Computer Studies

2020-2021

Chapter No 1

Question No 1: Discuss the use of computer in any two fields of life.

Answer:

Role of Computer our daily life:

The role of computer in our lives is increasing day by day. We are living today in the information era and the information has become one of the most valuable assets. To process this information, we make use of computers in various fields in our daily life. Computers have been integrated in our life in different shapes and sizes like desktops, laptops, mobile phones, gaming consoles and smart devices. Our lives have become so dependent of computers that we cannot work even a single day without the help of it.

Use of Computer in Robotics:

Robots are the machines that can be controlled by a computer and are capable of carrying out a complex series of actions automatically. Robots can be controlled by an external control device or through programming. Robots are commonly used in manufacturing, industry, science, medicine and education.

Use of Computer in Virtual Reality:

Virtual Reality is an artificial environment that is created with software and presented to the user in a way that the user feels it as a real environment. Virtual reality can be used for the simulation of a real environment for training and education.

Question No 2: Differentiate Compiler and Assembler.

Answer:

Compiler	Assembler
It translate High-Level language code into machine code.	It translate Assembly language code into machine code.
Compiler checks and converts the complete code at one time.	Assembler generally does not convert complete code at one time
Mnemonic version of machine code.	Binary version of machine code.
C, C++, Java use compilers.	GAS, GNU use assemblers.

Question No 3: Differentiate System and Application software.
Answer:

System Software	Application Software
System software is a computer program that coordinates all activities and functions of a computer.	Application Software is the type of software which runs as per user request. It runs on the platform which is provide by system software.
System software is used for operating computer hardware.	Application software is used by user to perform specific task.
System software are installed on the computer when operating system is installed.	Application software are installed according to user's requirements.
System software can run independently.	Application software can't run independently.

Eg. Operating systems, device drivers, utility programs and language translators.	Eg. MS word, Excel, web browser ,VS code and VLC

Question No4: Describe artificial intelligence with examples.
Answer:

Artificial intelligence:

Artificial Intelligence is based on simulating human intelligence in machines that can easily mimic and execute tasks from simple to more complex operations. The term A.I. may also be referred to any machine that displays qualities associated with a human brain such as learning, reasoning and problem solving. A.I. is also used for Machine Learning. It learns from our daily routines and suggests us different options. A.I. is vastly used in scientific experiment, healthcare and space technologies. Some examples are as under.

Examples:

Google maps:
Google maps suggest the best ways for our daily commute.
Intelligent Tutoring Systems:
Intelligent Tutoring Systems personalized electronic tutoring customized to the learning styles and preferences of the pupil.
Voice Assistants:
Such voice assistants as Amazon Alexa, Apple Siri and Google Home allow interacting with various learning materials without communication with a teacher.

Question No 5: Discuss Impact and Non-Impact Printers with examples.
Answer:

Impact Printers:

It is a type of printer that works by direct contact of an ink ribbon with paper. These printers are typically loud but remain in use today because of their unique ability to function with multipart forms. An impact printer has mechanisms resembling those of a typewriter.
Example of Impact Printers: Dot-matrix printers, Daisy-wheel printers, and line printers.

Non-Impact Printers:

It is a type of printer that does not hit or impact a ribbon to print. They used laser, xerographic, electrostatic and chemical and inkjet technologies. Non-impact printers are generally much quieter. They are less likely to need maintenance or repairs than earlier impact printers.

Example of Non-Impact Printers: Inkjet printers and Laser printers.

Question No 6: Write the use of these storage devices: Hard Disk, USB Flash Disk and SD Card.

Answer:

- **Hard Disk:** A hard drive is the hardware component that stores all of your digital content. Your documents, pictures, music, videos, programs, application preferences, and operating system represent digital content stored on a hard drive
- **USB Flash Disk:** USB flash drives are often used for storage, data back-up and transferring of computer files. Compared with floppy disks or CDs, they are smaller, faster, have significantly more capacity, and are more durable due to a lack of moving parts.
- **SD Card:** An SD card (Secure Digital Card) is an ultra-small flash memory card designed to provide high-capacity memory in a small size. SD cards are used in many small portable devices such as digital video camcorders, digital cameras, handheld computers, audio players and mobile phones.

Question No 7: Which monitor will you prefer in your school; CRT or FPD? Why?

Answer:

I preferred FPD monitor because it is better than CRT. Some of it advantages are as under.

Brightness:

FPDs are, on average, brighter than CRTs. A high-quality 15-inch FPD might be rated at 300 nits, three times as bright as a typical CRT.

Contrast:

Contrast measures the difference in luminance between the brightest and dimmest portions of an image, and is expressed as a ratio. FPDs have high contrast as compare to CRTs.

Usability in bright environments:

Even good flat-screen CRTs are subject to objectionable reflections when used in bright environments.

Question No 8: List any five components present on motherboard.
Answer:

Motherboard:

The motherboard is the main circuit board of your computer and is also known as the mainboard or logic board. If you ever open your computer, the biggest piece of silicon you see is the motherboard.

Component of motherboard:

- **RAM slots:** Random-Access Memory (RAM) stores programs and data currently being used by the CPU.
- **Power supply plug in:** The Power supply, as its name implies, provides the necessary electrical power to make the pc operate.
- **CPU Chip:** The *central processing unit*, also called the *microprocessor* performs all the calculations that take place inside a pc.
- **USB (Universal serial bus):** USB is the General-purpose connection for PC.
- **Parallel port:** Parallel port carry data on more than one wire, as opposed to the serial port, which uses only one wire.
- **Floppy controller:** A *floppy controller* is one that is used to control the floppy drive.
- **PCI slot:** Intel introduced the *Peripheral component interconnect* bus protocol. The PCI bus is used to connect I/O devices.
- **CMOS Battery:** To provide CMOS with the power when the computer is turned off all motherboards comes with a battery

Question No 9: Prepare a table of generations.

Generation	Period	Technology	Example of Machines

First	1940 to1956	Vacuum tubes	ENIAC and UNIVAC
Second	1956 to 1963	Transistors	IBM 7094 and IBM 1401
Third	1964 to 1971	IC (Integrated Circuit)	IBM 360 and IBM 370
Forth	1971 to Present	Microprocessors	Apple Macintosh, IBM PC.
Fifth	Present and Beyond	AI (Artificial Intelligence)	PARAM supercomputers. SUN Workstations.

Question No 10: Give examples of business, education, entertainment and productivity software.

S.No	Business	Education	Entertainment	Productivity
(i)	MS Access	MS Word	VLC	MS Office
(ii)	MS Excel	MS Paint	Counter Strike	VS Code
(iii)	Inventory Management	Zoom	Lightroom	Google Apps