**ICT Questions**

**Short Questions:**

1. **What is computer? Name its four basic parts.**

**Computer:**

An Electronic device that converts data into information which

is useful to people.

**Basic parts:**

1)Input unit (i.e. key-board) 2)CPU 3)Output unit (i.e. monitor) 4)Memory

**2) Why does home user need computer?**

Computer can be helpful for a home user in the following ways:

1) Communication 2) Business work done at home 3) School work 4) Entertainment 5) Finances and many more.

**3) What is the difference between Intel 4004 and Intel 8008 micro-processor?**

|  |  |
| --- | --- |
| **Intel 4004 micro-processor** | **Intel 8008 micro-processor** |
| * It consists of 4-bit micro-processor. * It can perform 60000 instructions per second. * It consists of 2300 transistor per chip. | * It consists of 8-bit micro-processor. * It can perform 640000 instructions per second * It consists of 6000 transistors on one chip. |

**4)** **List six types of computers that are designed for use by a single person.**

The six primary types of computers in this category are

» Desktop computers » Workstations » Notebook computers » Tablet computers » Handheld computers » Smart phones.

**5) Differentiate between hardware and software of computer?**

|  |  |
| --- | --- |
| **Hardware** | **Software** |
| * The mechanical devices that make up the computer are called hardware. * For example, CPU, Motherboard, Hard drive etc… | * Software is a set of instructions that makes the computer perform tasks. * For example, Application programs, Device servers, Operating Systems etc… |

**6) What do you mean by processor of computer?**

The **Processor** is like the brain of the computer. It executes instructions on different types of data. These instructions can be provided directly by the users or by some program. Usually it is a single chip or a set of chips contained on a circuit board.

**7) Define Data and Information?**

**Data:**

Data is actually facts or any piece of information or fact that, taken by itself, may not make sense to a person. Data is un-organized

**Information:**

The data processed by the computer is called information. Information is organized.

**8) Differentiate between input and output devices?**

|  |  |
| --- | --- |
| **Input Devices** | **Output Devices** |
| * Input devices accept data and instructions from the user or from another computer system. * For example, keyboard, mouse, trackball, touchpad, joystick, scanner, digital camera, microphone. | * Output devices returns processed data to the user or to another computer system. * For example, monitor, printer, speaker. |

**9) What is byte?**

**Byte:**

The most common measurement unit for describing the memory is called the byte.

Commonly used terms are:

*KB* (Kilobyte), *MB* (Megabyte), *GB* (Gigabyte).

**10) What are storage devices?**

**Storage Devices:**

The equipment in which the information can be stored called storage device. It works in a different way than RAM/ROM.

For example, CDs, Hard disks.

**11) Define the following terms:**

**1) Bit 2) Byte 3) Nibble**

**Bit:**

A bit is the smallest possible unit of data a computer can recognize or use**.**

**Byte:**

A group of eight bits is called a byte.

**Nibble:**

Half of a byte is called a nibble.

**12) What do you mean by Binary number system?**

**Binary Number System:**

A method of mathematical expression which uses only two symbols or digits 0 (zero) and 1 (one) is called binary number system.

The numbers are expressed in base 2.

**13) Covert:**

**(386)10 (?)2**

**Solution:**

(386)10 (110000010)2 [Either by division method or direct method]

**14) How arithmetic logic unit(ALU) differ from control unit(CU)?**

|  |  |
| --- | --- |
| **Arithmetic Logic Unit(ALU)** | **Control Unit(CU)** |
| * This unit deals with the processing of computer involves comparing numbers or carrying out mathematical operations. * Operations include addition, subtraction, multiplication etc. | * It is the logical hub of the computer. * All the computer resources are managed from the CU. |

**15) What is data bus?**

The data bus is an electrical path that connects the CPU, memory, and the other hardware devices on the motherboard. Actually, the bus is a group of parallel wires.

**16) Write the truth table of XOR operation.**

**Truth Table of XOR:**

**Inputs Output**

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **X** |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

**17) What is machine cycle? Write its 2 types.**

**Machine Cycle:**

Each time the CPU executes an instruction, it takes a series of steps, called Machine Cycle. It is further divided into two smaller cycles:

* Instruction cycle
* Execution cycle.

**18) Define Boolean Algebra?**

The digital circuits, present in a digital computer, are designed using a mathematical discipline known as Boolean Algebra.

It describes the relationship between the inputs and outputs of a digital circuit.

**19) Write four most popular text codes.**

The four most popular Text Codes systems are:

1. EBCDIC (*Extended Binary Coded Decimal Interchange Code*)
2. ASCII (*American Standard Code for Information Interchange)*
3. Extended ASCII
4. Unicode

**20) What is Application software?**

Application Software tells the computer how to perform specific tasks for the user. Many applications are available for many purposes.

For example,

Word Processing for creating text documents.

Spreadsheets for creating numeric-based documents.

**Long Questions**

1. **Differentiate between RAM and ROM?**
2. **What is software? Write its types**
3. **What is computer? Write its basic parts and explain them**
4. **Write down the steps involved in instruction cycle and execution cycle?**
5. **What is memory? Write its types.**