr. Vijay Pandurang Bhatkar, working in the Electronics Department of C-DAC, played an important role in the discovery and development of PARAM 8000. **Dr. Vijay Pandurang Bhatkar** is called the **Father of Supercomputer in India**.
- ❖ **Param Rudra** is the latest supercomputer launched under the National Super Computing Mission, which was launched in September **2024**.
- ❖ The PARAM series of supercomputers made by C-DAC are PARAM 8000, PARAM 10000, PARAM Anant, PARAM Siddhi etc.

- ❖ The **PESA** series of supercomputers are made by **DRDO's** laboratory **ANURAG (Advanced Numerical Research & Analysis Group)** Hyderabad.
- ❖ **Pratyush** was India's first multi-peta flop supercomputer, which was made by IITM, Pune. Its speed is 6.4 Petaflop.
- ❖ **Anupam** is a supercomputer manufactured in India; it was invented by **Bhabha Atomic Research Centre Mumbai (BARC)**.
- ❖ **Flowsolver** supercomputer was made by **NAL (National Aeronautical Laboratory)** Bengaluru.
- ❖ **EKA** was the first supercomputer in Asia.

Speed of Super Computer

- ❖ The speed of supercomputers is measured in **FLOPS. FLOPS stands for Floating Point Operations Per Second**.
- ❖ The length of each word in supercomputers ranges from **64 Bit** or 8 bytes.
Note:—Currently (2025), the **world's fastest supercomputer is EI Capitan**, which became the World's Fastest supercomputer in November 2024. Earlier to this the fastest supercomputer **was Frontier**.
- ❖ **Currently (2025)**, the fastest **supercomputer in India is AIRAWAT**. Before that **Param Siddhi AI** was the fastest supercomputer in India.
- ❖ AIRAWAT has a speed of 13.17 Petaflops per second. It has been installed at the Centre for Development of Advanced Computing (C-DAC) in Pune.

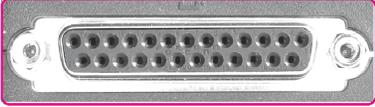
(C) Based on Purpose

1. **General Purpose Computer**—This type of computer can do all kinds of work. It is used by the general public. Such as computers used in schools, shopping malls, publications, etc.
2. **Special Purpose Computer**—This type of computer is made to do a specific purpose and a specific task. These computers are used only for that particular type of work, not for all types of work. For example – computers used in ATM in banks, computers used for meteorology and satellite operation.

Important Fact & Personality of Computer History

Computing in India

- ❖ The first digital computer **installed in India** was **HEC-2M**, which was imported from England and installed in 1955 at the **Indian Statistical Institute (ISI) Kolkata**.
- ❖ The first digital computer **made in India** is **Siddhartha**.
- ❖ The first use of a computer in India was made on August 16, 1986, at the **Head Post Office of**

Port	Important Fact
Serial Port 	<ul style="list-style-type: none"> ✧ This port is used to connect the mouse and modem. This port transfers one bit of data at a time. This port has five holes on the top and 4 holes at the bottom. ✧ Serial port is also called COM port. COM1 is the first serial port. Old computers used 4 serial ports (COM1, COM2, COM3, COM4).
Parallel Port 	<ul style="list-style-type: none"> ✧ This port is used to connect the printer and scanner. ✧ This port has 13 holes on top and 12 holes at the bottom. ✧ It is also called Printer Port or Centronics Port.
U.S.B. (Universal Serial Bus) 	<ul style="list-style-type: none"> ✧ This port is used to connect peripheral devices like mouse, key-board, scanner, printer, biometric machine, external hard disk etc. ✧ All portable devices are connected through USB. It is a type of serial port. Nowadays USB port is used instead of serial and parallel ports. The USB port is a replacement of serial and parallel ports.
V.G.A. (Video Graphics Array) 	<ul style="list-style-type: none"> ✧ This port is used to connect the monitor and projector to the computer system. VGA has 14 and 15 pins.
Power Connector Port 	<ul style="list-style-type: none"> ✧ This port is used to connect the system unit and monitor to the power cable.
Ethernet Port / RJ-45 Port 	<ul style="list-style-type: none"> ✧ This port is used to connect the LAN (Local Area Network) Cable. RJ45 UTP cable has 8 wires, which are used in the form of 4 pairs.
High Definition Multimedia Interface (HDMI) Port 	<ul style="list-style-type: none"> ✧ This is a display port, through which the output of the system unit is sent to the display device, i.e., this port is used for monitors and projectors. ✧ HDMI port is also used to output high quality video and audio signals.
Musical Instrument digital Interface (MIDI) Port	<ul style="list-style-type: none"> ✧ To connect special types of music instruments to the sound card.
PS/2 Port (Personal System/2 Port)	<ul style="list-style-type: none"> ✧ This port is used to connect Key-board and mouse.
Fire Wire Port	<ul style="list-style-type: none"> ✧ This is a serial bus port for high speed data transfer. It is also known as IEEE-1394.
Game Port	<ul style="list-style-type: none"> ✧ Gamepad and joystick devices are connected in this port.
Audio Port	<ul style="list-style-type: none"> ✧ Microphones and speakers are connected in this port.

Computer Bus

- ✧ A computer bus is a group of conductor wires formed on the motherboard which carries computer data and signals from one place to another within the computer system.
- ✧ Buses are **used to send control, signals and data between the processor and other components**.
- ✧ The data transfer bus is a communication system through which data is transferred between devices in the computer system.

- ✧ Bus Lines are pathways that support communication with various components on the system board.
 - ✧ A computer bus is a group of wires through which instructions and information are exchanged between the CPU, peripheral devices and other hardware of the computer system. The types of computer buses are as follows—
1. **Internal/System Bus**—Internal or system bus exchanges data and information between the devices on the motherboard. Data bus, address bus and control bus are parts of the system bus.

- ❖ A computer **terminal** is used to enter data or display data from a computer on a device.
- ❖ The frequency/rate at which a microprocessor executes instructions is called the **clock speed**.
- ❖ MIDI stands for **Musical Instrument Digital Interface**. It is a connectivity standard for data transfer.
- ❖ **VDA** stands for **Virtual Desktop Access**. It licenses the device that accesses the virtual desktop under Microsoft VDA.

FULL FORMS

ABC	: Atanasoff-Berry Computer
AI	: Artificial Intelligence
AIDC	: Automatic Identification and Data Capture
ALU	: Arithmetic Logic Unit
BARC	: Bhabha Atomic Research Centre
BIOS	: Basic Input Output System
CAD	: Computer Aided Design
CAI	: Computer Aided Instruction
C-DAC	: Centre for Development of Advanced Computing
CDC	: Control Data Corporation
CISC	: Complex Instruction Set Computing
CMOS	: Complementary Metal Oxide Semiconductor
CPU	: Central Processing Unit
CRC	: Cray Research Company
CU	: Control Unit
DRDO	: Defence Research and Development Organisation
DTP	: Desk Top Publishing

EDP	: Electronic Data Processing
EDSAC	: Electronic Delay Storage Automatic Calculator
EDVAC	: Electronic Discrete Variable Automatic Computer
ENIAC	: Electronic Numerical Integrator and Computer
FLOPS	: Floating Point Operations Per Second
GIGO	: Garbage in Garbage Out
IBM	: International Business Machine
IC	: Integrated Circuit
ICR	: Intelligent Character Recognition
IEEE	: Institute of Electrical and Electronics Engineers
LAN	: Local Area Network
LSI	: Large Scale Integration
MIDI	: Musical Instrument Digital Interface
MIPS	: Million Instructions Per Second
MOEMS	: Micro-Opto-Electro-Mechanical System
PCB	: Printed Circuit Board
PCI	: Peripheral Component Interconnect
PDA	: Personal Digital Assistant
POST	: Power On Self Test
RISC	: Reduced Instruction Set Computing
SCSI	: Small Computer System Interface
SMPS	: Switched Mode Power Supply
SSI	: Small Scale Integration
ULSI	: Ultra Large Scale Integration
UNIVAC	: Universal Automatic Computer
UPS	: Uninterruptible Power Supply
USB	: Universal Serial Bus
VGA	: Video Graphics Array
VLSI	: Very Large Scale Integration

Must Read : Exam Booster

- ✧ The user in the computer is called Human Ware.
- ✧ A **turbo switch** is used to reduce and increase the processing speed of the computer.
- ✧ **Raw facts** are called **data** and **meaningful data** is called **information**.
- ✧ **Martin Cooper** invented the **mobile phone**.
- ✧ **RFID** stands for **Radio Frequency Identification**. It is a data collection technology that uses electronic tags to store data.
- ✧ HGA stands for **Hercules Graphics Adapter**. This is a video card.
- ✧ A **single bus structure** is primarily found in **mini** and **microcomputers**.
- ✧ The Apple-I computer was built by **Stephen Wozniak** and **Steven Jobs**.
- ✧ The difference between people who use (use) computers and the Internet and those who are deprived of them is called the **Digital Divide**.
- ✧ The first computer in India was installed at the **Indian Statistical Institute (ISI)**, Kolkata.
- ✧ **Vinod Dham** is related to the creation of the **Pentium chip**.
- ✧ The development of the world's **first microprocessor** was done by the **Intel company in 1971**
- ✧ IC chips and transistors are made of semiconductor **materials silicon or germanium**.
- ✧ The inventor of the integrated circuit was **J. S. Kilby**.
- ✧ The laptop was invented by **Adam Osborne** in 1981.
- ✧ The capacity of a **computer is limited**.
- ✧ The main part of the Eniac computer was a **valve**.
- ✧ **Dr. Raj Reddy** is the first Indian to have a Ph.D. in computer science.
- ✧ **Celeron, Pentium** and **Core** are the design of computer processors in order.
- ✧ The first book on **Personal Computers, "Computer Liberation and Drum Machine"** was written by Ted Nelson.

57. Which technology used in the classification of integrated circuits is mismatched?
 (A) SSI - Small Scale Integration
 (B) MSI - Medium Scale Integration
 (C) LSI - Large Scale Integration
 (D) LSI - Low Scale Integration
58. The main component of the fourth generation was...
 (A) Large Integrated Circuit
 (B) Transistor
 (C) Integrated Circuit
 (D) Vacuum Tube
59. The basis for the classification of I.C. (I.C.) is...
 (A) Number of Transistors
 (B) Type of Computers
 (C) Manufacturing Company
 (D) Number of Diodes
60. The introduction of magnetic tape occurred in which generation?
 (A) First (B) Second (C) Third (D) Fourth
61. The first digital computer built with IC chips is known as...
 (A) Apple-I (B) VAX-780
 (C) IBM-1620 (D) IBM-System/360
62. The new institution established to implement the fifth generation project is called...
 (A) Institute for New Generation Computer Technology (ICOT)
 (B) Ministry of Internal Trade and Industry (MITI)
 (C) Microelectronic Computer Technology Corporation (MCC)
 (D) Strategic Computer Program (SCP)
63. In the fifth generation of computers, what technique was the VLSI technology converted into?
 (A) VLSI (B) ULSI
 (C) KLSI (D) SSI
64. The full form of the word ULSI used in computer chip technology is...
 (A) Ultra Large Short Integration
 (B) Ultra Large Scale Integration
 (C) Usable Large Scale Integration
 (D) Unique Large Scale Integration
65. Who is known as the father of Artificial Intelligence?
 (A) Charles Babbage (B) Dennis Ritchie
 (C) John McCarthy (D) Tim Patterson
66. Match the following.
- | | |
|----------------------------|-------------------------------|
| Set-1 | Set-2 |
| (I) Von Neumann | (a) First Generation Computer |
| (II) ENIAC | (b) Stored Program concept |
| (III) IBM-360 | (c) Third Generation Computer |
| (A) I - c, II - b, III - a | (B) I - b, II - c, III - a |
| (C) I - b, II - a, III - c | (D) I - a, II - c, III - b |
67. Choose the matching from the Components shown in the development of the computer.
- | Generation | Component |
|--|-----------------|
| (a) First Generation | I. IC |
| (b) Second Generation | II. Vacuum Tube |
| (c) Third Generation | III. ULSI |
| (d) Fifth Generation | IV. Transistor |
| (A) (a) - II, (b) - IV, (c) - III, (d) - I | |
| (B) (a) - II, (b) - IV, (c) - I, (d) - III | |
| (C) (a) - IV, (b) - II, (c) - I, (d) - III | |
| (D) (a) - III, (b) - II, (c) - I, (d) - IV | |
- Characteristics of Computer**
68. The full form of GIGO used in computer characteristics is...
 (A) Give in Give Out
 (B) Go in Go Out
 (C) Garbage in Garbage Out
 (D) None of these
69. The speed of a computer processor can be measured in?
 (A) Megahertz (B) Bits per Second
 (C) Lux (D) Horsepower
70. When you provide the appropriate program and necessary data once, the computer does not need human intervention. This characteristic is called...
 (A) Accuracy (B) Reliability
 (C) Versatility (D) Automatic
71. A computer is a machine and is used with various characteristics to perform a task. These characteristics include:
 (A) Accuracy (B) Versatility
 (C) Confidentiality (D) All of the Above
72. Which of the following is not a valid characteristic of a computer system?
 (i) Intellectual Level (IQ)
 (ii) Accountability
 (iii) Versatility
 (iv) Diligence
 (A) ii, iii (B) i, iv (C) iii, iv (D) i, ii
73. The speed of a computer system is measured in...
 (A) RISC (B) MIPS
 (C) MICS (D) UNIT
74. Which of the following is a limitation of a computer system?
 (A) Purity (B) Speed
 (C) Lack of Intelligence (D) Storage Capacity

Answer-key

- 57.(D) 58.(A) 59.(A) 60.(B) 61.(D) 62.(A) 63.(B) 64.(B) 65.(C) 66.(C)
 67.(B) 68.(C) 69.(A) 70.(D) 71.(D) 72.(D) 73.(B) 74.(C)

249. is unidirectional, originating from the CPU and accessing the memory unit and input/output units.

- (A) Data Bus (B) Address Bus
(C) Control Bus (D) Instruction Block

250. The CPU issues addresses, data, and control signals and receives instructions, data, status signals, and interrupt requests. This communication is done through the system bus. Therefore, an essential component of the CPU is an interface for the system bus, which is called...

- (A) Bus Control Block

- (B) Instruction Block
(C) Address Block
(D) Control Sequencer/Control Generator

251. Match the correct one:

Software Product	Types
(a) CRT	(i) Intelligent character recognition
(b) WSI-Integration	(ii) Output Devices
(c) CPU	(iii) CMOS-Technology
(d) ICR	(iv) ALU, Control Unit, Register

- (A) a-ii, b-iii, c-iv, d-i (B) a-i, b-iii, c-iv, d-ii
(C) a-ii, b-iii, c-i, d-iv (D) a-ii, b-i, c-iii, d-iv

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

- IBM system / 360 is an example of which of the following? [CET 10+2 Level, 24.10.24 (1st Shift)]
(A) Second Generation Computer
(B) Fourth Generation Computer
(C) Third Generation Computer
(D) First Generation Computer
- Which of the following units of the processor monitors all parts of the computer and gives them proper instructions? [CET 10+2 Level, 24.10.24 (1st Shift)]
(A) Memory Unit
(B) Control Unit
(C) Input Unit
(D) Arithmetic and Logic Unit
- The full form of "U S B" is [CET 10+2 Level, 22.10.24 (IInd Shift)]
(A) Universal Serial Bus [JRA Accountant Re Exam-2016]
(B) Universal Series Bus
(C) Universal Sequence Bus
(D) Uniform Series Bus
- From which generation of computers did the use of the integrated circuit (IC) begin? [CET 10+2 Level, 22.10.24 (1st Shift)]
[CET Gr. Level, 27.9.24 (1st Shift)]
[Raj. H.M. Sanskrit Education Exam 11.10.2021]
[Raj. Police Exam 07.11.2020; Raj. Librarian Grade-3 (13.11.2016)]
(A) First Generation (B) Second Generation
(C) Third Generation (D) Fourth Generation
- Data is transferred between the different components of the computer system using physical wires; they are called... [CET 10+2 Level, 22.10.24 (IInd Shift)]
(A) CPU (B) Flowchart
(C) Bus (D) Van
- Which of the following is not a bitwise operator? [CET Gr. Level, 28.09.24 (IInd Shift)]
(A) << (B) .
(C) & (D) >>
- That characteristic of a computer in which programs, information and data are stored, is called... [CET Gr. Level, 28.09.24 (IInd Shift)]
(A) Speed (B) Accuracy
(C) Versatility (D) Storage Capacity
- Which of the following applications of the computer is mainly related to the medical field? [CET Gr. Level, 27.9.24 (IInd Shift)]
(A) Creating advertisements
(B) Clearly viewing 3D objects
(C) Providing distance education
(D) Assisting in surgery
- Which of the following is not the category of a computer? [CET Gr. Level, 27.9.24 (IInd Shift)]
(A) Micro Computer (B) Mini Computer
(C) Mainframe Computer (D) Parallel Computer
- Which of the following best describes the functions of the control unit? [CET Gr. Level, 27.9.24 (IInd Shift)]
(A) Control of the operation of memory, processor and input/output devices
(B) Execution of logical operations
(C) Converting external (external) data into a form that the computer understands
(D) Execution of arithmetic operations
- Which characteristic of a computer does it easily perform various types of tasks? [CET Gr. Level, 27.9.24 (IInd Shift)]
(A) Speed (B) Versatile
(C) Reliability (D) Diligence

Answer-key

- 249.(B) 250.(A) 251.(A)
1.(C) 2.(B) 3.(A) 4.(C) 5.(C) 6.(B) 7.(D) 8.(D) 9.(D) 10.(A) 11.(B)

2

Input and Output Devices

Working of Input-Output

- ❖ The functionality of a computer system operates on the principle of IPO (Input-Process-Output).

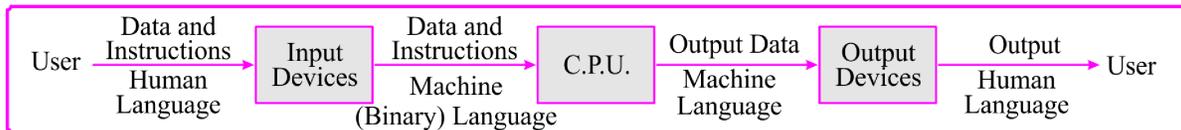


Image: Computer Input-Output Process

- ❖ In the Input-Process-Output functionality, the user provides input to the computer. The computer processes the input and gives the user output.
- ❖ IPO is divided into three steps: Input, Process, Output.
- ❖ Input and output devices are used to establish contact between the user and the computer.

Input Devices

- ❖ A computer is a machine that does not understand human language; it understands machine language or binary language only. However, the user enters data, information, and instructions into the computer in human language, i.e., High-Level Language.
- ❖ Before input is given to the computer, it is necessary to convert data and instructions in human language into machine language or binary language.
- ❖ Devices that convert data and instructions given by the user in human language or High-Level Language into a language understandable by the computer (machine language or binary language) are called input devices.
- ❖ Devices through which data and instructions are entered into the computer are called input devices.
- ❖ The main devices used for input in the computer are— **Keyboard, Mouse, Scanner, Trackball, Joystick, Lightpen, Stylus, Touch screen, Touchpad, Digital Camera, Video Camera, Web Camera, Digitiser, Biometric Sensor Machine, Microphone, Voice or Speech Recognition System, Kimball Tag Reader, BCR, MICR, OMR, OCR, SCR, QR Reader, etc.**

Keyboard

- ❖ The **keyboard** is the most commonly used input device for data entry into the computer.
- ❖ The keyboard was invented in **1868** by **Christopher Latham Sholes**.

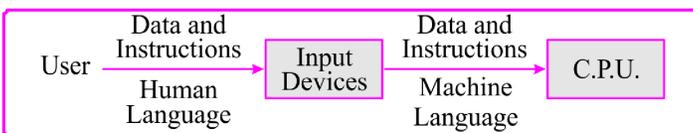


Image: Input Device Functionality

- ❖ Input devices are devices that accept data and instructions, convert them into binary or machine form, and make them usable by the computer.
- ❖ The data to be entered into any computer can be in the format of text, sound, picture, and video.
- ❖ Input devices are used to enter/record/type/submit data into the computer and capture information and commands.
- ❖ The keyboard is called the primary input device or the standard input device of the computer.
- ❖ The keyboard works on the principle of CUI (Character User Interface) like a **typewriter**.
- ❖ The keyboard is connected to the CPU via the PS2 (Plug Station 2) port. Nowadays, the keyboard is also connected to the computer via the **USB (Universal Serial Bus) port**.
- ❖ Radio waves are used in the wireless keyboards currently in use.
- ❖ The keyboard is also called the **QWERTY** board. QWERTY is a type of keyboard layout. AZERTY and

- ❖ DVORAK are also types of keyboard layouts.
- ❖ The number of buttons in a keyboard commonly used today is usually **104**, but based on the availability of functions in the keyboard, there are also **108** buttons. That is, the number of buttons may also vary in different keyboards.
- ❖ The buttons (keys) available on the keyboard are divided as follows—
 - ❖ Numeric Keys
 - ❖ Alphabet Keys

- ❖ Function Keys
- ❖ Editing Keys
- ❖ Control Keys
- ❖ Alphanumeric Keys
- ❖ Toggle Keys
- ❖ Navigation Keys
- ❖ Combination/Modifier Keys
- ❖ Special Keys



Numeric Keys

- ❖ Each keyboard has a key pad with buttons **similar to a calculator** on the **right side**, which is called the **numeric key pad**.

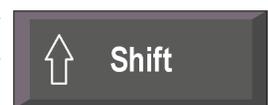
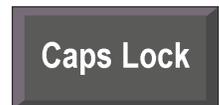
❖ The numeric key pad has a total of **17 buttons**. The numeric key pad has numbers from 0-9, which are called **numeric keys**, the number of which is 10.



- ❖ The buttons of the Numeric Keypad are used as an alternative to the mouse to move the cursor from one place to another through the Keyboard, which is called **Cursor Control Keys**.
- ❖ When Num Lock is on, a green light remains on and in the ON state of the numeric key pad, Numbers can be used for Typing.
- ❖ When the Num Lock button is OFF, the numbers of the Numeric Keypad cannot be typed, and then the buttons with numbers are used for Arrow Key, End, Home, Page Up, Page Down, Insert and Delete Function.

Alphabet Keys

- ❖ Each keyboard has a total of 26 **Alphabet Keys** which are from **A to Z**. Letters are typed in the form of Capital and Small Letter through these buttons only.
- ❖ If **Caps Lock is on**, the letter being typed will be typed in Capital Letter, while if Caps Lock is off, the letter being typed will be typed in Small Letter.
- ❖ Pressing any Alphabet Key with the **Shift button** will type that letter in **Capital letter**.



Function Keys

- ❖ The buttons that are in the form of **F1, F2,.....F12** in a row at the top of each keyboard are called **Function Keys**.

❖ Each keyboard has **12 function Keys**, which are from **F1 to F12**.



- ❖ It is used in computer aided design (CAD) by architects and engineers to digitise the design of maps/maps.

Bar Code Reader/Recognition

- ❖ **Bar code is read by BCR, bar code is in the form of black and white lines on any product**, on which the information related to the product is hidden, which is decoded by the bar code reader and displayed on the monitor screen by converting it into letters and numbers.
- ❖ Bar code was invented by **Joseph Woodland** and **Bernard Miller**.
- ❖ Bar code reader is used in **library, bank, shopping mall, super market, departmental stores** for quick billing and record keeping (Inventory management) etc.



Image: Bar Code



Image: Bar Code Reader

- ❖ The most commonly used bar coding pattern is **UPC- (Universal Product Code)**.
- ❖ Bar code is a **13 digit code. BCR (Bar Code Reader)** is used to read the bar code.
- ❖ Laser Beam is used in Bar code Reader.

MICR-Magnetic Ink Character Reader/Recognition

- ❖ **MICR** reads the letters printed in **magnetic ink on any paper**.
For example—Some special letters printed in magnetic ink on cheques in all banks are read by MICR.

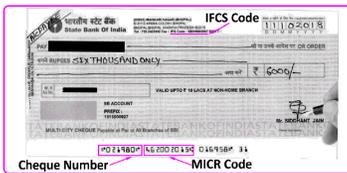


Image: MICR Code

- ❖ It reads the bottom strips of the cheque. Cheque number is printed in special font using magnetic ink below each cheque which MICR reads.



Image: Magnetic Ink Character Reader

- ❖ With its use, **cheque processing is faster in banks**.
- ❖ MICR Code mainly has **9 digits**, the first three digits tell the name **of the city**, the **next three digits** tell the name of **the bank** and the **last three digits** tell about **the bank branch**.

OCR-Optical Character Reader/Recognition

- ❖ OCR is a combination of scanner and special software, which converts printed data or **handwritten data** into **ASCII (American Standard Code For Information Interchange)**.

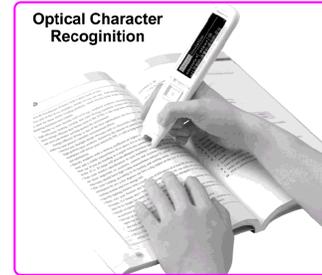


Image: Optical Character Reader (OCR)

- ❖ Optical Character Reader was invented by **E.G. Burg**.
- ❖ OCR is used to read old documents and for Electric Filing of paper records.
- ❖ OCR is used to store books in computer.
- ❖ Editing/formatting can be done in the letters read by OCR.
- ❖ OCR can translate text into editable text without scanning.
- ❖ It can convert the **Bitmap Image of characters into** Editable text.

OMR-Optical Mark Reader/Recognition

- ❖ Through this, the presence and absence of the mark made by pen or pencil on any paper is detected, i.e. OMR recognizes the mark made on the paper which can be read by the computer.
- ❖ OMR is used to check the answers of **alternative questions (OMR Sheet)** in competitive examination.
- ❖ It is used to check the **objective answer book**.
- ❖ This is helpful in selecting eligible persons.

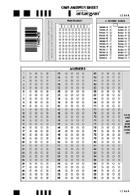


Image: OMR



Image: OMR Reader

- ❖ The input device OMR (Optical Mark Reader) is used to scan the marked answer book of **multiple choice question paper**.

100. The full form of BCR used in reading the secret code of the product is -

- (A) Binary Code Reader (B) Bar Code Read
(C) Bar Code Reader (D) None of these

101. By what type of scanner is Universal Product Code (UPC) read?

- (A) Magnetic Ink Character Recognition System
(B) Optical Character Recognition System
(C) Flatbed
(D) Barcode Reader

MICR

102. is the technology used by banking or other finance industry for quick task execution

(processing) of checks-

- (A) OCR (B) OMR (C) MICR (D) ISBN

103. By whom are the letters printed with magnetic ink on a paper read?

- (A) MICR (B) OCR (C) Mouse (D) SCR

104. MICR stands for-

- (A) Magnetic Input Character Reader
(B) Magnetic Ink Character Recognition
(C) Medium Ink Character Reader
(D) Medium Input Character Reader

105. Which of the following input devices is used to read/verify checks in banking industries?

- (A) OCR (B) OMR
(C) MICR (D) Card Reader

106. Optical input device allows the computer to use light as a source of input. Which of the following is an example of an optical input device -

- (i) Scanner (ii) MICR
(A) Only (i) (B) Neither (i) nor (ii)
(C) Only (ii) (D) (i) and (ii) both

OCR

107. What is the scanning technology that reads text located in a pre-determined location called?

- (A) OMR (B) OCR (C) SCR (D) BCR

108. By whom are handwritten and printed/printed letters on a paper read and can be edited?

- (A) BCR (B) OCR
(C) Scanner (D) Digitizer

109. Which of these devices can be used to direct read image printed text?

- (A) OCR (B) OMR
(C) MICR (D) All of the above

110. The main function of the input device OCR made by the combination of scanner and special software is-

- (A) Reading handwritten and printed letters on paper
(B) Editing and formatting the read letters
(C) Reading old documents and doing Electric Filling
(D) All of the above

111. The full name of input device OCR is -

- (A) Optical Character Reading
(B) Optical Character Recognition
(C) Option Chart Reader
(D) Optical Character Read

OMR

112. Which input device is commonly used to read the selection of candidates in multiple choice questions in competitive examination?

- (A) Magnetic Ink Card Reader
(B) Optical Bar Reader
(C) Bar Code Reader
(D) Optical Mark Reader

113. Which of the following types of scanners reads characters, numbers and codes with the help of a light source and is used for objective type answer sheets in competitive examinations?

- (A) Optical Character Recognition
(B) Optical Mark Recognition
(C) Optical Barcode Recognition
(D) Magnetic Ink Character Recognition

114. Which of the following is used to identify the type of a pre-defined mark made with a pencil or pen and the mark on the paper?

- (A) Barcode reader (B) OCR
(C) Scanner (D) OMR

115. The input device OMR used to scan/check the marked answer book of a multiple choice question paper is called -

- (A) Option Mark Reader
(B) Optical Mark Reader
(C) Optical Mode Recognition
(D) Option Mark Reader

SCR, QR

116. Which coding pattern is currently being used in place of bar codes?

- (A) KR Code (B) AR Code
(C) QR Code (D) LR Code

117. What is the total length in bits of the QR code (QR Code) used in digital payment systems?

- (A) 2 bits (B) 15 bits (C) 8 bits (D) 16 bits

Answer-key

- 100.(C) 101.(D) 102.(C) 103.(A) 104.(B) 105.(C) 106.(A) 107.(B) 108.(B) 109.(A)
110.(D) 111.(B) 112.(D) 113.(B) 114.(D) 115.(B) 116.(C) 117.(B)

228. 'Retina scan' is a part of which?

- (A) Biometrics (B) Biodegradation
(C) Biology (D) Biogas

229. Match the following-

Set-1

Set-2

- | | |
|----------------------------|---|
| (I) Microphone | 1. Identifies text characters from scanned files |
| (II) OCR | 2. Performs data processing by touching the screen directly |
| (III) Webcam | 3. Converts sound into electrical energy |
| (IV) Light Pen | 4. Video Chat |
| (A) I-1, II-3, III-2, IV-4 | (B) I-1, II-3, III-4, IV-2 |
| (C) I-3, II-1, III-2, IV-4 | (D) I-3, II-1, III-4, IV-2 |

230. Specify whether the following statement is true or false-

- (I) A printer can either be Impact or Non Impact.
(II) In dot-matrix printers, continuous paper can be used instead of separate sheets.
(III) A plotter can generate high-quality graphics or drawings using an ink pen.
- (A) I-True, II-True, III-True
(B) I-True, II-False, III-False
(C) I-True, II-False, III-True
(D) I-True, II-True, III-False

231. Which of the following groups has only output devices-

- (A) Scanner, Printer, Projector, Monitor
(B) Printer, Plotter, Mouse, Speaker
(C) Speaker, Printer, Projector, Monitor
(D) Projector, Speaker, Monitor, Digitiser

232. Joystick allows movement of-

- (A) 90° angle (B) 180° angle
(C) 360° angle (D) 45° angle

233. The process of removing unwanted external parts from the image is.

- (A) Cloning (B) Scaling
(C) Cropping (D) Anti-Aliasing

234. Which is the wildcard character to match any number of characters?

- (A) Hyphen Sign (B) Ampersand Sign
(C) Asterisk Sign (D) Dollar Sign

235. What is a dumb terminal?

- (A) An embedded microprocessor
(B) Independent processing capacity
(C) A keyboard and screen
(D) Extensive memory

236. Which of the following is related to input device scanner?

- (A) Laser (B) Twain
(C) Cartridge (D) Media

237. Identify True/False in the following statements.

- (a) Optical Mouse - It senses light to detect movement.
(b) Track Ball - It is a text scanning device.
(c) EPROM- Its content can be erased only once.
- (A) a - True, b - False, c - False
(B) a - False, b - True, c - True
(C) a - True, b - True, c - False
(D) a - True, b - False, c - True

238. Which of the following options indicates only input devices?

- (A) Mouse, Trackball, Joystick, Speaker
(B) Keyboard, Digitiser, Printer, Light Pen
(C) Scanner, OMR, OCR, MICR
(D) OMR, BCR, SCR, Projector

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. Which of the following groups is related only to input devices? [CET 10+2 Level, 24.10.24 (IInd Shift)]

- (A) Mouse, keyboard, plotter
(B) Mouse, keyboard, scanner
(C) Mouse, keyboard, monitor
(D) Mouse, keyboard, printer

2. A device that is used in the operation of industrial robots, computer game plays, and as equipment of training simulators in flight, is called-

[CET 10+2 Level, 24.10.24 (Ist Shift)]

- (A) Keyboard (B) Joystick
(C) Light Pen (D) Mouse

3. Which of the following pairs is not correct with reference to 'keyboard keys'?

[CET 10+2 Level, 23.10.24 (IInd Shift)]

- (A) Control key-Tab
(B) Command key-Caps Lock
(C) Punctuation key- (;) Semicolon
(D) Navigation key - Page Up

Answer-key

228.(A) 229.(D) 230.(A) 231.(C) 232.(C) 233.(C) 234.(C) 235.(C) 236.(B) 237.(A) 238.(C)
1.(B) 2.(B) 3.(B)

4. Which of the following is an input device? [CET 10+2 Level, 23.10.24 (IInd Shift)]
 (A) Speaker (B) Printer
 (C) Mouse (D) Visual Display Unit
5. Which of the following is a printer; silent, high speed and high quality? [CET 10+2 Level, 23.10.24 (Ist Shift)]
 (A) Typewriter (B) Dot matrix printer
 (C) Inkjet printer (D) Laser printer
6. Which of the following is an output device? [CET 10+2 Level, 23.10.24 (Ist Shift)]
 (A) Mouse (B) Keyboard
 (C) Speaker (D) Joystick
7. Which of the following is not an input device of the computer? [CET 10+2 Level, 22.10.24 (IInd Shift)]
 (A) Trackball (B) Image Scanner
 (C) Joystick (D) Monitor
8. Which of the following input devices allows the entry of alphanumeric integers and special integers into the computer? [CET Gr. Level, 28.09.24 (IInd Shift)]
 (A) Keyboard (B) Mouse
 (C) Monitor (D) Printer
9. Which of the following is not a printer type? [CET Gr. Level, 28.09.24 (Ist Shift)]
 (A) Inkjet Printer (B) Dot Solid Printer
 (C) LaserJet Printer (D) 3D Printer
10. The hardware of the computer system, which is used to provide information, control data, and signals from the external world is called - [CET Gr. Level, 28.09.24 (Ist Shift)]
 (A) Output Equipment
 (B) Secondary Memory Device
 (C) Keyboard and Mouse
 (D) TFT Monitor
11. Which of the following is not an input device? [Hostel Superintendent Exam, 28.08.2024]
 (A) Plotter
 (B) Bar Code Reader
 (C) Optical Mark Recognition (OMR)
 (D) Magnetic Mark Recognition (MICT)
12. Which of these printing technologies is the most advanced? [Raj. Jr. Accountant-11.02.2024]
 (A) 3-D Printing (B) Thermal Printing
 (C) Laserjet Printing (D) Inkjet Printing
13. is an example of Impact Printer- [Raj. Information Assistant -21.01.2024]
 (A) Laser Printer (B) Inkjet Printer
 (C) Deskjet Printer (D) Dot Matrix Printer
14. Mahi, a student of class 9, goes to the bank for the first time with her father. She sees that her father is given a small booklet which her father calls a cheque book. She opens it and finds that there is already some printed information on it. Some of these information are the same on each page but one number is written sequentially. She tries to change it but fails. Why is she unable to change it? Identify this specific feature of the cheque. [Raj. Information Assistant -21.01.2024]
 (A) OMR Code (B) BAR Code
 (C) QR Code (D) MICR Code
15. Dot Metrics Printer is known as Serial Printer. It prints (prints) a at a time- [Raj. Information Assistant -21.01.2024]
 (A) Word (B) Page (C) Letter (D) Line
16. button of the mouse is used to display various commands related to a selected graphical component, which are in the form of a list letter- [Raj. Information Assistant -21.01.2024]
 (A) Left (B) Middle (C) Right (D) Diode
17. An optical mouse has a light emitting device called a- [Raj. Information Assistant -21.01.2024]
 (A) Switch (B) Triode (C) Diode (D) Bulb
18. In an operating system 'keyboard' uses a definite QWERTY configuration. Although it can be damaged by key loggers, it is more secure than ordinary 'keyboard' hardware- [Raj. Information Assistant -21.01.2024]
 (A) On Screen (B) Online Virtual
 (C) Software (D) Semi-Soft
19. There are three different types of squares in QR. The first two are on the upper sides and the last one is on the lower- [Raj. Information Assistant -21.01.2024]
 (A) Left (B) Top
 (C) Right (D) Middle
20. Apart from input, storage, process, and output, what is the fifth operation performed by the computer? (A) Control (B) Display (C) Debug (D) Monitor
21. 'DPI' is - [Raj. CET 10+2, 11.02.2023]
 (A) Dots Per Inch (B) Digits Per Unit
 (C) Dots Pixel Inch (D) Diagram Per Inch
22. Which of the following equipment has a cylindrical drum, which is called a 'photoreceptor'? [Raj. CET 10+2, 05.02.2023]
 (A) Key Board (B) Laser Printer
 (C) Joystick (D) Flatbed Plotter
23. Which of the following is a hard copy device? [Raj. CET 05.02.2023]
 (A) Drum Printer (B) Monitor
 (C) Projector (D) Speaker

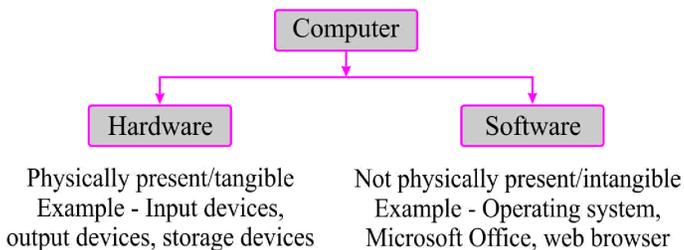
Answer-key

- 4.(C) 5.(D) 6.(C) 7.(D) 8.(A) 9.(B) 10.(C) 11.(A) 12.(A) 13.(D)
 14.(D) 15.(C) 16.(C) 17.(C) 18.(A) 19.(A) 20.(A) 21.(A) 22.(B) 23.(A)

3

Hardware and Software (Operating System)

- ❖ A computer system is comprised of hardware and software.
- ❖ The computer system is divided into two parts for operation:
 1. Hardware
 2. Software



Computer Hardware

- ❖ Hardware refers to the physical components of a computer that are tangible.
- ❖ The **physical parts** of a computer are called **hardware**. Hardware can be **physically touched**, meaning all parts of the computer that we can see, hear, and touch are hardware.

Examples—Input devices, output devices, processing devices, memory devices, etc.
- ❖ Examples of **hardware devices** includes keyboard, mouse, printer, monitor, processor, and hard disk.
- ❖ The **CPU** (Central Processing Unit) is also a **hardware** device used to process data.

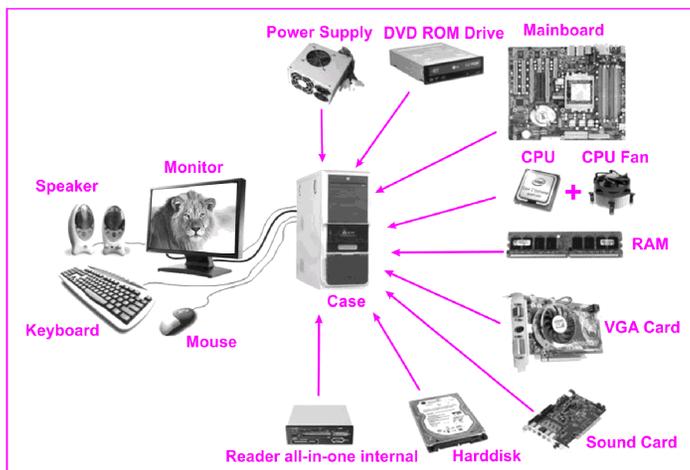


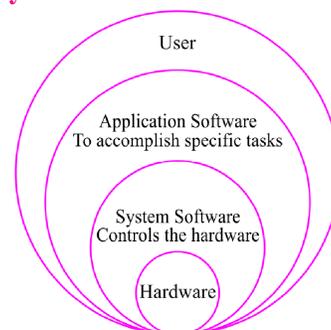
Image: Various Computer Hardware

Computer Software

- ❖ A set of instructions, called as program, is needed to operate hardware devices. Software is created by combining multiple programs.
- ❖ A group of instructions is called as **program**, and a **group of programs** is called as **software**.
- ❖ A person who **writes and tests computer programs** is called a programmer.
- ❖ Software is **abstract**, means it cannot be physically touched.
- ❖ All operations in computers, mobile phones, etc., are executed by software. Hardware and software are **complementary to each other**.
- ❖ The process of **establishing communication between hardware and software** is called an interface.
- ❖ The primary purpose of software is to **convert data into information**. All software are **digital and electronic**.
- ❖ Software can be **seen and heard** but **cannot be physically touched**.
- ❖ Instructions related to when and how hardware devices should operate are provided through software. Software activates the hardware and tells it what to do and when to do it.
- ❖ The legal right to use software based on specific **restrictions** is called a **software licence**.

Types of Software

1. System Software
2. Application Software
3. Utility Software



- (iv) **Process Management**—Under this, it is determined how much time the processor is to be given to process a program and how the work is to be done.
- ❖ If more than one process is running in the computer, then the management of the CPU and other devices to complete all those processes is done by process management.
 - ❖ Storing the input/data given by an input device in the correct location in memory, processing the input data, and sending the result after processing to the output device, etc., are performed by the operating system.
- (v) **Security Management**—Through **security management**, protection is provided to the resources and information of the computer system against **unauthorised access**. For example, when the user turns on the computer, the computer asks for a password, in this way the OS prevents your computer system from unauthorised access.
- (vi) **Integrity Management**—Through this function, data and programs are maintained in an integrated form so that the data never interfere with each other.
- (vii) **Device Management**—The operating system manages various types of devices and drivers while operating the computer. For example, the operating system runs sound drivers, Bluetooth drivers, graphics drivers, etc. Device management also determines which process will get the device when and for how long.
- (viii) **Network Management**—Used to manage network components.
- (ix) **Sound Management**—Managing sound, voice, etc.

Examples of Operating System

Microsoft Disk Operating System (MS-DOS)

- ❖ This is a **single-user** and character/command line user interface-based operating system.
- ❖ Its first version, **MS DOS 1.0**, was created by **Microsoft** and **IBM** in August **1981**.
- ❖ This is **Microsoft's first operating system** installed on personal computers.
- ❖ MS DOS is also called a **command-line operating system**. This operating system has two types of commands:
 - (i) Internal Commands of MS-DOS:- In MS-DOS, Copy, Type, Time, Date, Cls, Dir, Ven, md, Prompt Ver, Vol etc. are internal commands.
 - (ii) External Commands of MS-DOS:- In MS-DOS, Chkdsk, diskcopy, format, xcopy, label, tree, backup, xstore etc. are external commands.
 - (iii) CONFIGSYS is used to configure DOS and load device drivers.

- (iv) AUTO EXEC.BAT is read on startup by all versions of DOS.

Linux Operating System

- ❖ This is an **open-source** software. Linux was developed by **Linus Torvalds**. Its first version came in 1991.
- ❖ Linux is **multi-user, multitasking, and multiprocessing** software.
- ❖ **Linux has three main parts:**
 1. Kernel
 2. System Library
 3. System Utility
- Note:** - (i) The **identification mark** (Mascot) or mascot symbol of Linux is a **penguin** named **Tux**.
(ii) **Redhat** is related to the Linux operating system.
- ❖ Debian, Fedora, Mint, and Ubuntu etc. are Linux-based operating system versions. Ubuntu is an open-source operating system.

Unix Operating System

- ❖ It was developed in 1969 by **Ken Thompson & Dennis Ritchie** and employees of AT&T Bell Laboratory.
- ❖ It was first written in assembly language. But in 1973, it was rewritten in the 'C' programming language.
- ❖ Unix is a multi-user, multitasking, and time-sharing operating system.
- ❖ **Note-LINUX** is a type of **Open Source Software**, while **Unix** is a **proprietary software** that can be used as free and open source.

Macintosh Operating System (Mac OS)

- ❖ The Macintosh operating system came on **January 24, 1984**.
- ❖ Macintosh was the **first** commercially successful **PC**, which was made available in a **graphical user interface** instead of a command-line interface.
- ❖ Macintosh is a more secure operating system based on single-user and **graphical user interface**.
- ❖ The latest version of Macintosh O.S. is Mac O.S. 15.3.1 Sequoia, which was launched in February 2025.

BOSS (Bharat Operating System Solutions)

- ❖ This operating system was created by C-DAC in 2007.
- ❖ This is designed to promote Free & Open Source Software in India.
- ❖ Its latest version is 10.0 (Pragya), which was released in March 2024.

Solaris

- ❖ This O.S. was developed by Sun Microsystems in the year 1992.
- ❖ This operating system is called Sun O.S. This is based on Unix O.S.

Mobile/Smart Phone Operating System

- ❖ Just as an operating system is used to operate a computer system. Similarly, various operating systems

3. Menu

- ❖ The list of options or options that appears in any program is called the menu.
- ❖ The list of programs and the list of installed programs available in the computer system is visible on checking.

4. Screen Saver

- ❖ When the computer remains on but no work is done on it for a long time, the same picture keeps coming on the computer, due to which the focus of the computer remains centred on the same place and there is a risk of the computer screen burning, then to avoid this, moving shapes are used which change the focus of the computer and **provides security** to the computer, it is called the **screen saver**. The screen saver blanks the computer screen.

5. Recycle Bin

- ❖ Recycle Bin is a folder in the computer that stores (stores) **temporarily** deleted files or folders.
- ❖ On deleting a file with the help of Delete Key, it is temporarily deleted and stored in the Recycle Bin.
Note:- Restore command is used to bring the **file back into the computer** from the Recycle Bin.

- ❖ If the file is deleted by **Shift+Delete** key, then the file is not stored in the recycle bin and is **permanently** deleted from the computer.



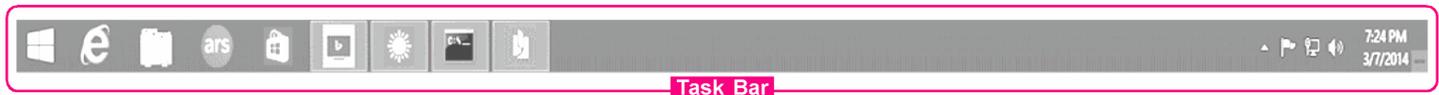
Note:-The file that is temporarily deleted from the computer and stored in the recycle bin uses the space of the computer memory only.

6. Windows Explorer

- ❖ Windows Explorer is a file manager application that is used to **increase the utility of the system by managing files and folders** in the computer system.

7. Task Bar

- ❖ The thin horizontal strip at the **bottom** of the desktop in the computer, with the **start button** at one end and the clock and some **small icons** on the other, is called the task bar.



- ❖ In the taskbar, the start or Windows button on the left side and the date, time, network sign, volume sign are displayed on the **system tray on the right side**.

- ❖ Most commonly used programs can be accessed quickly through the task bar. Through this, various open applications can be quickly swapped.

- ❖ **All pinned programs** can be seen **on the task bar**.

Note:-Status bar is the bar located just above the task bar which tells the status of the program, document, page and the number of paragraphs, words etc.

- ❖ **System Tray**—The entire area that has icons to hold the programs running in the background of the computer system, such as date and time and many icons next to them, is called the system tray.



System Tray

8. Start Button

- ❖ The start button is a button located on the left side of the task bar of the window OS, on which the Microsoft logo (MS Window Logo) is placed. Clicking on it shows various menus, which is called the start menu.

150. What does the compiler do?

- (A) First scan the entire programme and then translate it into machine code.
- (B) Only translate the entire programme.
- (C) Only scan the entire programme.
- (D) None of these

151. Compiler translates high level programmes into machine language. These high-level programmes are called

- (A) Software
- (B) Source Code
- (C) Compile Code
- (D) Object Code

152. Compiling creates is-

- (A) While creating programme
- (B) While watching output of programme
- (C) While executing programme
- (D) While copying programme

153. What is the full form of BASIC?

- (A) Basic All Purpose Symbolic Instruction Core
- (B) Basic Information of Computer
- (C) Beginner All Source Information Code
- (D) Beginners All Purpose Symbolic Instruction Code

154. Arrange the following languages chronologically according to their development period - (Oldest first, most modern at the end)

- (A) FORTRAN, COBOL, PASCAL, JAVA
- (B) COBOL, FORTRAN, PASCAL, JAVA
- (C) PASCAL, FORTRAN, COBOL, JAVA
- (D) FORTRAN, COBOL, JAVA, PASCAL

Application Software**155. Software that is not pre-installed in the system and is used to execute a general or specific task or purpose is called:**

- (A) Utility Software
- (B) Application Software
- (C) System Software
- (D) None

156. Software instructions created with the purpose of fulfilling the specific processing requirements of the user are called:

- (A) System Software
- (B) Micro Computer
- (C) Documentation
- (D) Application Software

157. Which of the following is application software?

- (A) Google Chrome
- (B) MS Excel
- (C) Photoshop
- (D) All of the above

158. Which of the given software is not an application software?

- (A) MS Word
- (B) MS Excel
- (C) PowerPoint
- (D) Window 7

Utility Software**159. The programme that helps to fix hardware is called:**

- (A) Utilities
- (B) Compiler
- (C) Interpreter
- (D) Assembler

160. Which of the following is not a utility software?

- (A) Backup Software
- (B) Anti-virus
- (C) Disk Tools
- (D) Web Browser

161. Which of the following is an anti-virus software?

- (A) Avira
- (B) LifeCare
- (C) Hangout
- (D) Photoshop

162. Security in computers protects from:

- (A) Hardware obsolescence
- (B) Software errors
- (C) Unauthorised access to the system
- (D) None of the above

163. A utility software programme that identifies unnecessary fragments of memory and rearranges disk space so that operation can be optimal is called:

- (A) Backup
- (B) Disk Cleanup
- (C) Disk Defragmenter
- (D) Disk Restore

164. Which device is used to back up data?

- (A) Floppy Disk
- (B) Tape
- (C) Network Drive
- (D) All of the above

165. A computer programme that troubleshoots to improve the performance of the computer machine and make it easier to use is:

- (A) System Software
- (B) Operating System
- (C) Utility Software
- (D) Application Programme

File and Folder**166. A file used in a computer is:**

- (A) A division of the computer's hard disk
- (B) A collection of related information
- (C) A group of digital data
- (D) Both B and C

167. Which data can be stored in digital format in a file?

- (A) Text
- (B) Image
- (C) Audio
- (D) All of the above

168. What is the maximum number of characters a file name can have?

- (A) 226
- (B) 255
- (C) 126
- (D) 512

169. The full name of FAT is:

- (A) File Allocation Table
- (B) File Allow Table
- (C) File Access Table
- (D) File Address Test

170. What is the full name of NTFS?

- (A) New Technical File System
- (B) New Technology File System
- (C) New Test File System
- (D) New Text File System

Answer-key

- 150.(A) 151.(B) 152.(C) 153.(D) 154.(A) 155.(B) 156.(D) 157.(D) 158.(D) 159.(A) 160.(D)**
161.(A) 162.(C) 163.(C) 164.(D) 165.(C) 166.(D) 167.(D) 168.(B) 169.(A) 170.(B)

238. Which of the following statements is false?

- (A) Windows are multitasking operating systems.
 (B) Linux is a time-sharing operating system.
 (C) Unix is both a multi-user and multitasking operating system.
 (D) DOS is a multitasking operating system, but it is not multi-user.

239. Software that can be downloaded from the Internet without any cost is called:

- (A) Freeware (B) Shareware
 (C) Dataware (D) Anti-virus

240. Software that is free to use for a set period, then must be paid for to continue use is called:

- (A) Freeware (B) Shareware
 (C) Trunky software (D) None of the above

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. A set of step-by-step processes to complete a task is called [CET 10+2 Level, 23.10.24 (IInd Shift)]

- (A) Firmware programme (B) Software bug
 (C) Hardware programme (D) Algorithm

2. Which of the following is a system software?

[CET 10+2 Level, 23.10.24 (Ist Shift)]

- (A) Excel (B) PowerPoint
 (C) MS Word (D) Linux

3. Which of the following translators converts a high-level language into a low-level language in one go?

[CET 10+2 Level, 22.10.24 (IInd Shift)]

- (A) Assembler (B) Compiler
 (C) Interpreter (D) Controller

4. Which of the following does not correspond to a valid extension for an audio file?

[CET Gr. Level, 28.09.24 (Ist Shift)]

- (A) .mid (B) .wav (C) .rar (D) .mp3

5. What is the name of the software used for specific tasks performed by the user on the computer?

[CET Gr. Level, 28.09.24 (Ist Shift)]

- (A) Operating system (B) Utility software
 (C) Artificial intelligence (D) Application software

6. Which of the following languages is not procedural?

[CET Gr. Level, 28.09.24 (Ist Shift)]

- (A) Fortran (B) Cobol
 (C) Pascal (D) Prolog

7. Which of the following is an application software?

[Hostel Superintendent Exam, 28.08.2024]

- (A) Centos (B) Mac
 (C) Firefox (D) Linux

8. A group (set) of instructions given to a computer is called [Hostel Superintendent Exam, 28.08.2024]

- (A) C.U. (B) Storage
 (C) Program (D) A.L.U.

9. Which of the following functions preserves storage space by reducing the size of the file?

[Hostel Superintendent Exam, 28.08.2024]

- (A) File scanning (B) File synthesizing
 (C) File defragmentation (D) File compression

10. is the name of a programme that acts as an interface between the device and the operating system.

[Hostel Superintendent Exam, 28.08.2024]

- (A) RAM (B) Application software
 (C) Device drivers (D) Software packages

11. Which of the following is not hardware?

[Raj. Jr. Accountant-11.02.2024]

- (A) Printer (B) Scanner
 (C) Browser (D) Monitor

12. What are the functions of an operating system?

[Raj. Jr. Accountant-11.02.2024]

1. Controls memory.
2. Controls calculations.
3. Controls process time.
4. Controls the creation and deletion of files/folders.

Select the most appropriate answer from the options given below:

- (A) Only 1, 2 and 3 (B) Only 2 and 3
 (C) Only 1, 3 and 4 (D) Only 1 and 4

13. Who developed the C language?

[Raj. Jr. Accountant-11.02.2024]

- (A) Dennis Ritchie (B) Guido van Rossum
 (C) Tim Berkel (D) Von Neumann

14. What does the operating system authorise the file system to do?

[Raj. Information Assistant -21.01.2024]

- (A) Re-arrange files based on their properties.
 (B) Create directories, maintain access and protect files from unauthorised access.
 (C) Change the file extension.
 (D) Transfer files from one computer to another.

Answer-key

- 238.(D) 239.(A) 240.(B) 1.(D) 2.(D) 3.(B)
 4.(C) 5.(D) 6.(D) 7.(C) 8.(C) 9.(D) 10.(C) 11.(C) 12.(C) 13.(A) 14.(B)

Types of ROM

- Currently used ROM is mainly of three types—
(i) PROM (ii) EPROM (iii) EEPROM

PROM	E-PROM	EE-PROM
Programmable Read Only Memory <ul style="list-style-type: none"> The data/program/software stored in it cannot be removed. That is, after the user burns the program instructions once, neither can be changed, nor can any new data be stored. The data in PROM is stored by the manufacturing company or the user while manufacturing this ROM. This type of ROM works as WORM (Write Once Read Many). WORM means writing data once and reading it repeatedly on a disk. This memory has small fuses inside which instructions are inserted through programming, and once programmed, they cannot be erased. 	Erasable Programmable Read Only Memory <ul style="list-style-type: none"> The data / program / software stored in it can be removed and rewritten using ultraviolet rays. EPROM is also called UV EPROM. It works on WORM (Write Many Read Many), that is, data can be written and read many times. The data and information present in EPROM can be erased and reprogrammed. 	Electrically Erasable Programmable Read Only Memory <ul style="list-style-type: none"> The data / program / software stored in it can be removed and rewritten using electrical pulses. EEPROM is also a WORM type of memory, that is, data can be written and read repeatedly in this memory. Most of the motherboards nowadays use this ROM. According to current technology, ROM can be updated and changed repeatedly, which requires EEPROM. Flash memory is an example of EEPROM.

2. Secondary Memory

- Secondary memory stores the data that the CPU does not currently need, and it is used by copying it to the main memory when needed.
- Secondary memory is also called **auxiliary memory**, **external memory**, **banking storage memory**, backup memory, and additional memory.
- Secondary memory is a **permanent storage memory** that is slower and cheaper than primary memory.

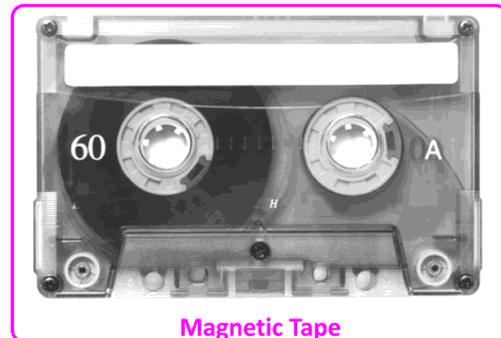
Secondary memory is used to **permanently store** the data of the computer system and access it repeatedly when needed. It has more **storage capacity and a lower data access speed**.

- Secondary memory is a **non-volatile** memory in which all stored data and information remain saved even after the computer's power supply is turned off, i.e., the data and instructions remain in it even when the power is turned off.
- Secondary memory, unlike primary memory, is not accessed directly by the CPU. To access the data of secondary memory, data is first loaded into primary memory. Then, data is sent from primary memory to the CPU to be processed.

- Examples of secondary memory are magnetic tape, magnetic disk, optical disk, electronic storage devices, and flash memory devices, the details of which are as follows:

Magnetic Tape

- Magnetic tape can be seen in the form of a tape recorder **cassette**, in which a plastic ribbon is used, and the ribbon is coated with a magnetic substance, **Magnetic Oxide**.



Magnetic Tape

- In magnetic tape, **data is accessed sequentially**, i.e., **sequential access** occurs. Data is read in a sequential manner.
- The access time of magnetic tape is measured in bytes per second (**BPS**).
- Binary data** is stored in **magnetic tape**.

171. Which of these is a primary storage device?

- (A) Hard Disk (B) Optical Disk
(C) RAM (D) Magnetic Tape

172. Match the computer memory type with its typical capacity-

Set-1

- (a) CD

Set-2

- (i) 4.7 GB to 16 GB

- (b) DVD (ii) 700 MB
(c) BD (iii) 520 GB
(d) HDD (iv) 25 GB to 50 GB
(A) a-i, b-ii, c-iii, d-iv
(B) a-ii, b-i, c-iv, d-iii
(C) a-ii, b-i, c-iii, d-iv
(D) a-ii, b-iv, c-iii, d-i

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. What is the full form of "RAM"?

[CET 10+2 Level, 24.10.24 (IInd Shift)]

- (A) Random Anonymous Memory
(B) Read Anonymous Memory
(C) Read Access Memory
(D) Random Access Memory

2. Which of the following is an optical storage device?

[CET 10+2 Level, 24.10.24 (IInd Shift)]

- (A) Punch card (B) Blue-ray Disc
(C) Hard disk (D) Tape

3. Which of the following is correct regarding RAM?

[CET 10+2 Level, 24.10.24 (Ist Shift)]

- (A) Non-volatile, temporary
(B) Volatile, temporary
(C) Volatile, permanent
(D) Non-volatile, permanent

4. Which of the following is the smallest data unit in a computer?

[CET 10+2 Level, 24.10.24 (Ist Shift)]

- (A) KB (KB) (B) GB (GB)
(C) Byte (Byte) (D) Nibble (Nibble)

5. 1 PB (Petabyte) is equal to:

[CET 10+2 Level, 23.10.24 (Ist Shift)]

- (A) 1024 TB (Terabyte) (B) 1024 Bytes
(C) 1024 MB (Megabyte) (D) 1024 GB (Gigabyte)

6. The full form of 'EEPROM' is:

[CET 10+2 Level, 23.10.24 (Ist Shift)]

- (A) Electronically Erasable Programmable Read Only Memory
(B) Electrically Erasable Programmable Read Only Memory
(C) Erasable Electrically Erasable Process Read Only Memory
(D) Electrically Erasable Programmable Read Memory

7. 1 ZB (Zettabyte) is equal to:

[CET 10+2 Level, 22.10.24 (IInd Shift)]

- (A) 1024 EB (B) 1024 ZB
(C) 1024 KB (D) 1024 GB

8. Which of the following storage devices can store the maximum amount of data?

[CET 10+2 Level, 22.10.24 (Ist Shift)]

- (A) Hard disk (B) Floppy disk
(C) Compact disk (D) Optical disk

9. Which of the following statements is NOT true about floppy disks? [CET 10+2 Level, 22.10.24 (Ist Shift)]

- (A) Some versions can store only 1.44 MB.
(B) Data can only be read or written when the write protect notch is closed or covered.
(C) Floppy disks are made of Mylar plastic.
(D) The surface of Mylar plastic is coated with iron oxide (magnetic substance).

10. What is the smallest unit of data in a computer?

[CET Gr. Level, 28.09.24 (IInd Shift)]

- (A) Bit (B) Nibble (C) KB (D) Byte

11. is a memory that is used to temporarily store data, while is used for the permanent storage of data, which cannot be changed or erased.

[CET Gr. Level, 28.09.24 (Ist Shift)]

- (A) RAM; ROM (B) ROM; RAM
(C) Compiler, ROM (D) RAM, Operating System

12. Which of the following options is arranged in descending (decreasing) order according to the size of storage space? [CET Gr. Level, 27.9.24 (Ist Shift)]

- (A) MB, KB, Byte, Nibble
(B) Nibble, KB, MB, GB
(C) Bit, MB, Nibble, KB
(D) Bit, GB, KB, MB

13. Arrange the following memory in order (fastest to slowest): [Raj. Jr. Accountant-11.02.2024]

1. RAM 2. HDD 3. Cache
4. Register 5. SSD

Select the correct answer from the options given below:

- (A) Register > Cache > RAM > SSD > HDD
(B) Cache > Register > RAM > SSD > HDD
(C) Register > Cache > RAM > HDD > SSD
(D) Cache > Register > RAM > SSD > HDD

Answer-key

171.(C) 172.(B)

1.(D) 2.(B) 3.(B) 4.(D) 5.(A) 6.(B) 7.(A) 8.(A) 9.(B) 10.(A) 11.(A) 12.(A) 13.(A)

Readers are advised that while studying MS Word, Excel, and PowerPoint, they should also definitely try them out practically on a laptop/computer. Practical knowledge will help you remember these chapters easily.

5

Microsoft Word

Microsoft Office

- ❖ M.S. Office stands for **Microsoft Office**.
- ❖ Microsoft Office is an **application software** created by **Microsoft**.
- ❖ **Microsoft** is a software company founded on **April 4, 1975**, by **Bill Gates** and **Paul Allen**.
- ❖ Microsoft Headquarters is **Redmond, Washington, USA**.
- ❖ Microsoft Office is also known as **MS Office**.
- ❖ Microsoft Office is also referred to as **Office Suite**.
- ❖ The first version of Microsoft Office was created for the Macintosh operating system in 1989.
- ❖ On **November 19, 1990**, Microsoft created the first **Microsoft Office 1.0 version** for the Windows operating system.
- ❖ Various versions of Microsoft Office have been developed by Microsoft, including Microsoft Office 4.0, 4.3, 1995, 1997, 2000, 2003, 2007, 2010, 2013, 2016, 2019 and 2024.

❖ Applications similar to Microsoft Office include **LibreOffice, Kingsoft Office, NeoOffice, OpenOffice, OnlyOffice, FreeOffice** etc.

- ❖ Microsoft Office **2024** is the **latest version of MS Office**.
- ❖ Nowadays, MS Office is also available on Android phones, iPhones, etc., under the name **WPS Office**. WPS stands for **Writer, Presentation, and Spreadsheet**.
- ❖ The main programs or application software used in Microsoft Office are as follows:
 1. **Microsoft Word**—For creating **text documents**, such as writing letters by an office or school.
 2. **Microsoft Excel**—For **mathematical and statistical calculations**, such as recording ledgers/income-expense details in an office.
 3. **Microsoft PowerPoint**—For creating **slides for presentations**, such as expressing the data, activities, achievements, etc., of an office/company through graphs and presentations.
 4. **Microsoft Access**—For creating **database applications**, such as an office/organisation requires a program to keep details of people

working on it, which can manage the database by working on the data. MS-Access is a database management software used for this purpose.

Note:—

1. These **small application software** used in Microsoft Office are collectively called **Office Assistant**.
 2. **Front Page** is an application of MS Office that is used to create **web pages**.
- ❖ Other programs in Microsoft Office include Microsoft Office Tools, OneNote, InfoPath Designer, InfoPath Filler, Outlook, Share Point Workspace, etc.
- Note:—MS-Outlook**, used for **email client service**, is also a part of MS Office. In this, the user can **open multiple email accounts in one place** on their computer without a browser.

Office 365

- ❖ Users use Word, Excel, PowerPoint, etc., offline in MS Office, which means it is not necessary for the user's computer to be connected to the Internet while using them, and this type of file is saved in the computer's local storage only. It is not easy to share these files, and they cannot be edited when the user is not available on their computer system. Office 365 came into use to solve these problems.
- ❖ **Office 365** is a **web-based cloud computing** service developed by Microsoft.
- ❖ Office 365 is an advanced online version of Microsoft Office, which includes various application software such as Word, Excel, PowerPoint, OneDrive, Outlook, etc. Users can work on these software.
- ❖ The work done in Office 365 will be web-based. The Internet is necessary to use it, and the work done in it will be saved on the server only.
- ❖ The work done in Office 365 is not saved on your computer's hard drive, it is saved on the **cloud/server**. This has the advantage that the user can open and edit the data online on any computer anywhere.
- ❖ Office 365 cannot be used without the Internet.
- ❖ Saving a file on the cloud allows more than one user to edit it at the same time.

- ❖ Any update to any application in MS-Office will also be updated in Office 365. Various types of updates, such as security updates, tools updates, are also available.

For example, when a new version of MS Word is launched, MS Word 2024, this Word 2024 will also be available in Office 365, and the user will be able to use it.

Microsoft Word Introduction

- ❖ Microsoft Word is an **application software** of the **word processor** type.
- ❖ **Word Processor**—A word processor is a program/software that processes or works on words.
- ❖ **MS Word, Notepad, WordPad, PageMaker, WordStar, OpenOffice Writer, Word Perfect, SoftWord, Akshar**, etc., are used in word processing.
- ❖ Currently, **MS Word is the most used word processor** because WordStar, Akshar, etc., processors have less features.
- ❖ Microsoft Word is a **word processing program** of Microsoft Office, the **latest version of which is 2024**.
- ❖ The tasks performed in MS Word include changing the colour of typed words, changing the size and shape, **underlining** words, **bolding** words, **italicising** words, aligning the first and last letters of different lines, centering letters on the page, correcting spelling and

grammar mistakes, applying borders around the page, arranging different lines alphabetically, adding headers and footers on each page, and inserting various types of pictures/graphs.

- ❖ MS Word, a part of MS Office, is **similar to Notepad**. Both MS Word and Notepad are text editors, and both are used for creating, opening, and editing text files. **Notepad does not provide the facility of text formatting**, while MS Word provides this facility.

Word File Extension

- ❖ The extension tells about the **type/format** of a **file/document**, that is, the extension provides information about which type of file it is, such as pdf/image/word file/excel spreadsheet, etc.
- ❖ The file created in Microsoft Word is called a **document** file.
- ❖ The file extension of **Microsoft Word** is **.doc/.docx**.
- ❖ For Microsoft Word versions Word 1997, Word 2000, Word 2003, **.doc** is used as the extension, and for Word 2007, Word 2010, Word 2013, Word 2016, Word 2019, Word 2021, Word 2024, **.docx** is used as the extension.
- ❖ The extension of the Template File is **.dot** in Microsoft Word 2000, 2003 and **.dotx** in Microsoft Word 2010, 2013, 2016, 2019 and 2021.
- ❖ The extension of the Macro File is **.docm**.

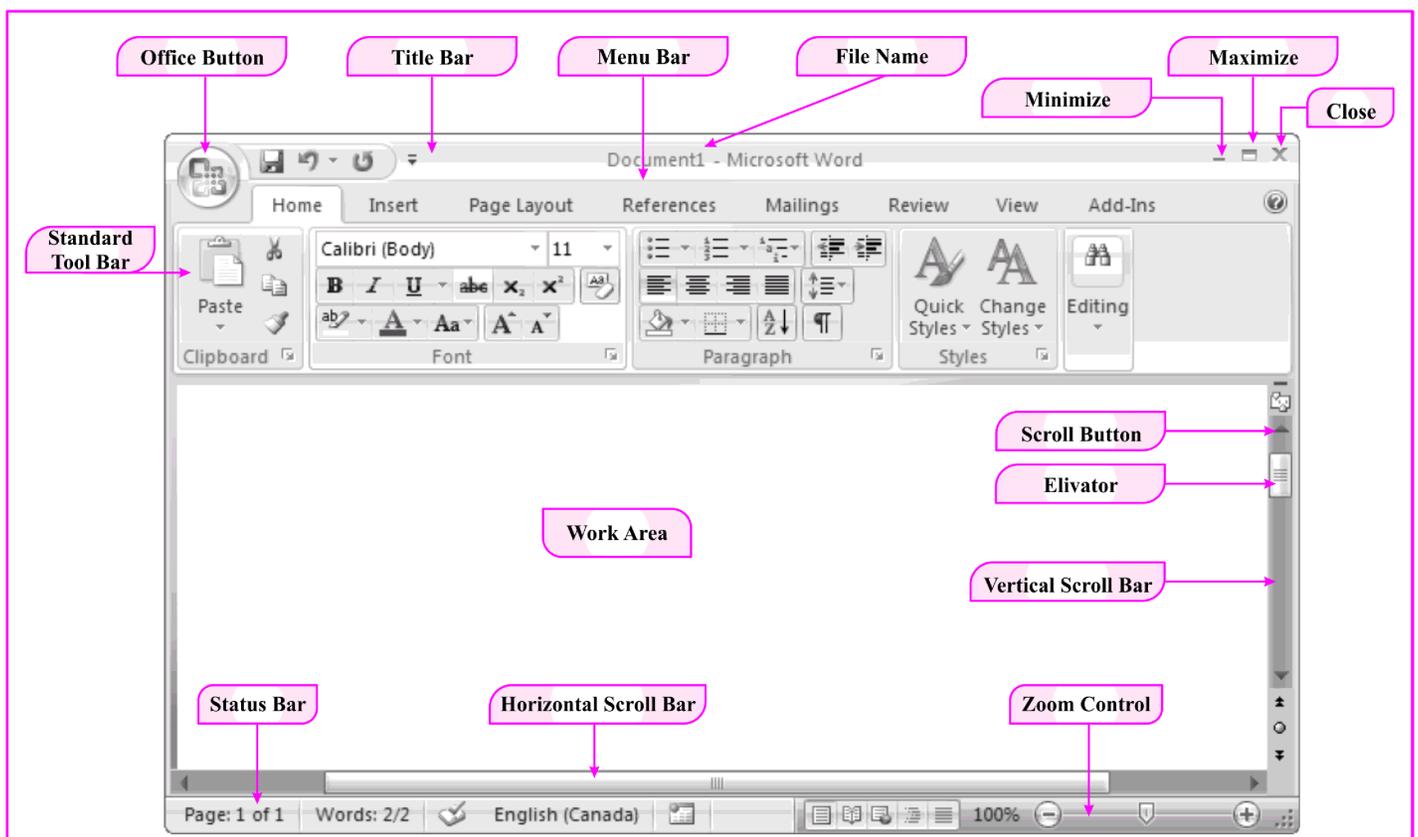


Fig.: Microsoft Word Window

S. No.	Short Cut Keys	Command Name	Function
81	Ctrl+Shift+S		To apply style to the selected text
82	Alt+Left Click	Research	
83	Alt+Esc		To switch between different applications on the task bar
84	Esc	Escape	To cancel a command
85	Ctrl+Left Arrow		To Move a Word to the Left Side
86	Ctrl+Right Arrow		To Move a Word to the Right Side
87	Ctrl+Delete		To delete the words to the right of the cursor
88	Ctrl+Backspace		To delete the words to the Left Side of the cursor
89	Ctrl+Shift+*		To View or hide Non Printing Characters
90	Alt+Ctrl+F2		To Open New Document

Must Read: Exam Booster

- ✧ MS-Word can save a **maximum of 24 items** in the **clipboard**.
- ✧ **Ctrl+T** shortcut is used for **hanging indent** in MS Word.
- ✧ In the Computer User Interface, Blinker is an indicator; it indicates the cursor's current position in the Text.
- ✧ **Undo/Redo can be done a maximum of 100 times** by default in MS-word and all other office programmes. This can be changed by adding an entry in the MS Windows registry.
- ✧ In MS-Word, Preview Mode shows all Pages of a document in the form they will be printed. The shortcut key for **Print Preview** is **Ctrl + F2**.
- ✧ Word Art is used to add **special text effects** in MS Word documents. Word Art is a gallery of Text styles, which users can add to their documents to create decorative effects such as Shaded or Mirrored text.
- ✧ **Ctrl + End** shortcut key is used to **go directly to the bottom**, i.e., the end of the document in MS Word document.
- ✧ The shortcut Key **Ctrl + Home** is used to reach the beginning or start of the MS Word document.
- ✧ To Select an entire **paragraph** in MS Word, the Mouse has to be continuously **Clicked three times** (Triple click) anywhere in that Paragraph, and if the **current word** has to be Selected, then **double click** will be done.
- ✧ A document can be **saved** in **MS-Word in 3 ways**.
- ✧ Phone Book, Diary, etc., can be managed offline by MS-Outlook.
- ✧ **Spell Check** is used to check the spelling in MS-Word. The **F7** key is used for this.
- ✧ Any document of MS Word can be zoomed to a minimum of **10%** and a maximum of **500%**.
- ✧ The size of the font is measured in **Pt** (Point).
- ✧ Backspace Key deletes the letter immediately to the left of the cursor, and Delete Key deletes the letter immediately to the right of the cursor.
- ✧ The time when the computer breaks down is called **Down Time**.
- ✧ We can prepare personal or business documents through word processing.
- ✧ To indent a Paragraph of a report in MS Word Document, the Paragraph is Selected and the Tab key is pressed.
- ✧ **Shift+Tab** is used to **go back** through an option; it is called **Reverse Tab**.
- ✧ Machine language is the first language of the computer world.
- ✧ By Default, the line spacing in MS-Word is **1.15**.
- ✧ Google Docs is an online word processing programme.
- ✧ Internet banking is also called **online banking**.
- ✧ Blank Page command is used to insert a blank page.
- ✧ **Table of Content** is a subject list, which is present in the document with its related reference page.
- ✧ Two or more cells are included in a table in MS Word by the merge cells command.
- ✧ One cell in a table is divided into multiple cells by the split cells command.
- ✧ The task of writing reports is done with the use of MS Word.
- ✧ The formatting of even columns is shown differently from odd columns by the banded column command.
- ✧ The command used to see how a document will look after printing is **Print Preview**.
- ✧ Spelling or spelling correction is possible by the **review toolbar**.
- ✧ Text automatically goes to the next line by **Word Wrap**.
- ✧ To insert a file object in a document, the object dialogue box is shown by the short cut Alt + N.
- ✧ **Ctrl+Shift+F** short-cut is used for font change in

Microsoft Word, Font dialogue Box opens by the use of this key and shortcuts for font dialogue Box are **Ctrl+Shift+P** and **Ctrl+D**.

- ✧ When a word is **immediately repeated** in an MS-Word document, Word makes a **red wavy** line under that word.
- ✧ **Ctrl key** is used to Select Multiple words, Lines and Paragraph in MS-word.
- ✧ Default Font in MS Word is Calibri and the default size of the font is 11 point.
- ✧ Auto correct is a Feature of MS-Word which was designed to automatically change the words with wrong spelling as soon as the user types. Typing efficiency of the user increases by this feature.
- ✧ Regular, Italic, Bold, Underline etc are font styles in Microsoft Word while Superscript and Subscript is a

Scripting style which is located a little above and below the normal line of Text respectively and is smaller than the remaining Text.

- ✧ The group of **Stored files in any computer is called Directory**.
- ✧ **BBL** used in any conversation or Text messaging means **Be Back Later**.
- ✧ Hanging Indent used in MS Word is known as **Second Line Indent**. It indents the line of the paragraph.
- ✧ Corel draw is a vector graphics editor which was developed by Corel corporation.
- ✧ Sans Serif font is also called Gandhik font; Serif is not used in these fonts. Prominent Sans Serif fonts are Avant, Garde, Arial, Geneva while prominent Serif fonts are **Time New Roman, Courier** etc.

Multiple Choice Questions

Microsoft Office [MS-Office]

1. Which word is used in Word 2019 to create, edit, format, store, retrieve, and print text documents?
(A) Word processing (B) Web design
(C) Database management (D) Spreadsheet design
2. MS-Office used for word processing is a:
(A) Application software (B) System software
(C) Operating system (D) All of the above
3. Microsoft Office is an example of a:
(A) Open-source software
(B) Start software
(C) Compiler software
(D) Horizontal market software
4. Which of the following is not a product of MS-Office?
(A) Word (B) Oracle
(C) Access (D) Excel
5. Which of the following is not a part of the MS-Office suite?
(A) PowerPoint (B) Projects
(C) Word (D) Excel
6. Which of the following is most suitable for creating, editing, and saving professional documents such as letters and reports?
(A) MS Word (B) MS Excel
(C) MS PowerPoint (D) MS Access
7. Which of the following are valid versions of MS Office?
(A) Office XP (B) Office 2016
(C) Office 2010 (D) All of the Above
8. Priyanka's husband is serving in the Indian Army, and telephone communication is not possible between them due to lack of proper connectivity. Which

version of Microsoft Word cannot Priyanka use in the process of corresponding with her husband?

- (A) Office XP (B) Office Manager
(C) Office 2007 (D) Office 2019
9. When you are using, you are always running the most up-to-date apps offered by Microsoft. It unlocks regular security updates, improvements, and most importantly, provides access to the latest features and tools as soon as they become available.
(A) Office 2019 (B) Office 365
(C) Open Office (D) Cloud Office 2019
 10. Which of the following is not an Office package?
(A) WPS (B) Microsoft Office 2010
(C) Quantum (D) Libre
 11. The full form of Office WPS used in Android phones is:
(A) Writer, Present, Spreadsheet
(B) Writing, Presentation, Sportsheet
(C) Writer, Presentation, Spreadsheet
(D) None of the above
 12. Sunil wants to prepare an invitation letter to invite people to his wedding anniversary party. Which application software would be most suitable for Sunil to prepare the invitation letter?
(A) Microsoft Word (B) Microsoft Access
(C) Notepad (D) Microsoft Excel

MS-Word Introduction

13. Which of the following is not a word processing software?
(A) WordPad (B) Open Office Impress
(C) Open Office Writer (D) Microsoft Word

Answer-key

1.(A) 2.(A) 3.(D) 4.(B) 5.(B) 6.(A) 7.(D) 8.(B) 9.(B) 10.(C) 11.(C) 12.(A) 13.(B)

7. Which of the following is the shortcut command for print in MS Office? [CET 10+2 Level, 22.10.24 (1st Shift)]
 (A) Alt + P (B) Shift + P
 (C) Ctrl + P (D) Alt + Ctrl + P
8. Which of the following is not a character formatting word processing tool? [CET 10+2 Level, 22.10.24 (1st Shift)]
 (A) Font Colour (B) Alignment
 (C) Underlining (D) Effect
9. Which of the following is not a paragraph alignment option in MS Word? [CET Gr. Level, 28.09.24 (2nd Shift)]
 (A) Former Alignment (B) Left Alignment
 (C) Right Alignment (D) Justify
10. With the help of which of the following can we create the same letter for several recipients in MS-Word? [Hostel Superintendent Exam, 28.08.2024]
 (A) Template (B) E-mail
 (C) Mail Merge (D) Macros
11. Which of the following is not a font style? [Hostel Superintendent Exam, 28.08.2024]
 (A) Regular (B) Superscript
 (C) Italics (D) Bold
12. What is the short key combination to open the font dialogue box in MS Word? [Raj. Computer-03.03.2024]
 (A) Ctrl + Shift + F (B) Ctrl + Shift + G
 (C) Ctrl + Shift + L (D) Ctrl + Shift + V
13. What opens from F12 Key in MS Word- [Raj. Computer-03.03.2024]
 (A) Save As Dialogue Box (B) Open Dialogue Box
 (C) Save Dialogue Box (D) Close Dialogue Box
14. What is the short cut Key combination to create a folder? [Raj. Computer -03.03.2024]
 (A) F2 (B) Ctrl + C
 (C) Ctrl + Shift + N (D) Ctrl
15. Which of the following is used to check synonyms in MS Word? [Raj. Jr. Accountant-11.02.2024]
 (A) Spell Checking (B) Auto Check
 (C) What If (D) Thesaurus
16. What are the benefits of the mail merge feature in MS Word?
 1. It saves a lot of time and effort.
 2. It is used to outline the document.
 3. It can keep details of all recipients.
 4. It makes the document more attractive.
 Select the most appropriate option from the options given below: [Raj. Jr. Accountant-11.02.2024]
 (A) Only 1 (B) Only 2 and 3
 (C) Only 1 and 3 (D) Only 1 and 4
17. In a Word document, Simrat has to display a list of online sites, which is later to be used by a student to prepare a research paper on the topic 'Impact of social media on student behavior'. Which feature of Word is suitable for preparing this list? [Raj. Information Assistant-21.01.2024]
 (A) Linking (B) Bullets
 (C) Numbering (D) Graph
18. Which button is used to create a multi column document? [Raj. CET 10+2, 11.02.2023]
 (A) Break Column (B) Multi Column
 (C) Column (D) Set Column
19. Verdana is a type of- [Raj. CET 10+2, 11.02.2023]
 (A) Font Style (B) Font Size
 (C) Font Alignment (D) Font Art
20. The watermark option in Microsoft Word 2016 is in the menu- [Raj. CET 10+2, 11.02.2023]
 (A) Insert (B) View
 (C) Review (D) Design
21. Portrait and landscape option is- [Raj. CET 10+2, 05.02.2023]
 (A) Of paper size (B) Of page orientation
 (C) Of page layout (D) Of page size
22. The shortcut key to save a document in MS Word is- [Raj. CET 10+2, 05.02.2023]
 (A) Ctrl + O (B) Ctrl + S
 (C) Ctrl + F (D) Ctrl + P
23. What is the minimum and maximum font size available in the font size toolbar available in the formatting toolbar? [Raj. CET 10+2, 04.02.2023; Junior Instructor (COPA) 24.03.2019]
 (A) 6 and 68 (B) 8 and 68
 (C) 6 and 72 (D) 8 and 72
24. Use of Microsoft Clip Gallery- [Raj. CET 10+2, 04.02.2023]
 (A) To add Word Art
 (B) To spell check
 (C) To add Clip Art Pictures
 (D) To remove slides
25. Ctrl + Y is used- [Raj. CET 10+2, 04.02.2023]
 (A) To align paragraph
 (B) To close a document
 (C) To repeat or redo the last action
 (D) To undo the last action
26. In MS Word, when page margins are altered or when the text does not fit on the current line, which feature can automatically move the text to the next line? [Raj. CET 10+2, 05.02.2023]
 (A) Word Wrap (B) Word Enter
 (C) Word Format (D) Word Scroll
27. In reference to MS Word-2019, to go to the place of last change, the key stroke is- [Raj. CET Grad. 08.1.2023]
 (A) Alt + F6 (B) Control + F7
 (C) Shift + F5 (D) Control + Shift + F8
28. Which option is not available in the file menu while working with MS Word? [Raj. CET Grad. 07.1.2023]
 (A) Print Preview (B) Save
 (C) Header and Footer (D) Save As

Answer-key

- 7.(C) 8.(B) 9.(A) 10.(C) 11.(B) 12.(A) 13.(A) 14.(C) 15.(D) 16.(C) 17.(A)
 18.(C) 19.(A) 20.(D) 21.(B) 22.(B) 23.(D) 24.(C) 25.(C) 26.(A) 27.(C) 28.(C)

6

Microsoft Excel

Microsoft Excel: Introduction

- ❖ Microsoft Excel is a part of the Microsoft Office package, and **Excel is an electronic spreadsheet program.**
- ❖ A spreadsheet program is used for the analysis of **statistical data, mathematical calculations,** budget creation, accounting worksheet creation, and for keeping records of financial transactions.

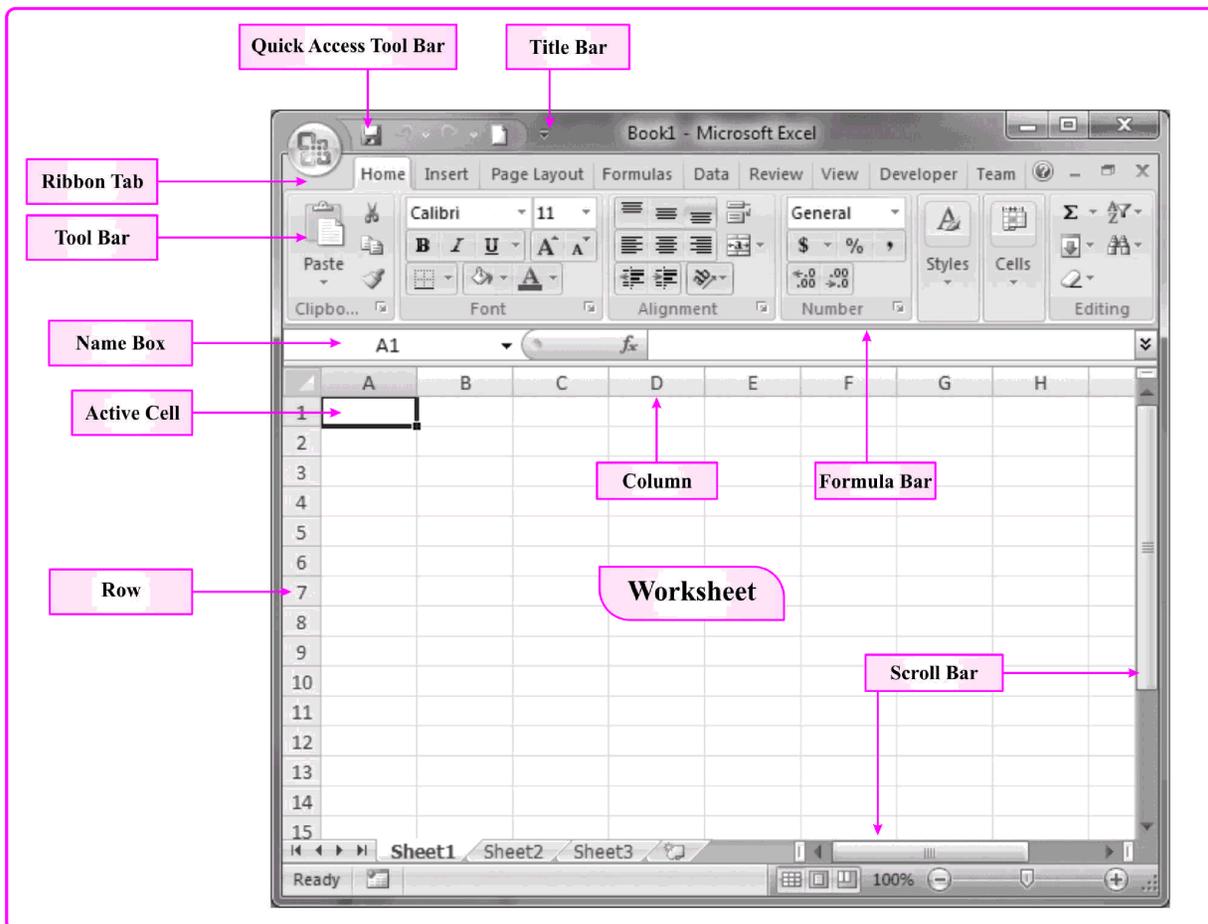


Fig.: MS Excel Window

- ❖ **The first electronic spreadsheet program was Visicalc.**
- ❖ MS Excel is used for performing **statistical calculations** and **creating charts**, along with data analysis, and organising data and information.
- ❖ Accounts-related work and large calculations can also be easily done by use of MS Excel.
- ❖ There are many other spreadsheet programs similar to Excel, such as Lotus **123**, **LibreOffice**, **Google Sheets**, I Work Numbers, Lotus Symphony, and VisiCalc.
- ❖ The format or **extension of an Excel file is .xls/.xlsx.** The extension for the 2003 version of Excel is .xls, and the extension for versions 2007 to 2024 is .xlsx.
- ❖ The extension of a **Template File** in MS Excel is **.xltx.**
- ❖ The extension of a file created in Lotus is 123.
- ❖ The run command for Excel is **Excel/Excel.exe.**

Workbook & Worksheet

- ❖ In Excel, the **intersection point of a row and a column** is called a **cell.**

Time Function

- ❖ It has functions to perform calculations related to time.

Sr.No.	Date Function	Description	Example
1.	TIME ()	This function converts the given number into the format of time.	= TIME (hour, minute, second) = TIME (8, 15, 20) Result = 8:15 AM
2.	SECOND ()	This function displays the Seconds in a given time.	= SECOND (10:25:10) Result = 10
3.	MINUTE ()	This function displays the minutes in a given time.	= MINUTE (10:25:10) Result = 25
4.	HOUR ()	This function displays the hours in a given time.	= HOUR (10:25:10) Result = 10

Statistical Function

- ❖ **Statistical Function:** This has the following types of functions—

- SUM ()
- AVERAGE ()
- MAX ()
- MIN ()
- COUNT ()
- COUNTA ()

	A	B	C	D	E
1	9				
2	5				
3	6				
4	4				
5	R				

- ❖ The result is calculated by taking the values from the table shown above to understand all the above functions.

- ❖ **SUM()**—This function adds the value of the selected cell in the worksheet. Example = SUM(A1:A4)

The SUM function has been used in the above example and cells from A1 to A4 have been selected, and its result will be 24. That is, the sum of the value of the cell from A1 to A4 will be 24.

- ❖ **AVERAGE()** : It indicates the **average value** of the selected cell.

For example = AVERAGE(A1:A4)

Result = 6 That is, the average value will be 6.

For example :-

= AVERAGE (12, 15, 25, 22, 31) [Ans.: 21]

- ❖ **MAX()** : It indicates the **maximum value** from the value of the selected cell.

For example = MAX(A1:A4)

Result : 9

For example :-

= MAX (17, 23, 18, 11, 9, 13) [Ans.: 23]

- ❖ **MIN()** : It indicates the **minimum value** from the value of the selected Cell.

For example = MIN(A1:A4)

Result = 4

For example :-

= MIN (13, 9, 27, 11, 7, 2, 17) [Ans.: 2]

- ❖ **COUNT()** : This function indicates the number of all selected cells that have a numeric value, i.e., the number of Cells that have Numbers.

For example = COUNT(A1:A5)

Result = 4

- ❖ **COUNTA()** : This function indicates the number of all selected cells that have some data or text.

= COUNTA(A1:A5)

Result = 5

Note: The COUNTA function does not count empty cells.

Other Important Function

- ❖ **ABS()** ⇒ This function returns the absolute value of the numbers, i.e., **it converts negative numbers into positive numbers.**

= ABS(-4) + ABS(-1)

= 4 + 1

= 5

- ❖ **FLOOR()** ⇒ The FLOOR function in MS Excel is used to **round down** a given number (Number) to the nearest multiple of the given significance (Significance).

Syntax of Floor = FLOOR (Number, Significance)

This gives the **value equal** to or **less than the value** given in the cell address.

For example –

(i) = FLOOR(14, 4)

= 12 [Multiple of 4 which is closest to 14 or less than 14]

(ii) = FLOOR(55,5)

= 55 [Multiple of 5 which is closest to 55]

Microsoft Excel Short Cut Keys

No.	Short Cut Keys	Work	No.	Short Cut Keys	Work
1.	Ctrl+N	To open a new workbook	2.	Alt+F4	To exit from the Excel program
3.	Ctrl+Tab	To move between two Excel files	4.	Alt+=	To create a formula to add all the data of the selected cells
5.	Ctrl+'	To edit the data of the selected cell	6.	Ctrl+Shift+!	To write numbers in comma format
7.	Ctrl+Shift+S	To write numbers in currency format	8.	Ctrl+Shift+#	To write numbers in date format
9.	Ctrl+Shift+@	To write the number in time format	10.	Ctrl+Space	To select the current column
11.	Shift+Space	To select the current row	12.	Ctrl+%	To write the number in percentage format
13.	F2	To edit the data of the cell	14.	F5	To go to a specific cell
15.	Ctrl+Shift+;	To insert the current time	16.	Ctrl+;	To insert the current date
17.	Alt+Shift+F1	To insert a new worksheet	18.	Shift+F3	To open the formula window
19.	Shift+F5	To open the search box	20.	F11	To create a chart of the selected data in the worksheet
21.	Alt+I+C	To insert the column	22.	Alt+I+R	To insert the row
23.	Ctrl+9	To hide the row	24.	Ctrl+0	To hide the column
25.	Ctrl+F3	To define a name	26.	Ctrl+F6	To switch between open workbooks
27.	Ctrl+Shift+&	To create a border on the selected cell	28.	Ctrl+Shift+4	To convert the cell into currency
29.	Ctrl+Shift+5	To convert the cell to percentage	30.	Ctrl+Shift+1	To convert the number into the format of two decimal points.
31.	Alt+Shift+F1	To insert a new worksheet in Excel	32.	Ctrl+K	To insert Hyperlink
33.	Ctrl+5	To strikethrough the highlighted text	34.	Ctrl+W	To close the active workbook
35.	Ctrl+F9	To minimise the current window	36.	Ctrl+F10	To maximise the current window
37.	Ctrl+PageUp	To go to the previous worksheet from the current worksheet	38.	Ctrl+Page Down	To go to the next worksheet from the current worksheet with the cell pointer
39.	Ctrl+Tab	To move between two or more Excel files	40.	Shift+F10+O	Select cells with comment
41.	Ctrl+Shift+PgDn	To select the current and next worksheets	42.	Ctrl+Shift+End	To extend the selection of the cell to the last used cell (lower right corner) of the worksheet
43.	Alt+Enter	To create a new line within the worksheet cell	44.	Shift+F2	To edit the cell comment

- ❖ **Split**—Splits the worksheet into **different parts**.
- ❖ **Hide**—Hides the current or active window so that it is not visible.
- ❖ **Unhide**—This window feature unhides the window.
- ❖ **View Side By Side**—By using this, the windows that are open can be seen side by side.
- ❖ **Synchronous Scrolling**—Scrolls two documents simultaneously.
- ❖ **Reset Window Position**—Resets the position of the windows to be compared side by side, which share the screen equally.
- ❖ **Save Workspace**—The workspace of the file is saved by Save Workspace.
Note:— While saving the file in the save workspace, the cell pointer stays where it is and is saved there, and when the file is **opened** again, the cell pointer appears there where it is saved.
- ❖ **Switch Window**—We can go from one window of Excel to another window.
- 5. **Macros**—Those tasks that are required again and again in the worksheet can be recorded in the form of shortcut keys.

26. How is data organised/arranged in the spreadsheet concept used for statistical concepts?
 (A) In Lines & Space (B) In Height & Width
 (C) In Rows & Columns (D) In Layers & Planes
27. Upper margins on a page are useful for tasks.
 (A) Footer (B) Column
 (C) Header (D) Paragraph
28. Which of the following characters is not used while naming a folder/file?
 (A) < (B) :
 (C) / (D) All of the above
29. Obtaining data or information from a cell located in a separate sheet is called.
 (A) Accessing (B) Referencing
 (C) Updating (D) Functioning
30. In MS Excel 2019, the extension of a template file is
 (A) .docx (B) .yltx (C) .xltx (D) .zltx
31. In MS Excel, the data is entered in which builds the grid of rows and columns—
 (A) Text box (B) Cells
 (C) Header (D) Row
32. In Microsoft Excel 2019, the address/address of the cell is displayed in the 'Name Box'.
 (A) First (B) Second from the last
 (C) Active (D) Last
33. What is the collection of consecutive cells from left to right or top to bottom or both called?
 (A) Cell Range (B) Table
 (C) Formula (D) Notification
34. Considering the cell numbering in the Row (Row) wise order, what is the address of the second cell in the worksheet of MS Excel?
 (A) A1 (B) B1 (C) A2 (D) 1B
35. What is the valid cell reference for cells from A1 to C13 in MS Excel 2010?
 (A) A1-C13 (B) A1:C13
 (C) A1..C13 (D) A1::C13
36. What does A3 : A6 represent in an Excel sheet?
 (A) A3, A4, A5, A6 (B) A3, A4, A5
 (C) A4, A5, A6 (D) A4, A5
37. When you are working on more than one refresh data sheet, then it is called sheets.
 (A) Referencing Multiple (B) Crop
 (C) Both A and B (D) None of these
38. How many rows and columns (Rows and Columns) are there in a Worksheet of MS Excel 2019?
 (A) 10,48,576 & 16,384 (B) 65,535 & 256
 (C) 1048576 & 255 (D) 1248576 & 234
39. The extension of the file created in the spreadsheet package Lotus is -
 (A) WR1 (B) Pdf (C) xls (D) 123
40. Which of the following is a type of spreadsheet?
 (A) Lotus 1-2-3 (B) MS Excel
 (C) Soft Calc (D) All of these
41. What is at the top of the Excel application window?
 (A) Title Bar (B) Menu Bar
 (C) Formatting Bar (D) Task Bar
42. is a primary document used to store and work on data; in this, cells are arranged in the form of rows and columns?
 (A) Workbook (B) Workspace
 (C) Spreadsheet or Worksheet
 (D) None of the above
43. How many characters (characters) can be there in a single cell of an Excel 2019 worksheet?
 (A) 32, 767 (B) 255
 (C) 409 (D) 16, 384
44. In Microsoft Excel, the border of an active cell is thick. (Thicker than normal gridlines) There is a small solid box in its lower right corner. What is this box called?
 (A) Fill Handle (B) Edit Handle
 (C) Copy Handle (D) File Handle
45. A spreadsheet consists of
 (A) Row (B) Column
 (C) Both Row and Column (D) None of the above
46. Arrange the following options in ascending order based on their size -
Worksheet, Cell, Workbook
 (A) Cell, Workbook, Worksheet
 (B) Workbook, Worksheet, Cell
 (C) Cell, Worksheet, Workbook
 (D) Worksheet, Cell, Workbook
47. What shortcut key is used to select the entire row in MS Excel?
 (A) Ctrl + Space (B) Shift + Space
 (C) Ctrl + PgUP (D) Ctrl + PgDn
48. How is an active cell displayed in MS Excel?
 (A) A dark wide border (B) A dotted border
 (C) A blinking border (D) Normal text border
49. The shortcut key used to edit/modify the content of a Microsoft Excel cell, i.e., to change the cell into edit mode is -
 (A) F2 (B) F4
 (C) F1 (D) Shift + F3
50. Which key does the user use to accept the content typed in a worksheet?
 (A) Alt + Enter (B) Enter
 (C) Ctrl + Enter (D) Shift

Answer-key

- 26.(C) 27.(C) 28.(D) 29.(B) 30.(C) 31.(B) 32.(C) 33.(A) 34.(B) 35.(B) 36.(A) 37.(A) 38.(A)
 39.(D) 40.(D) 41.(A) 42.(C) 43.(A) 44.(A) 45.(C) 46.(C) 47.(B) 48.(A) 49.(A) 50.(B)

277. Which of the following combinations is used in Microsoft Excel to select table column data?
 (A) Ctrl + C (B) Ctrl + Arrow key
 (C) Ctrl + S\$ (D) Ctrl + Spacebar
278. What is a Possible Function to display the Date in Excel?
 (A) Now() (B) Day()
 (C) Month() (D) All of the above
279. Which of the following shortcut keys is used to apply macros in Microsoft Excel?
 (A) Alt + F12 (B) Alt + F5
 (C) Ctrl+F5 (D) Alt + F8
280. In an MS Excel workbook, which of the following is clicked to move from one worksheet to another?
 (A) Active cell (B) Sheet tab
 (C) Scroll bar (D) Tab button
281. Through which feature of MS Excel can Excel dynamically calculate the results from the data?
 (A) Diagram (B) Chart
 (C) Table (D) Formula & Function
282. The shortcut key for inserting the Auto sum function in Microsoft Excel 2016 is
 (A) Ctrl + + (B) Alt + +
 (C) Alt + = (D) Alt + S
283. With reference to editing a cell in a spreadsheet, which of the options given below best matches the items in List-1 with the items in List-2?
- | List-1 | List-2 |
|----------------|--|
| (i) Enter | (a) Takes you to the next cell to the right. |
| (ii) Shift+Tab | (b) Takes you to the next cell below. |
| (iii) Tab | (c) Takes you to the arrow key direction. |
| (iv) Arrow key | (d) Takes you to the next cell to the left |
- (A) (i)-(b), (ii)-(d), (iii)-(a), (iv)-(c)
 (B) (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
 (C) (i)-(b), (ii)-(a), (iii)-(d), (iv)-(c)
 (D) (i)-(a), (ii)-(d), (iii)-(b), (iv)-(c)

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. Which of the following is not a type of spreadsheet program? [CET 10+2 Level, 24.10.24 (IInd Shift)]
 (A) Google Sheet (B) Rose Symphony
 (C) Zoho Sheet (D) Microsoft Excel
2. What does a valid formula in Excel start with? [CET 10+2 Level, 24.10.24 (Ist Shift)]
 (A) + (B) = (C) # (D) @
3. In which referencing, the cell reference does not change while copying the formula? [CET 10+2 Level, 24.10.24 (Ist Shift)]
 (A) Cell Referencing (B) Absolute Referencing
 (C) Relative Referencing (D) Mixed Referencing
4. Which of the following shortcut key hides the selected column in Excel. [CET 10+2 Level, 23.10.24 (IInd Shift)]
 (A) Shift + F10 (B) Alt + H
 (C) F2 (D) Ctrl + 0 (Zero)
5. Which of the following is a feature of a software 'Pivot Table'? [CET 10+2 Level, 23.10.24 (IInd Shift)]
 (A) Microsoft Excel (B) Microsoft Word
 (C) Microsoft Access (D) Microsoft PowerPoint
6. Which of the following is most suitable for the name of an Excel sheet? [CET 10+2 Level, 23.10.24 (IInd Shift)]
 (A) Minimum 1 character, Maximum 21 characters
 (B) Minimum 1 character, Maximum 31 characters
 (C) Minimum 2 characters, Maximum 19 characters
 (D) Minimum 2 characters, Maximum 27 characters
7. Which of the following commands in Excel will take you to the previous sheet of your work book? [CET 10+2 Level, 23.10.24 (IInd Shift)]
 (A) Ctrl + Shift + Page Up
 (B) Alt + Page Up
 (C) Ctrl + Page Up
 (D) Tab + Page Up
8. Which of the following is a method to arrange data in ascending or descending order in a spreadsheet- [CET 10+2 Level, 23.10.24 (Ist Shift)]
 (A) Filter (B) Sorting
 (C) Auto Sum (D) Logical Operator
9. Which function key is used to edit the cell contents in a spreadsheet? [CET 10+2 Level, 23.10.24 (Ist Shift)]
 (A) F5 (B) F2
 (C) F6 (D) F8
10. Which of the following is not an Excel function? [CET 10+2 Level, 22.10.24 (IInd Shift)]
 (A) COUNT () (B) MIN ()
 (C) MAX () (D) SUBTRACT ()

Answer-key

- | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|-------|-------|--------|
| 277.(D) | 278.(D) | 279.(D) | 280.(B) | 281.(D) | 282.(C) | 283.(A) | | | |
| 1.(B) | 2.(B) | 3.(B) | 4.(D) | 5.(A) | 6.(B) | 7.(C) | 8.(B) | 9.(B) | 10.(D) |

7

Microsoft Power Point

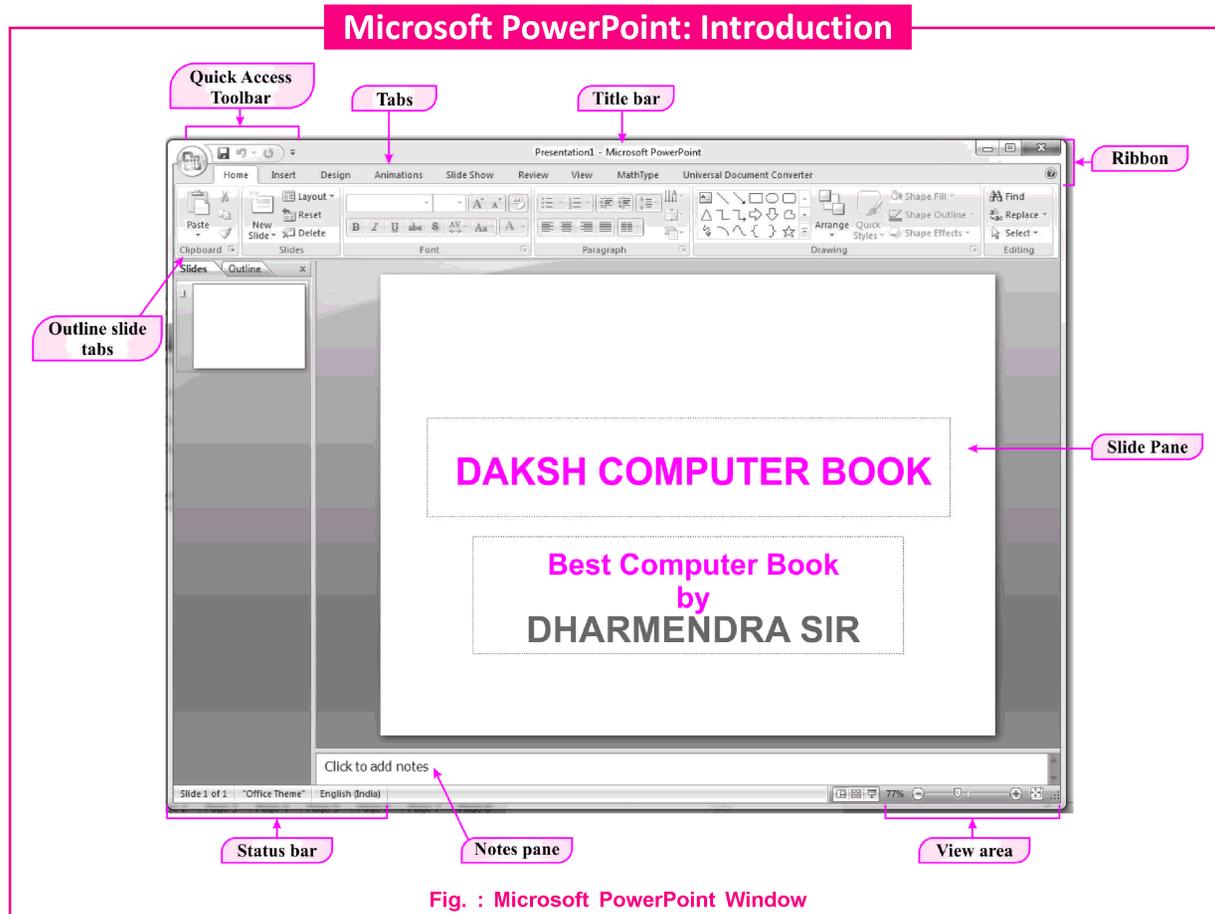


Fig. : Microsoft PowerPoint Window

- ❖ Microsoft PowerPoint is part of the **Microsoft Office package**, created by the Microsoft company.
- ❖ Microsoft PowerPoint is an **application software** for creating **presentations**.
- ❖ Microsoft PowerPoint is a complete **presentation graphics program**.
- ❖ The **run command** for Microsoft PowerPoint is '**Powerpnt**'.
- ❖ The **file format/extension** of Microsoft PowerPoint is **.ppt/.pptx**.
 - ❖ Extension up to PowerPoint 2003 - .ppt
 - ❖ Extension after PowerPoint 2003 - .pptx
- ❖ The file created in Microsoft PowerPoint is called a **presentation**.
- ❖ Presentation files are also known as **PPTs**.
- ❖ The **by-default** name of a **file** created in PowerPoint is **Presentation1**.
- ❖ Each page in a PowerPoint program is called a **slide**.
 - ❖ A presentation is made up of many **slides**.
 - ❖ All slides of a presentation on a particular topic are kept in one file, which is called a **presentation file**.
 - ❖ The **default slide orientation** in PowerPoint is **landscape**.
 - ❖ The shortcut key to take a **new slide in a presentation** is **Ctrl+M**.
 - ❖ All the information in PowerPoint is displayed on the slide.
 - ❖ **Text, pictures, shapes, audio, video, animations**, etc., can be inserted into each slide of the presentation.

4. Zoom

❖ A presentation slide can be zoomed by a minimum of 10% and a maximum of 400%.

5. Color/Greyscale

❖ The entire PowerPoint presentation is changed to different colours through this.

6. Window

❖ A new window of Microsoft PowerPoint is opened through the New Window command.

❖ The windows of the presentation are displayed on the screen or any other program by overlapping through the **Cascade** command.

❖ The Cascade Window is removed through the Arrange All commands.

Short Cut Keys

S. No.	Short Cut Keys	Work
1.	Ctrl+M	To take a new slide
2.	Ctrl+D	To create a duplicate slide
3.	F5	To start the slide show of the presentation
4.	Shift+F5	For slide show from the current slide
5.	N, Enter, Page Down, Right Arrow, Down Arrow, Spacebar	To go to the next slide
6.	P, Page UP, Left Arrow, Up Arrow, Backspace	To go to the previous slide
7.	S	To stop or restart the automatic presentation
8.	Esc	To stop the slide show of the presentation
9.	Ctrl + N	To open a new blank presentation.
10.	Slide Number + Enter	To go to the slide of the mentioned number.
11.	B	To pause the Slide show and show the black screen.
12.	W	To pause the Slide show and show the white screen.
13.	Ctrl+G	For Grouping of the selected shapes
14.	Ctrl+Shift+<	To make the Text Smaller
15.	Ctrl+Shift+>	To make the Text Bigger

Comparative Summary of MS Word, Excel & PowerPoint

Must Remember

Sr. No.	Feature/Quality	MS Word	MS Excel	MS PowerPoint
1.	Software type	Word processing software	Spreadsheet program	Presentation software
2.	Use	In making various reports, letters, and documents	To perform calculations on statistical data	To make a presentation
3.	Run command	winword/winword.exe	excel/excel.exe	powerpnt
4.	File name	Word file is called a document.	The Excel file is called a workbook.	PowerPoint file is called presentation.
5.	By default file name	Document1	Book1	Presentation1
6.	File extension	.doc/.docx	.xls/.xlsx	.ppt/.pptx
7.	Formula/Calculation	Formula can be written manually in Word but does not calculate automatically	Automatic calculations in Excel on inserting formula.	—
8.	By default font name	Calibri	Calibri	Calibri
9.	By default Orientation	Portrait	Portrait	Landscape
10.	Font Size	1-1638	1-409	1-4000
11.	Formatting Toolbar Font Size	8-72	8-72	8-96
12.	Zoom percentage	10-500%	10-400%	10-400%

123. The PowerPoint application allows the user -

- (A) Notes for the speaker notes
- (B) Paper printout of slide
- (C) Animation presentation
- (D) All of the above

124. What is a trigger in MS PowerPoint?

- (A) An object that allows you to hide a slide during a slide show.
- (B) An object that allows you to rehearse the time.
- (C) An object that you click to generate a Transition on the slide.
- (D) An Object that you Click to generate Animation on the Slide.

125. Which of the following statements is correct?

- (i) Animation can only be applied to the selected slides objects of the MS PowerPoint presentation.
 - (ii) 'Slide-Sorter' appears under the 'View Tab' in MS PowerPoint 2016.
- (A) Only (ii)
 - (B) Both (i) and (ii)
 - (C) Neither (i) nor (ii)
 - (D) Only (i)

126. Which of the following is not a valid slide layout in Microsoft PowerPoint 2016?

- (A) Title and Content
- (B) Picture with Caption
- (C) Blank with Title
- (D) Comparison

127. In PowerPoint, the dotted area in an empty slide is called-

- (A) Template
- (B) Placard
- (C) Placeholder
- (D) Theme

Questions Asked in Previous Recruitment Examinations

Questions asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. How many slide layouts of Office theme are available in the new slide dialog box?

[CET 10+2 Level, 24.10.24 (IInd Shift)]

- (A) 9
- (B) 17
- (C) 7
- (D) 14

2. In a PowerPoint presentation, a design that controls the layout and formats for the slides is called -

[CET 10+2 Level, 24.10.24 (Ist Shift)]

- (A) Design plates
- (B) Templates
- (C) Placeholders
- (D) Blue prints

3. What is the special effect that occurs in the transition from one slide to another during a presentation? (Choose the most appropriate option from the following)[CET 10+2 Level, 23.10.24 (IInd Shift)]

- (A) Slide transition
- (B) Effect
- (C) Custom animation
- (D) Present animation

4. Which of the following is the shortcut key for PowerPoint which helps in presenting the slide from the beginning? [CET 10+2 Level, 22.10.24 (IInd Shift)]

[Gram Vikas Adhikari (Village Development Officer) Direct Recruitment Exam 27.12.2021]

- (A) F1
- (B) F7
- (C) F5
- (D) F4

5. What is "Fly In" in MS PowerPoint?

[CET 10+2 Level, 22.10.24 (Ist Shift)]

- (A) Colour scheme
- (B) Page design
- (C) Animation effect
- (D) System command

6. Which of the following file extensions applies to an MS PowerPoint 365 presentation when you save it by default? [CET Gr. Level, 28.09.24 (IInd Shift)]

- (A) .xps
- (B) .pptx
- (C) .xls
- (D) .doc

7. What does animation mainly determine in a PowerPoint presentation? [CET Gr. Level, 28.09.24 (IInd Shift)]

- (A) How the slides move.
- (B) How the slides appear.
- (C) How the objects in the slide appear.
- (D) How the text appears.

8. What does the question mark sign represent on the MS PowerPoint window?

[Raj. Computer Instructor -03.03.2024]

- (A) Title bar
- (B) Status bar
- (C) Menu box
- (D) Formatting bar

9. Can we create an mp4 file of a PowerPoint presentation? [Raj. Information Assistant -21.01.2024]

- (A) We can only create slides.
- (B) We can only create mp3 files.
- (C) We can only create animation.
- (D) We can create mp4 files.

10. In a PowerPoint presentation, the feature creates a reflection of the selected object -

[Raj. CET 10+2, 11.02.2023]

- (A) Mirroring
- (B) Flipping
- (C) Sliding
- (D) Rotating

11. What is the use of master slide in PowerPoint?

[Raj. CET 10+2, 11.02.2023]

- (A) To format every slide the same
- (B) To bring a new slide and see all the slides together both
- (C) To see all the slides together
- (D) To bring a new slide

Answer-key

123.(D) 124.(D) 125.(B) 126.(C) 127.(C)

1.(A) 2.(B) 3.(A) 4.(C) 5.(C) 6.(B) 7.(C) 8.(C) 9.(D) 10.(B) 11.(A)

8

Computer Network and Internet

Communication Systems

- ❖ The **communication system** plays a crucial role in the internet and networks.
- ❖ A process by which information and data are exchanged is called a communication system.

❖ Sending or receiving data between one or more computers and various types of terminals is called **data communication**.

- ❖ Data communication is a process by which data, information, and instructions are transmitted from one computer to another.



Fig.: Communication system

- ❖ In data communication, data is transmitted from one place to another through signals.
- ❖ The person or device sending information or data is called the **Sender**.
- ❖ The person or device receiving information or data is called the **Receiver**.

Data Communication Channels

1. **Simplex Channel:** A communication system in which data flows in only one direction. Examples include television, radio, keyboards, and mouse.



Fig. : Simplex Data Communication

2. **Half Duplex Channel:** A communication system in which data flows in both directions, but only in one direction **at a time**. Examples include railway tracks and walkie-talkies.



Fig. : Half Duplex Data Communication

3. **Full Duplex Channel:** Data flows in both directions simultaneously. Examples include telephone networks, video conferencing, and Wi-Max.



Fig. : Full Duplex Data Communication

Note: In a Full Duplex Communication System, data flows in both directions at the same time.

Data Transmission Media

Wired or Guided Technologies

1. Twisted Pair Cable

- ❖ In this cable, the wires are twisted around each other.
- ❖ The performance of Twisted Pair is measured in **decibel/miles**.
- ❖ This cable consists of two conducting (copper) wires.
- ❖ Its types are UTP (Unshielded Twisted Pair) and STP (Shielded Twisted Pair).
- ❖ These are used in telephone networks.

2. Coaxial Cable

- ❖ It has a solid wire inside, which is surrounded on all sides by an insulator.
- ❖ It has a greater data communication capacity as compared to telephone wire.
- ❖ It is used only in TV networks.
- ❖ Its data translation speed is higher than that of twisted pair cable.

3. Optical Fibre

- ❖ Optical fibre uses glass, plastic, or silica for data transmission.
- ❖ Optical fibre is quite thin and lightweight.
- ❖ Optical fibre transfers data at high speed in digital format.
- ❖ Even over long distance, there is no decrease in the intensity of the signal, so it is used for **long-distance communication** and secret signal transmission.
- ❖ It has **point-to-point installation**.
- ❖ **Optical fibre works** on **total internal reflection**.

Wireless Technologies

- ❖ In this technology, information is transmitted by the air without any cable or wire.
- ❖ Data transfer via microwave, satellite, and other wireless technologies is called radio transmission. The sender and receiver do not need to be connected by wire.
- ❖ PDAs, laptops, and mobile phones are used as wireless clients.

Note:

- ❖ **Ctrl + Tab** or **Ctrl + PgDn** is used to go to the open Tab on the **right side** of a Web browser.
- ❖ **Ctrl + Page Up** is used to go to the open Tab on the **left side** of a Web browser.

Search Engine

❖ Search engines are computer programs that are used to **find the desired information from the information stored** on a computer system.

- ❖ Search engines are web-based software that is used by Internet users to obtain any information located on the WWW (World Wide Web).
- ❖ A Search Engine is a useful tool of the Internet, through which users get useful information for themselves from many different websites and can also access different websites through the Search Engine.
- ❖ Accessing the Internet is very easy through the Search Engine. Through this, any website on the Internet can be easily accessed.
- ❖ **Search Engines** use Boolean Operators (AND, OR, NOT) to search for information on the World Wide Web.
- ❖ Search engines have automatic programs that **visit** different **websites** and **web pages** available on the Internet and **store** the information in an organised manner in their **database** (Database) so that it can be easily found when needed.
- ❖ A search engine is a software that searches for any website in the World Wide Web in the web browser.
- ❖ **Information** can be **searched quickly** with their help.
- ❖ **SEO** stands for **Search Engine Optimisation**. It increases the number of visitors to a website or web page by placing the site in a high position in the search engine results, i.e., we have implemented SEO on a web page on the website, then that web page or website will appear first on searching.

Examples of Search Engine

- ❖ A search engine is an application software used to **visit** a website.



- ❖ **Examples of search engines—** Google, Bing, Yahoo, Alta Vista, Khoj, Exite, Lycos,

Netscape, Web Crawler, MSN, Go, Rediff, Ask.Com, Baidu, Hot Bot etc.

Google

- ❖ Google is currently the **most widely used search engine** in the world.
- ❖ Google was invented by **Sergey Brain** and **Larry Page**.
- ❖ There is no limit to the list of search engines on Google. In this, any type of news, product, photo, calendar, etc., is kept completely secure.

Uniform Resource Locator (URL)

- ❖ The **URL (Uniform Resource Locator)** is the address of a website through which that website is recognised on the World Wide Web. The URL of each website is different.

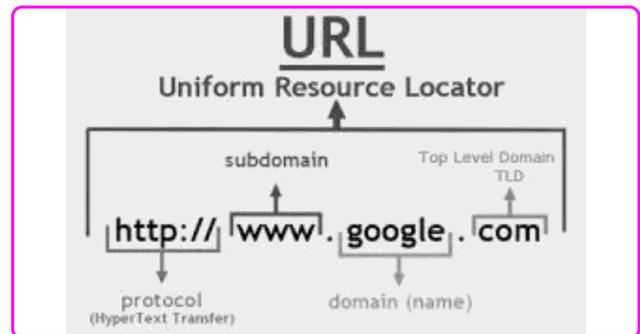


Fig. : URL

- ❖ The URL of a website includes protocol, World Wide Web, and domain name.
- ❖ An **example of a URL-** http://www.computer.com in this, '**http**' is the protocol, '**www**' is the World Wide Web, and '**computer**' is a domain name and '**.com**' is a **top-level domain**.
- ❖ **Uniform Resource Identifier (URI)** indicates the name and position of any file or information located on the World Wide Web, while URL indicates the position of the information and the way to obtain it.

Protocol

- ❖ Protocol is called the **set of rules** on the World Wide Web that are made for **data communication** on the Internet and other networks or to **properly exchange data from one computer to another**.
- ❖ The set of rules is called a protocol to transfer data in a systematic way and easily in the network.

❖ The **set of rules and standards** made for data transfer between two or more computers in a network is called a protocol.

- ❖ Protocol is also called network protocol or internet protocol.

44. The network device through which the analogue data of the telephone line is converted to digital and digital data to analogue is:
(A) Switch (B) Hub (C) MODEM (D) Router
45. What is the full form of MODEM?
(A) Main Digital (B) Modulator Demodulator
(C) Modulator Data (D) Modulator Discom
- Internet and Internet Service Provider**
46. The world's largest network that connects computers all over the world is:
(A) Intranet (B) Internet (C) Arpanet (D) Network
47.was the network that became the basis of the internet.
(A) Arpanet (B) Cluster (C) HTTP (D) SSID
48. The beginning of the network of networks, the Internet, was done in the form of
(A) TCP/IP experiment
(B) Network of American security forces
(C) By the team of Bell Laboratory
(D) All of the above
49. The internet was launched in India in:
(A) 15 August 1994 (B) 15 August 1995
(C) 16 August 1994 (D) 16 August 1995
50. The expanded form of Arpanet (ARPANET) is:
(A) Advanced Research Project Agency Network
(B) Advancing Research Project Agency Networking
(C) Advanced Research Project Agency Networking
(D) Advanced Research Program Agency Networking
51. For which of the following tasks can the internet be used?
(A) For E-mail
(B) For file downloads
(C) For online chat with other people
(D) All of the above
52. Which of the following statements is incorrect regarding the Internet?
(A) Each computer on the Internet is identified by a unique IP address.
(B) The ownership of the Internet is in the name of the United Nations.
(C) The Internet is a global, worldwide system of interconnected computer networks.
(D) The Internet uses the standard Internet Protocol (TCP/IP).
53. The set of rules and guidelines used for the Internet is technically known as:
(A) Netiquette (B) Net Etiquette
(C) Software (D) Spyware
54. Information sent on the internet is divided into small pieces, which are called:
(A) Web page (B) Web server
(C) Packets (D) Node
55. The Internet Protocol Architecture acts as a focal point, it defines a common method for the exchange of between a vast collection of networks.
(A) Messages (B) Packets
(C) Information (D) Package
56. A shared network within an organisation that enables all its employees to communicate with each other and is used only by the employees of that organisation, is called:
(A) Extranet (B) Intranet
(C) Delnet (D) Internet
57. What is the process of obtaining information while viewing various websites on the Internet?
(A) View (B) Surfing
(C) Chatting (D) Communication
58. A network of organisations designed to protect a network from external threats which is a security system is:
(A) Firewall (B) Antivirus
(C) Bluetooth (D) Search Engine
59. An organization that provides services for using the Internet is:
(A) ISP (B) Network
(C) Website (D) WWW
60. What is the full form of ISP used in a network?
(A) Internet Service Provider
(B) Internal System Point
(C) Intranet Set Provider
(D) Intranet System Perfect
61. As a used organisation / Internet service provider, whose services can be taken / were taken to provide Internet services to the consumer?
(A) BSNL (B) Airtel
(C) VSNL (D) All of the baove
62. Applets are special programs, which are written in language.
(A) Java (B) HTML
(C) HTTP (D) None of the above
- WWW, Website, Webpage**
63. The group that handles the standards for the internet is called:
(A) W3C (B) TCP (C) IP (D) HTTP
64. WWW means in the internet:
(A) World With Web (B) Wide With Website
(C) World Wide Web (D) Web With Web
65. Who discovered WWW?
(A) Bill Gates (B) Fail Allen
(C) Mark Zuckerberg (D) Tim Berners Lee
66. Which of the following concepts did Tim Berners Lee present?
(A) WWW (B) HTML
(C) Senatic Web (D) All of The Above
67. a new language of computers, which plays animations and games for the World Wide Web.
(A) Java (B) C (C) C++ (D) HTML

Answer-key

- 44.(C) 45.(B) 46.(B) 47.(A) 48.(B) 49.(B) 50.(A) 51.(D) 52.(B) 53.(A) 54.(C) 55.(B)
56.(B) 57.(B) 58.(A) 59.(A) 60.(A) 61.(D) 62.(A) 63.(A) 64.(C) 65.(D) 66.(D) 67.(A)

290. State true or false for the following statements:

- (i) The Internet is the best example of a Local Area Network (LAN).
 (ii) Every computer connected to the Internet must have an IP address.
 (A) i - True, ii - True (B) i - False, ii - False
 (C) i - True, ii - False (D) i - False, ii - True

291. Match the following.**Set-1**

1. Malware

Set-2

(a) Automatically gives advertisement.

2. Adware (b) It automatically creates its own copies.
 3. Worm (c) It gets unauthorised access to the system.
 (A) 1-a, 2-b, 3-c (B) 1-a, 2-c, 3-b
 (C) 1-c, 2-a, 3-b (D) 1-b, 2-c, 3-a

292. The expanded form of PCI is-

- (A) Peripheral Component Interconnect
 (B) Personnel Component Interconnect
 (C) Personal Component Interconnect
 (D) Para Component Interconnect

Questions Asked in Previous Recruitment Examinations**Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)****1. The main function of the GPS system is:**

[CET 10+2 Level, 23.10.24 (1st Shift)]

- (A) Weather forecasting
 (B) Navigation and positioning
 (C) Satellite imaging
 (D) Space exploration

2. The full form of HTTP is

[CET 10+2 Level, 22.10.24 (2nd Shift)] [Junior Accountant-2016]

- (A) Hyper Text Transfer Protocol
 (B) Hyper Text Technical Protocol
 (C) Hyper Text Transmission Protocol
 (D) Hyper Text Transfer Protocol

3. Which of the following is a type of computer network?

[CET Gr. Level, 28.09.24 (2nd Shift)]

- (A) RING (B) BUS
 (C) STAR (D) PAN

4. Cyber security is also called 'information technology security'. It is used for the following tasks:

[CET Gr. Level, 27.9.24 (2nd Shift)]

- (A) Connecting different computers to each other
 (B) For use in sharing resources on the internet
 (C) To prevent unauthorised access to various computers
 (D) To send letters by post

5. Which of the following is not a web browser?

[CET Gr. Level, 27.9.24 (1st Shift)]

- (A) Mozilla Firefox (B) Safari
 (C) Opera (D) Gmail

6. An Ethernet card is also known as

[Hostel Superintendent Exam, 28.08.2024]

- (A) Network Internet Communication Card
 (B) Network Interconnection Card
 (C) Network Internet Card
 (D) Network Interface Card

7. Which protocol is the most reliable?

[Raj. Computer -03.03.2024]

[Raj. Jr. Accountant-11.02.2024]

- (A) FTP (B) UDP (C) POP (D) TCP

8. How many layers are there in the OSI model?

[Raj. Computer -03.03.2024]

[Raj. Information Assistant -21.01.2024]

2. Adware

3. Worm

(A) 1-a, 2-b, 3-c

(C) 1-c, 2-a, 3-b

(b) It automatically creates its own copies.

(c) It gets unauthorised access to the system.

(B) 1-a, 2-c, 3-b

(D) 1-b, 2-c, 3-a

292. The expanded form of PCI is-

- (A) Peripheral Component Interconnect
 (B) Personnel Component Interconnect
 (C) Personal Component Interconnect
 (D) Para Component Interconnect

- (A) 7 (B) 3 (C) 4 (D) 6

9. Which of the following is not an instant messaging service?

[Raj. Computer -03.03.2024]

- (A) Google Hangouts (B) Yahoo Messenger
 (C) Facebook Messenger (D) Google Chrome

10. In a data entry office, the computer centre is on the first and fifth floors. Both centres are connected by LAN (L.A.N). It takes time for signals to travel between these floors. Which hardware can improve data transmission?

[Raj. Computer -03.03.2024]

- (A) Modem (B) Repeater
 (C) Router (D) Computer

11. Which of the following is a contactless protocol?

[Raj. Jr. Accountant-11.02.2024]

[Raj. Librarian Grade-II -02.12.2019]

- (A) TCP (B) HTTP (C) UDP (D) TP

12. The address of a website is called:

[Raj. Jr. Accountant-11.02.2024]

- (A) Location (B) URL (C) ID (D) DNS

13. What is BCC in email?

[Raj. Jr. Accountant-11.02.2024]

- (A) Blind Carbon Copy (B) Blind Content Copy
 (C) Barind Carbon Copy (D) Barind Content Copy

14. Which attack prevents a valid user from using the computer?

[Raj. Jr. Accountant-11.02.2024]

- (A) Phishing (B) DOS (Denial of Service)
 (C) Virus (D) Spamming

15. Which of the following is not an instant messaging facility?

[Raj. Jr. Accountant-11.02.2024]

- (A) Google Hangouts (B) Yahoo Messenger
 (C) Facebook Messenger (D) Google Chrome

16. Which web page is displayed differently for different users?

[Raj. Jr. Accountant-11.02.2024]

- (A) Static (B) Home
 (C) Dynamic (D) Current

Answer-key

- 290.(D) 291.(C) 292.(A) 1.(B) 2.(D) 3.(D) 4.(C) 5.(D)
 6.(D) 7.(D) 8.(A) 9.(D) 10.(B) 11.(C) 12.(B) 13.(A) 14.(B) 15.(D) 16.(C)

9

Number System

Number System

- ❖ A computer uses the digits **0 and 1** to store and present any data/information.
- ❖ All data and instructions given to the computer by the user are converted into these two digits (0 and 1), which is called **Data Representation**.
- ❖ Most of the work in a computer is done by numbers, for which various number systems are used as follows:

Binary Number System

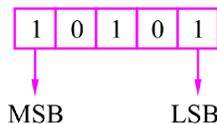
- ❖ The binary number system has **only two digits**, which are 0 and 1.

❖ The **Base Value** of the binary number system is **2**.

Note: The **Base Value** is used to identify to which number system a number belongs to.

- ❖ Example of a binary number: $(1011101)_2$

- ❖ In any binary number system, the last digit (Right Side) is called the **Least Significant Bit (LSB)**, and the **first digit** (left digit) is called the **Most Significant Bit (MSB)**.



Octal Number System

- ❖ Because of the large length of binary numbers, it becomes difficult to use them many times.
- ❖ The Octal Number System is used as an alternative to the binary number system, which requires fewer digits.
- ❖ A total of eight digits are used in the octal system, which are from 0 to 7 (0, 1, 2, 3, 4, 5, 6, 7).
- ❖ The **Base Value** of the octal number system is **8**.
- ❖ Example of an octal number: $(137)_8$

Octal Number	Binary Number
0	000
1	001
2	010
3	011
4	100
5	101
6	110
7	111

Decimal Number System

- ❖ The decimal number system has a total of **ten digits** (10 Numbers) which are from 0 to 9 (0, 1, 2, 3, 4, 5, 6, 7, 8, 9).
- ❖ The **Base Value** of the decimal number system is **10**.

Decimal Number	Binary Number
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

- ❖ Example of a decimal number: $(165)_{10}$

Hexadecimal Number System

- ❖ The number system of this type has **16 digits**. Which are digits from **0 to 9** and letters from **A to F** (0, 1, 2, 3, 4, 5, 6, 7, 8, 9 A, B, C, D, E, F).
- ❖ Here A=10, B=11, C=12, D=13, E=14, F=15

- ❖ When a larger binary bit is subtracted from a smaller binary bit, then, like a decimal number, 2 is borrowed from the next higher column.

1. **Subtract the binary number 01110 from 10101?**
Solution:

$$\begin{array}{r} 10101 \\ - 01110 \\ \hline 00111 \end{array}$$

In the first column of the above example, 1 is subtracted from 1. In this case, there is no need for a borrow and the result is 1. In the second column, 1 is subtracted from 0. According to the table described above, a borrow of 1 is required here for subtraction, so a borrow of 1 is taken from the 3rd Column. Now it becomes 2 in the second column, because the **base of the binary number system is 2, so even after taking a borrow of 1, the base value will be written as 2 only**. Now we subtracted 1 from 2 in the second column, so the result came to 1. Since the 3rd column had taken a borrow of 1 from the second, it became 0 after taking the borrow, so here too 1 will be subtracted from 0 only.

Therefore, when 1 is being subtracted from 0, the 3rd column needed a borrow, the Fourth column is 0 and there is nothing to borrow, so a borrow will have to be taken from the 5th column. After taking a borrow of 1 from the 5th Column, it will become 2 in the Fourth column and this 2 will now go to the 3rd column as a Borrow, now in the 3rd column, when 1 is subtracted from 2, 1 is left.

Multiplication of Binary Numbers

- ❖ **Multiplication in the binary number system occurs according to the following rule:**

Binary multiplication table

A×B	Multiplication
0 × 0	0
0 × 1	0
1 × 0	0
1 × 1	1

1. **Multiply the binary digits 1010 and 1001.**

$$\begin{array}{r} 1010 \\ \times 1001 \\ \hline 1010 \\ 0000 \\ 0000 \\ 1010 \\ \hline 1011010 \end{array}$$

According to the above multiplication, when the Multiplier digit is 1, the multiplicand simply copies and when the multiplier digit is 0, the whole string will be 0 and the multiplication process will proceed according to the decimal multiplication.

Division of Binary Numbers

- ❖ The following rules apply for binary division:

Binary Division table

0 / 0	0
1 / 1	1

1. Start from the left of the number to be divided (dividend).
2. Now subtract the divisor from the dividend.
3. If subtraction is possible, then add 1 to the quotient and subtract the divisor from the corresponding digits of the dividend.
4. If subtraction is not possible (i.e. divisor is greater than the remainder), then enter 0 in the quotient.
5. Bring down the next digit to add the remaining digits.
6. Proceed as before like long division.

1. **Example: 10000 ÷ 110**

$$\begin{array}{r} 0101 \\ 110 \overline{) 100001} \\ \underline{- 1110} \\ 1001 \\ \underline{- 110} \\ 11 \end{array}$$

In the above example:

1. When starting the division, the three digits 100 of the dividend are smaller than the divisor, so write 0 in the quotient.
2. Adding the next digit makes the dividend 1000 in which 110 can be divided, the division is possible, so write 1 in the quotient.
3. Now we will divide the remaining number in the remainder and 100 of the dividend, then we will not be able to divide because the divisor is greater than the dividend. So write 0 in the quotient.
4. Add the next digit from the dividend in the next digit.
5. The number got divided, so it was written in the quotient.

Complement of Binary Numbers

1's Complement—

1's complement means changing 0 to 1 and 1 to 0.

1. **The 1's Complement of (10110)₂ will be—**

- (A) (10101)₂ (B) (01011)₂
 (C) (01001)₂ (D) (10110)₂ [C]

Solution: The meaning of 1's Complement is to write 0 in place of 1 and 1 in place of 0, so 01001 is the answer.

2's Complement

While finding 2's Complement, you have to write the same from the left hand side till the first 1, after that change 1 to 0 and 0 to 1.

2. **2'S Complement of 10110**

Solution: You have to write the same from Left hand side till the first 1

Write the same till 10, after that write 1 in place of 0 and 0 in place of 1.

Therefore 10110 = 01010

Hence the 2's complement of 10110 = 01010 will be.

Questions Asked in Previous Recruitment Examinations

Questions asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. **Convert:** [CET Gr. Level, 28.09.24 (1st Shift)]
 $(101110)_2 = (?)_8$
{Base 2 to Base 8}
 (A) $(56)_8$ (B) $(48)_8$
 (C) $(30)_8$ (D) $(20)_8$
2. **In a binary file, the symbols read by the machine are and** [Raj. Information Assistant -21.01.2024]
 (A) 1, 0
 (B) Letters and specific symbols
 (C) Specific symbols and number
 (D) Letter, number
3. **The rightmost digit in the binary number is** [Raj. Information Assistant -21.01.2024]
 (A) LBB (B) LSB (C) MBB (D) MSB
4. **On dividing binary digit..... by 11, the output is 10. Identify the correct option-** [Raj. Information Assistant -21.01.2024]
 (A) 111 (B) 011 (C) 110 (D) 101
5. **The base in octal number system is.....** [Raj. Information Assistant -21.01.2024]
 (A) 10 (B) 8 (C) 16 (D) 4
6. **Convert the following decimal number to 8-bit binary- $(187)_{10}$** [Raj. HM 2018]
 (A) 10111011_2 (B) 11011101_2
 (C) 10111101_2 (D) 10111100_2
7. **Represent the following binary number in octal- $(010111100)_2$** [Raj. HM 2018]
 (A) 172_8 (B) 272_8 (C) 174_8 (D) 274_8
8. **The result of binary subtraction $(100-011)$ is-** [Raj. HM 2018]
 (A) -111 (B) 111 (C) 011 (D) 001
9. **How many symbols does the hexadecimal system use?** [Raj. IA 2018]
 (A) 6 (B) 10 (C) 16 (D) 60
10. **To convert decimal to octal we do-** [Raj. IA 2018]
 (A) Divide the decimal number by 8
 (B) Multiply the decimal number by 8
 (C) Divide the decimal number by 16
 (D) Multiply the decimal number by 16
11. **Subtract $(1056)_{16}$ from $(A427)_{16}$ using hexadecimal method-** [Raj. IA 2018]
 (A) $(A3B1)_{16}$ (B) $(9331)_{16}$
 (C) $(3711)_{16}$ (D) $(93D1)_{16}$
12. **2's complement of $(1000)_2$ is** [Raj. IA 2018]
 (A) 0001 (B) 0101 (C) 0111 (D) 1000
13. **What is the base of octal number system?** [Raj. IA 2013]
 (A) 2 (B) 8 (C) 10 (D) 16
14. **What is the decimal number equal to the binary number 111011.101?** [Raj. IA 2013]
 (A) 59.875 (B) 59.625
 (C) 59.750 (D) 59.487
15. **What is the hexadecimal representation of the binary number 110101111?** [Raj. IA 2013]
 (A) D71 (B) D78 (C) 1AF (D) 32F
16. **The decimal number equal to hexadecimal number 'A0' is?** [Raj. IA 2013]
 (A) 160 (B) 80 (C) 100 (D) 256
17. **Binary 1111 is equal to-** [Raj. IA 2013]
 (A) 16 (B) 7
 (C) 15 (D) None of the above
18. **The table which indicates the logical calculations of Boolean expression?** [Raj. IA 2013]
 (A) False table (B) Truth table
 (C) Logical table (D) None of the above
19. **The hexadecimal number equal to the decimal number 54977 is-** [Raj. IA 2013]
 (A) D6C5 (B) D6C1
 (C) DC61 (D) None of the above
20. **What is the product of two binary numbers 1011 and 1001?** [Raj. IA 2013]
 (A) 1100011 (B) 100100
 (C) 1010100 (D) 000100
21. **Which digits are included in the octal number system?** [Raj. IA 2013]
 (A) 0 to 6 seven digits (B) 0 to 8 nine digits
 (C) 1 to 8 eight digits (D) None of the above

Answer-key

- 1.(A) 2.(A) 3.(B) 4.(C) 5.(B) 6.(A) 7.(D) 8.(D) 9.(C) 10.(A) 11.(D)**
12.(D) 13.(B) 14.(B) 15.(C) 16.(A) 17.(C) 18.(B) 19.(B) 20.(A) 21.(D)

10

Information Technology Act 2000 and Digitalization

Information Technology (IT)

- ❖ Nowadays, all tasks are performed with the aid of Information Technology.
- ❖ Information Technology (IT) encompasses the collection, storage, processing, dissemination, and use of information.
- ❖ Through Information Technology, information and data are transmitted rapidly from one location to another.
- ❖ Electronic communication is also considered a major component of Information Technology, which is why it is also referred to as **Information and Communication Technology (ICT)**.

❖ The operation, regulation, and management of Information Technology are carried out under the provisions of the **Information Technology Act 2000**.

- ❖ **In India**, the **Ministry of Electronics & Information Technology MEITY** is responsible for creating and implementing IT policy.

Information Technology Act 2000

- ❖ The **Information Technology Act 2000** is an Act passed by the Indian Parliament, enacted on **17 October 2000**.
- ❖ Following a United Nations resolution, India enacted the **Information Technology Act 2000** in May 2000, and issued a notification on 17 October 2000 to implement it.
- ❖ It was amended in October 2008 through a declaration.
- ❖ The Information Technology Act, 2000 was significantly amended through the **Information Technology Amendment Act, 2008**, which was passed by both houses of the Indian Parliament in **2008**.
- ❖ The Information Technology Act provides legal recognition to various digital documents and Electronic signatures, provided for laws against Cyber-Crime, enables Quick Information Transmission, and other functions.
- ❖ As the use of various digital formats has increased in the digital world, so has digital theft. Digital theft or digital fraud includes stealing various types of information, sending threatening E-mails, etc. In order to prevent all these Electronic crimes, there is a provision for punishment, for which the sections are as follows:
- ❖ Attempting to tamper with computer resources. —**Section 65**
- ❖ Attempting to hack and tamper with data stored in a computer. —**Section 66**

- ❖ Provision for punishment for sending prohibited information through communication services. —**Section 66-C**
- ❖ Provision for punishment for Cyber Terrorism. —**Section 66 F**
- ❖ Provisions related to the publication of offensive information. —**Section 67**
- ❖ There is a provision for punishment for publishing or transmitting obscene information through electronic media. —**Section 67 A**
- ❖ Publication of fake digital signatures. —**Section 73**
- ❖ Fake websites or Cyber fraud. —**Section 420**
- ❖ Use of fake electronic records. —**Section 463**
- ❖ Provision for fines for sending restricted information through communication services —**Section 66 A**
- ❖ Provision for punishment for wrongly obtaining stolen information from a computer or any other electronic gadget —**Section 66 B**
- ❖ Provision for punishment for stealing someone's identity —**Section 66 C**
- ❖ Provision for punishment for accessing someone's private data with the help of a computer by concealing their identity —**Section 66 D**
- ❖ Provision for punishment for violating someone's privacy —**Section 66 E**
- ❖ Publication or transmission via electronic media of objectionable material containing children in an obscene situation —**Section 67 B**
- ❖ Provision for fines for intermediaries obstructing or withholding information —**Section 67 C**
- ❖ Relevant provisions for attempting to gain subordinate access to a secure computer —**Section 70**
- ❖ Misrepresentation of data or information —**Section 71**
- ❖ Provisions related to breach of mutual trust and violation of privacy —**Section 72A**
- ❖ Provisions related to disclosing information to the public in violation of the terms of the contract —**Section 72A**

Development & Application in the Field of IT

E-Governance

- ❖ E-Governance means **Electronic Governance**, which **promotes the digitalization** of services.
- ❖ E-Governance means making all **government functions/schemes/facilities** easily accessible to the public through **online services**.

Information Technology & E-Governance in Rajasthan

- ❖ To provide a systematic, planned, and proper direction to the information technology projects, the Computer Directorate was established in the state in 1987.
- ❖ On 30 September 1997, its name was changed to the Department of Information Technology, and in May 2002, its name was changed to the Department of **Information Technology and Communication (DOIT&C)**.
- ❖ The Department of Information Technology and Communication implements and operates all the schemes related to e-governance in Rajasthan.
- ❖ **RajCOMP Info Services Limited** provides technical consultation and advice to the Department of Information Technology and Communication in the implementation of schemes.
- ❖ **Rajasthan Knowledge Corporation Limited (RKCL)** was established to provide computer education in urban and remote areas, through which the **RSCIT (Rajasthan State Certificate in Information Technology)** course is run.

Important Steps for E-Governance in Rajasthan

Rajasthan Sampark

- ❖ It started in June 2014 for the redressal of complaints from the general public.
- ❖ Through this, online complaints are registered and their solutions are obtained.
- ❖ Rajasthan Sampark Portal is a process by the Rajasthan government to register and resolve various types of complaints from the general public.
- ❖ On this portal, the general public registers their complaint, the complaint is sent to the concerned department's officers/employees, and the complainant gets a proper solution to his/her problem.
- ❖ Along with this, **CM Helpline 181** has also been started for complaint redressal.

E-Mitra

- ❖ E-Mitra is an important e-governance scheme of the Rajasthan government, which was started by the state government using the Public Private Partnership (PPP) model for the convenience and transparency of citizens to avail of various government services.
- ❖ The E-Mitra platform was established in **2004**.
- ❖ Through E-Mitra, domicile, caste certificates, birth certificates, ration cards, etc. are made and edited, and water, electricity, and mobile bills are also deposited through it.
- ❖ Each E-Mitra has a unique kiosk ID.
- ❖ On **E-Mitra Plus**, free payments are made for various government services using cash debit cards and credit cards.

CSC

- ❖ CSC stands for **Common Service Center**.

- ❖ Under this scheme, the services of agriculture, health, education, entertainment, banking and financial services, utility payments, etc. of Indian citizens are operated online.

SSO (Single Sign On)

- ❖ SSO stands for **Single Sign On**. SSO is a single window interface through which various digital services of the state government's departments can be easily accessed.
- ❖ Its purpose is to provide many facilities to citizens on a single platform.
- ❖ SSO-ID is different for each person/citizen, through which applications for examination, admit cards, results, etc. are also obtained.
- ❖ The classification of services in SSO is as follows:
 - G2G:** Government to Government - Services available for government officers and employees.
 - G2C:** Government to Citizen - Services available to the general public.

Jan Aadhar Yojna

- ❖ Jan Aadhar Yojna was started on 18 December 2019 by the Rajasthan government, Jan Aadhar card replaced the Bhamashah card.
- ❖ Currently, the benefits of various government schemes are being made available by the government through many e-governance services through Jan Aadhar card.
- ❖ Jan Aadhar card is a **10-digit** registration number.

Jan Suchna Portal

- ❖ This Portal was started in 2019. It is also known as Jan Suchna Portal 2019.
- ❖ Jan Suchna Portal is a Portal created by the Rajasthan government on which the government updates all the information of government schemes.

- ❖ Jan Suchna Portal executes according to Section 4(2) of the Right to Information Act (RTI Act) 2005.

Jan Kalyan Portal

- ❖ Jan Kalyan Portal is a **Public Welfare Portal**.
- ❖ All the information related to government information will be made available on this Portal as an Integrated Portal.

Raj Bioscope

- ❖ This is the state government's video sharing portal.
- ❖ It helps citizens and government departments in sharing information about the government.

Raj E-walt

- ❖ To promote paperlessness, the citizens of the state can scan their documents and keep them digitally safe in it.

Raj Dhara

- ❖ Geographic information system arrangement for Rajasthan which is a part of GIS (Geographical Information Service). It is used in land mapping.

43. The process of transferring currency through a computer is called:
(A) EFT (B) TFT (C) ECT (D) TET
44. What is the full form of TRAI?
(A) Train Regulatory Authority of India
(B) Transition Regulatory Authority of India
(C) Telephone Regulatory Authority of India
(D) Telecom Regulatory Authority of India
45. In banking, how many characters are there in CVV (security code)?
(A) 1 (B) 5 (C) 2 (D) 3
46. Online banking is known by which name?
(A) Internet Banking (B) Net Banking
(C) E-banking (D) All of the above
47. The full form of EPIC used in the voting system is:
(A) Election Passport Identity Card
(B) Election Photo Identity Card
(C) Elector's Photo Identity Card
(D) Economy Photo Identity Card
48. The full name of EVM used in the voting system is:
(A) Electronic Voting Master
(B) Electronic Voting Machine
(C) Economic Voting Maching
(D) None of the above
49. The first state to provide the facility to write E-mail in Hindi is:
(A) Karnataka (B) Rajasthan
(C) Gujarat (D) Bihar
50. The full name of the Aadhaar Service Operator (UIDAI) is:
(A) Universal Identification Authority of India
(B) Unique Identification Authority of India
(C) Unique Ideal Assets of India
(D) None of Above
51. What is the expanded name of E-PDS?
(A) e-Personal Development Scheme
(B) e-Problem Development System
(C) e-Public Distribution System
(D) 3-Public Delay System
52. Which of these is necessary to pay the online electricity bill?
(A) PAN card (B) Online bank account
(C) Yahoo Messenger (D) Gtalk
53. The system of online payment is:
(A) Cash (B) Credit
(C) E-commerce (D) E-activity
54. What is the meaning of E-Commerce?
(A) Online buying and selling, managing accounts, etc.
(B) Electric equipment to deal with commercial problems
(C) Study of Commerce subject
(D) All of the above

Questions Asked in Previous Recruitment Examinations

Questions Asked by Rajasthan Public Service Commission (RPSC) and Rajasthan Staff Selection Board (RSSB)

1. Which of the following is not a social networking website?
[CET Gr. Level, 28.09.24 (IInd Shift)]
(A) Hotmail (B) Facebook
(C) Snapchat (D) X (formerly Twitter)
2. Which of the following is not a means of social media?
[CET Gr. Level, 27.9.24 (Ist Shift)]
(A) Facebook (B) Twitter
(C) Broadband (D) Blogging
3. The 'Rajasthan Sampark' portal can be used for -
[Lecturer (Technical Education Department) - 12.03.2021]
(A) To collect information under RTI
(B) As a grievance redressal system
(C) For the guarantee of providing public services
(D) As a social audit forum
4. If a citizen wants to register their complaints with a particular department of the Rajasthan state government, then which of the following e-governance platforms should they use?
[Raj. Statistical Officer - 20.12.2021]
(A) Raj Masters (B) Shala Darpan
(C) Rajasthan Sampark (D) Vikas Darpan
5. The use of information and communication technology by the government to ensure the participation of people in administration has been called -
[Raj. Computer Exam - 19.12.2021]
(A) Gyandoot (B) Gyansudha
(C) E-Stake (D) E-Governance
6. The official website of the BHIM app is -
[Junior Instructor (COPA) - 2019]
(A) www.bhimupi.in (B) www.bhimupi.org.in
(C) www.bhim.com (D) www.bhimupi.net
7. The type of e-commerce in which a company sells its products to another company through the internet is called—
[Junior Instructor (COPA) - 2019]
(A) B to G (B) B to C (C) C to C (D) B to B
8. Which is not an example of G2C services?
[Information Assistant-2018]
(A) E-Visa (B) E-Transportation
(C) Digital Police Portal (D) E-bay.com
9. What is e-governance? [RRB NTPC 07.04.2016 (Shift-I) Stage Ist]
(A) Systematic Governance
(B) Human Operated Governance
(C) Technology Operated Governance
(D) Effective Administrative Governance
10. ICT means - [I Grade (Drawing-Painting) 2014]
(A) Inter Connected Terminals [I Grade (H.Sc.) 22-07-2016]
(B) Inter Common Terminology
(C) Information Communication Technology
(D) International Communication Technology
11. The Information Technology Act was amended in India- [Raj. Patwari Preliminary Examination - 13.02.2016]
(A) 2000 (B) 2005 (C) 2008 (D) 2010
12. Which service is UIDAI related to? [RPSC Jr. Acc.]
(A) Pen card (B) Aadhaar card
(C) Service card (D) None of these

Answer-key

- 43.(A) 44.(D) 45.(D) 46.(D) 47.(C) 48.(B) 49.(B) 50.(B) 51.(C) 52.(B) 53.(B) 54.(A)
1.(A) 2.(C) 3.(B) 4.(C) 5.(D) 6.(B) 7.(D) 8.(D) 9.(C) 10.(C) 11.(C) 12.(B)

Computer Related Full Forms

◇ A/D : Analog to Digital	◇ CLASS : Computer Literacy and Studies in Schools
◇ ADC : Analog to Digital Converter	◇ CMYK : Cyan, Magenta, Yellow, Key (Black)
◇ ADT : Abstract Data Type	◇ COBOL : Common Business Oriented Language
◇ AI : Artificial Intelligence	◇ Comal : Common Algorithmic Language
◇ ALGOL : Algorithmic Language	◇ CPI : Character Per Inch / Cycles Per Instruction
◇ ALU : Arithmetic Logic Unit	◇ CPU : Central Processing Unit
◇ AM : Amplitude Modulation	◇ CRC : Cray Research Company
◇ ANSI : American National Standards Institute	◇ CRT : Cathode Ray Tube
◇ ARPANET : Advanced Research Projects Agency Network.	◇ CSC : Common Service Center
◇ ASCII : American Standard Code For Information Interchange	◇ CSMA : Carrier Sense Multiple Access
◇ ATM : Automated Teller Machine/Asynchronous Transfer Mode/ Automatic Teller Machine	◇ CSMA/CD : Carrier-Sense Multiple Access with Collision Detection
◇ AVI : Audio Video Interleave	◇ CU : Control Unit
◇ B2B : Business to Business	◇ CUI : Character User Interface / Command Line User Interface
◇ B2C : Business to Consumer	◇ D/A : Digital – to – Analog
◇ BARC : Bhabha Atomic Research Centre	◇ DAC : Digital to Analog Converter
◇ BASIC : Beginner's All – Purpose Symbolic Instruction Code	◇ DAT : Digital Audio Tape.
◇ BCC : Blind Carbon Copy	◇ DBMS : Database Management System
◇ BCD : Binary Coded Decimal	◇ DBT : Direct Benefit Transfer
◇ BCPL : Basic Combined Programming Language	◇ DCL : Data Control Language
◇ BCR : Bar Code Reader / Recognition	◇ DDL : Data Definition Language
◇ BHIM : Bharat Interface for Money	◇ DDOS : Distributed Denial of Service
◇ BIOS : Basic Input Output System	◇ DEC : Digital Equipment Corporation
◇ BMP : Bitmap	◇ DFD : Data Flow Diagram
◇ Bps : Bits Per Second	◇ DML : Data Manipulation Language
◇ BSNL : Bharat Sanchar Nigam Limited	◇ DNR : Domain Name Registration
◇ C2C : Consumer to Consumer	◇ DNS : Domain Name System
◇ CAD : Computer Aided Design	◇ DOIT&C : Department of Information Technology & Communication
◇ CAM : Computer Aided Manufacturing	◇ DOS : Disk Operating system
◇ CAN : Campus Area Network	◇ DPI : Dots per Inch
◇ CC : Carbon Copy	◇ DRAM : Dynamic Random Access Memory
◇ CD : Compact Disc	◇ DRDO : Defence Research and Development Organisation
◇ C-DAC : Centre for Development of Advanced Computing	◇ DSA : Data Structures Algorithm
◇ CDC : Control Data Corporation	◇ DSHD : Double Sided High Density
◇ CDMA : Code Division Multiple Access	◇ DSL : Digital Subscriber Line
◇ C-DOT : Center for Development of Telematics	◇ DTP : Desktop Publishing
◇ CD-R : Compact Disc-Recordable	◇ DTR : Data Terminal Ready
◇ CD-R/W : Compact Disc-Rewritable	◇ DTS : Desk Top System
◇ CD-ROM : Compact Disc-Read Only Memory	◇ DVD : Digital Versatile Disc/ Digital Video Disc
◇ CDSL : Conference on Data System Language	◇ EBCDIC : Extended Binary Coded Decimal Interchange Code

Mentor Introduction



**Dharmendra
Kumar Yadav**

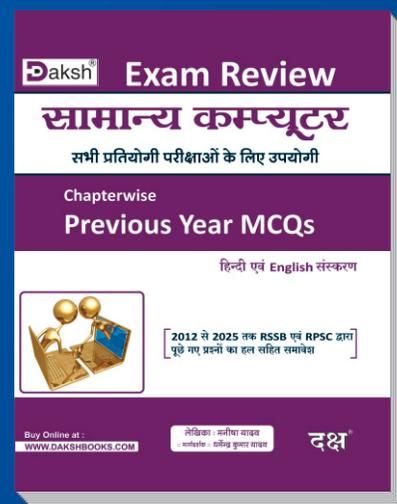
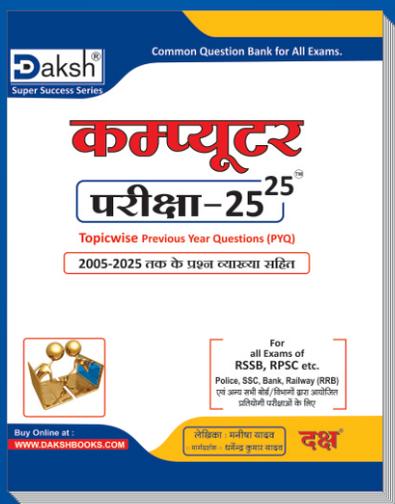
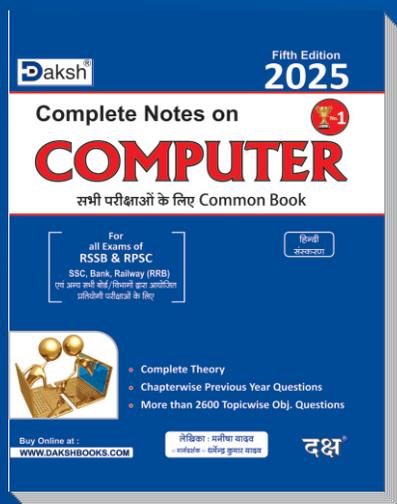
Dharmendra Kumar Yadav, from Village- Kalyanpura, Udawala, tehsil Shahpura, Jaipur, is currently a well-known guide and expert of computer subject who brought a revolutionary pattern of learning and understanding in the field of competitive exams which lead him to be a first choice of Students for guidance of computer subject.

Author Introduction



**Manisha
Yadav**

Manisha Yadav was born in the village Navalpura of tehsil Shahpura, Jaipur district. Because of her interest in writing and her technical knowledge, she has been working as a writer for the past several years. Thousands of competitive exam candidates have guidance by studying the books she has written and compiled.



DAKSH PUBLICATIONS

(A Unit of College Book Centre)

A-19 सेठी कॉलोनी, जयपुर (राज.)

फोन नं. 0141-2604302

Code No. D-881

₹ 380/-

To Buy this Book Online

ORDER at

WWW.DAKSHBOOKS.COM

★ SPECIAL DISCOUNT + FREE DELIVERY ★