

Concept of IT

1. What are the basic elements of a computer? / Write down the parts of a computer.

➤ There are some of the basic elements that make up a computer including:

- Central processing unit (CPU)
- Types of memory
- The hard disk
- Input and output devices.

2. Write down the parts of the CPU.

➤ The CPU contains following elements:

- Control Unit
- Arithmetic Logic Unit (ALU)
- Register
- BUS

3. Write down the functions of control Unit, ALU, Register and Bus.

- Control Unit: The control unit is responsible for controlling the sequencing and timing of the other elements making up the CPU.
- Arithmetic Logic Unit (ALU): The ALU performs the mathematical calculations using data stored within the CPU registers.
- Register: The registers are memory storage areas within the CPU that hold the data that is worked on by the ALU.
- BUS: The computer bus transports data between the memory and registers.

4. What is RAM?

- The RAM (Random Access Memory) within a computer is where the operating system is loaded to when end user switch on a computer and also where applications are copied to before starting an application, such as a word processor or database program.

5. What is ROM-BIOS?

- The ROM-BIOS (Read Only Memory - Basic Input Output System) chip is a special chip held on a computer's system (mother) board. It contains software which is required to make a computer work with the operating system, for instance it is responsible for copying the operating system into RAM during switch on a computer.

6. Where are the input and output ports are normally located?

- The input and output data are normally located at the back or on the side of a computer.

7. Give some examples of input and out ports.

- Examples of Input and Output ports are given below:
 - USB(Universal Serial Bus) port
 - Serial Port
 - Parallel port
 - Network Port
 - Firewire port

8. What are the factors that affect computer performance?

- There are a wide range of factors that can affect the performance of a computer. These include:
 - CPU speed
 - RAM size
 - Graphics and processor and memory
 - Number of applications running

9. Write down the names of different types of memory used as computer memory.

- Names of different types of memory used as computer memory:
 - **RAM (Random Access Memory):** Random Access Memory (RAM) is the main 'working' memory used by the computer. Data and programs stored in RAM are volatile (i.e. the information is lost when the computer is switched off).
 - **ROM (Read Only Memory):** Read Only Memory (ROM) as the name suggests is a special type of memory chip which holds software which can be read but not

written to. A good example is the ROM-BIOS chip, which contains read-only software.

- **ROM-BIOS:** The 'Read Only Memory-Basic Input Output System' chip is a chip located on the computer's system (mother) board, which contains software. This software performs a variety of tasks such as self diagnostics to check the computer is working ok and loading the operating system from the disk into the RAM.
- **Video (Graphics memory):** The on-screen pictures are held in special memory chips called video memory chips; these chips are usually located on the video card. A modern motherboard is supplied with several Megabytes of video memory.

10. Write down the names of different types of Storage Media.

- There are a range of storage media to choose from including:
 - Internal Hard Disk
 - External Hard Disk
 - CDs
 - DVDs
 - Recordable CD and DVD drives
 - USB Flash drives
 - Memory Cards
 - Network Drives and on line file storage

11. Where is the operating system stored?

- The operating System is stored in internal hard disks.

12. What is a memory card?

- A memory card (also called a flash memory card) is a card containing memory chips that is often used in devices such as digital cameras, telephones, music players, video game consoles, GPS system and similar devices where there is a need to store data in a compact form, often using a battery power source.

13. What is input device?

- Input devices are devices that allow end user to input information to the computer.
Example: Keyboard, Mouse, scanners, tracker balls, touch pads, joy sticks, webcams, digital camera and microphones.

14. Give some examples of output devices.

- Example of output device: Screens (Monitor), printers, speech synthesizer, projection devices, speakers and headphones.

15. Write down the names of different types printers.

- There are many different types of printers. These are:
 - Laser printers
 - Colour laser printers
 - Inkjet printers
 - Dot Matrix printers

16. Give two examples of input and output device with explanation.

- Two examples of input and output devices:
 - I. **Modem:** A modem can be used for downloading information from web sites and receiving emails. It can also be used for uploading and sending emails.
 - II. **Touch Screen:** A touch screen can display a menu system (output device), and accept input when people touch the menus displayed on the screen.

17. What is software?

- Software is the collection of instructions which makes the computer work. Software is held either on a computer's hard disk, CD-ROM, DVD or on a diskette (floppy disk) and is loaded (i.e. copied) from the disk into the computer's RAM (Random Access Memory), as and when required.

18. What is an operating system?

- The operating system is a special type of program which loads automatically during starting of a computer. The operating system allows consumers to use the advanced

features of a modern computer without having to learn all the details of how the hardware works.

- Example: Windows XP, Windows Vista, UNIX, Linux etc.

19. What is a software application program?

- An application program is the type of program which you use once the operating system has been loaded. Examples include word-processing programs (for producing letters, memos etc), spreadsheets (for doing accounts and working with numbers), databases (for organizing large amounts of information), games programs and graphics programs (for producing pictures, advertisements, manuals etc).

20. Write down the differences between the operating system and application software.

- The operating system works closely with the hardware that you have installed within your computer. It interprets the input via the mouse or keyboard and outputs data to the screen.
- The application programs sit above the operating system, and make use of the functionality built into the operating system. They are specific to a particular task. For instance Microsoft Word is designed as a word processing program, while Microsoft Excel is a spreadsheet program.

21. Write down the accessibility options of a computer.

- There are a range of options to improve computer accessibility. These cover:
 - Voice recognition software
 - Screen reader software
 - Screen magnifier software
 - On-screen keyboard.

22. What is client/server network?

- This term relates to the type of network where resources are kept centrally on the server and used locally by the client. The server tends to be a very powerful PC

(or group of PCs), while each client workstation, which the users have, is less powerful.

23. What is LAN?

- A LAN (Local Area Network) is a system whereby individual PCs are connected together within a company or organization.

24. What is WLAN?

- A WLAN (Wireless Local Area Network) allows you to connect to other computers within LAN using wireless technology.

25. What is WAN?

- A WAN (Wide Area Network) as the name implies allows you to connect to other computers over a wider area (i.e. the whole world).

26. Write down the names of different types of Network.

- Names of different types of Network:
 - LAN
 - CAN
 - MAN
 - WAN

27. What are the differences between WWW vs. Internet?

- The World Wide Web (WWW) is just a small part of the Internet as a whole whereas The Internet relates to all the hardware and software involved, as well as the WWW.
- Internet includes FTP (File Transfer Protocol), email and newsgroups whereas The WWW is basically the text and pictures which can be viewed by using web browser, such as Microsoft Internet Explorer, or Netscape Navigator.

28. Define Internet, Intranet and extranet.

- **Internet:** The Internet is a global network of interconnected networks.
- **Intranet:** An Intranet is a smaller, closed version of the Internet, which can only be accessed by authorized member of an organization.

- **Extranet:** An Extranet is an Intranet which is partially accessible to authorized outsiders.

29. What is the basic difference between Intranets and Extranets?

- An Intranet is normally only accessible by members of the same company or organization; an extranet also allows outsiders who have been issued with a password to gain limited access to information held on a company network.
- Extranets are being used as a way for business partners to share information while intranets are being used only for company or organization purposes.

30. Write down the feature of a broadband Internet Connections.

- Features of a broadband Internet Connections
 - Broadband connection is always connected to the Internet.
 - Broadband connection is paid for via a flat monthly fee.
 - High Speed access
 - Risk of intruder attack

31. What does 'Information and Communication Technology' (ICT) mean?

- The term ICT cover a wide range of computer related fields including:
 - Installing and maintaining computer systems and applications
 - Designing, installing and maintaining computer networks
 - Data management
 - Computer hardware maintenance
 - Database and software design and many other areas!

32. What are the internet services for consumers?

- The Internet offers a vast range of services for consumers including
 - E-commerce
 - E-banking
 - E-learning
 - E-government.

33. What is e-commerce?

- The phrase e-commerce is a buzzword which relates to buying or selling via the Internet.

34. Write down the advantage and disadvantage of e-commerce.

- Advantages of e-commerce:
 - Services available 24 / 7
 - Large stock range
 - Ability to compare price
 - Equal delivery to town and country
 - Right to return defective goods
- Disadvantages of e-commerce:
 - Possible credit card fraud
 - Presence of fake website
 - Absence of communication with a real person
 - Insecurity of returning the faulty goods

LIST OF ABBREBIATIONS

Item	Meaning
ADSL	Asymmetric Digital Service Line
ALU	Arithmetic Logic Unit
BIOS	Basic Input Output System
BPS	Bits Per Second
CAN	Campus/Corporate Area Network
CBT	Computer Based Training
CD	Compact Disk
CD-R	Compact Disk- Recordable
CPU	Central Processing Unit
DAT	Digital Audio Tap
DOS	Disk Operating System
DSL	Digital Subscriber Lines
DVD	Digital Versatile Disk
e-Mail	Electronic Mail
FAST	The Federation Against Software Theft
FTP	File Transfer Protocol
GB	Gigabyte
GHz	Giga Hertz
GPS	Global Positioning System
GUI	Graphical User Interface

ICT	Information and Communication Technology
IM	Instant Messaging
IP	Internet Protocol
IS	Information System
ISDN	Integrated Services digital Network
ISP	Internet Service Provider
IT	Information Technology
IT & T	Information Technology and telecommunication
KB	Kilobyte
Kbps	Kilobits Per Second
LAN	Local Area Network
MAN	Metropolitan Area Network
MB	Megabyte
Mbps	Mega Per Second
MHz	Mega Hertz
OCR	Optical Character Recognition
OS	Operating System
PB	Petabyte
PC	Personal Computer
PDA	Personal Digital Assistant
PSTN	Public Switched telephone Network
RAM	Random Access Memory
ROM	Read Only Memory
RSI	Repetitive Strain Injury
RSS	Really Simple Syndication
TB	Terabyte
UPS	Uninterruptible Power Supply
USB	Universal Serial Bus
VDU	Visual Display Unit

VoIP

Voice Over Internet Protocol

WAN

Wide Area Network

WLAN

Wireless Local Area Network

WWW

World Wide Web