**Pakistan School, Kingdom of Bahrain**

**SSC-I (Week 2)**

Q.11 Write a short note on the Fourth generation of computer and the technology used in it. Also write down the names of model used in Fourth generation of computers?

**OR**

Write a note on invention of Microprocessor and Fourth -generation of computers?

 Ans: **Fourth Generation Computers (1971 — Present):** In this generation of computers LSI (Large Scale Integration) and VLSI (Very Large Scale Integration) chips having millions of transistors were developed. Microprocessor was also developed in fourth generation of computers. A microprocessor is a single chip that can handle all the processing of a computer.

**Microprocessor Characteristics/features of fourth generation computers:** The following are the characteristics of fourth generation of computers.

 i. Microprocessor was developed which resulted in the development of microcomputers.

 ii. Fourth generation computers are very fast, have large storage capacity and use advanced input/output devices.

 iii. Microcomputers are very small in size, very reliable, consume less power and are affordable. iv. Large variety of software is available for use in microcomputers.

 v. Operating system having Graphical User interface (GUI) was developed in this generation.

vi. These computers support multimedia software that combines text, image, sound and video. vii. These computers support modern programming languages such as Visual Basic, C++, Java and Python for developing powerful software.

 viii. Fourth generation computers support a large variety of portable and wireless input/output devices.

**Examples of microprocessors:** Some examples of microprocessors developed in fourth generation of computers are Intel Pentium series, Dual Core, Core2 Duo, Core i3, i5, i7 and AMD Athlon

**Examples of fourth generation computers**:

Some examples of fourth generation computers are IBM Think Pad series, HP Pavilion series, Dell Inspiron series and Apple's MacBook Pro and MacBook Air series.

**Do You Know?**

Intel invented the world's first microprocessor, the Intel 4004 in November. 1971

Q.12 Write a short note on the fifth generation of computer and the technology used in it. Also write down the names of model used in fifth generation of computers?

**OR**

Write a note on Artificial Intelligence and fifth -generation of computers?

 Ans: **Fifth Generation Computers:** The goal of fifth generation of computers is to develop devices Mat can understand natural languages and have thinking power. This is a big challenge for computer developers and programmers to design such systems and software for them **Characteristics/features of fifth generation computers**: The following are the characteristics of fifth generation of computers.

 i. Fifth generation computes are based on Artificial Intelligence (Al).

 ii. In the fifth generation of computers, Artificial Intelligence (Al) will minimize the need to write programs.

 iii. These computers will allow users to give commands in any natural language such as English.

**Examples of fifth generation computers:** Examples of fifth generation computers are robots and expert systems.

**For Your Information**

Artificial Intelligence is the branch of computer science concerned with making computer behave like humans.

 Q.13 List the TYPES/classification OF COMPUTERS.

 Ans: **Types of Computers:** On the basis of data representation, processing, Input and Output, Computers can be classified into the following three types.

 i. Analog Computers

 ii. Digital Computers

 iii. Hybrid Computers

Q.14 Describe some of the features of Hybrid Computers/ Vital Sign Monitoring Unit.

 Ans: Hybrid Computers/Vital Sign Monitoring Unit: Hybrid computers are the combination of analog and digital computers. They combine the characteristics of both analog and digital computers.

**Uses of Hybrid Computers:**

Hybrid computers are mainly used for scientific applications. These computers are used in spaceships, missile systems, scientific research, hospitals and far controlling industrial processes.

**Vital Sign Monitoring Unit :**

A hybrid computer known as Vital Sign Monitoring Unit. It is used in hospitals to monitor patient's important data such as blood pressure, temperature respiration and heartbeat.

Q15 List the classification of digital computers.

Ans: **Classification of Digital Computers:** Digital computers are classified into mainframe, minicomputer and microcomputer based on their size, speed, storage capacity and the number of users they can support.

 Q.16 List the use/Role of computers in education.

Ans: **Education:** Role of computers it education has been given a lot of importance in the recent years. Computer technology eases the process of learning. Many programs are available for students to learn the subjects of Physics, Mathematics, Chemistry, Biology, etc.

 Multimedia software makes the process of learning interactive and interesting. It combines text, graphics, sound and video for effective learning. Internet has enormous information on a wide variety of subjects. Students can refer to Internet to find information on any topic. **Multimedia projectors:**

Nowadays computers with multimedia projectors are being used in classrooms for effective teaching. Al: the activities related to examinations are also being controlled using computers. Therefore, it plays an important role in education Today. Computer education is a part of curricula from elementary to university level.

 Q.17 Discuss the use/Role of computers in education.

 Ans: Business: Computers are used in all types of businesses to improve productivity. They help in running business activities efficiently. They are use° to prepare business documents, reports, charts, presentations, invoices, etc. They help in staying in contact with employees and customers. Important business areas where computers are used: The following are some important business areas where computers are used.

 i. Computer technology has revolutionized the banking business. Deposits and withdrawals are instantly logged into a customer's account.

 ii. Accurate monthly bank statements are generated with the help of computer. Computer networks allow amount of bill to be transferred from customer's bank account to the store.

iii. **Automated Teller Machine (ATM):** People can obtain cash any time anywhere through Automated Teller Machine (ATM)

 iv**. Bar code readers:** Computers are used in retail stores. Bar code readers are linked to computer system that are used to read the tar code printed on each product sold to prepare the bill. With the use of computers at retail stores. The checkout process is faster and the bill produced is accurate.

 v. **Electronic commerce/E-Commerce:** Electronic commerce, also known as e-commerce allows to sell products and services by means of computer networks such as Internet

 vi. Computers are very helpful in running many other types of businesses that include hotel, hospital, school, travel agency. real estate, stock exchange, etc.

Q.18 List the Use/Role of Computers in Defense.

 Ans: **Use/Role of computers in defense:** There are various applications of computer technology in defense. Computers are used in tanks, planes and ships to target enemy forces. They help in tracking missiles and destroying them Modern defense weapons and other equipment are controlled by computers. Computers are used or designing and testing of weapons Computers are also used in communication systems in defense.

Q.19 List the Use/Role of Computers in Media.

 Ans: **Use/Role of Computers in Media:** Computers have lot of applications in print and electronic media. Print media refers to mass communication through printed material. Computer technology helps in preparation and production of newspapers, magazines, booklets and brochures, flyers, press releases and books. Electronic media refers to broadcast media that includes radio broadcast:, cable and satellite television broadcast and the new-age media like Internet and mobile devices. Computer is used for television broadcasting.

 Q.20 List the Use/Role of Computers in Manufacturing Industry.

 Ans: **Use/Role of computers in manufacturing industry:** Now days ,computer technology is widely used in manufacturing industry. It has improved the accuracy, quality and speed of manufacturing Computers are used for product design and automation of manufacturing process in factories. This is known as Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM).

**Computer-Aided Design (CAD):** CAD involves the use of computer hardware and graphics software to create product designs.

 **Computer-Aided Manufacturing (CAM):** CAM involves the use of computer in planning and management of production operation. It helps in automatically producing finished products. CAD/CAM technology has been applied in many industries, including automobile, electronics, machine components. textiles, fashion, etc.