10 Information and Communication Technology
EXTRA QUESTION

Q.1 A _____ file can be used to view the file, to print it or to handle files.
Ans.- Portable Document Format.

Q.2 What is the full form of C - DAC ?
Ans.- Centre for Development of Advanced Computing.

Q.3 Write the long form of ISCII.
Ans.- Indian script code for Information Interchange.

Q.4 Define the Term - Memory.
Ans.- Memory is the place for storing data, obtained from the input and also the generated solution or answer by the computer.

Q.5 What is Internet ?
Ans.- The Internet is a kind of search engine. It helps us to find information which we want from all the information that is available on it.

Q.6 Which Software can be used to create presentations ?
Ans.- Ms PowerPoint.

Q.7 Which was the first super computer made with the help of C - DAC ?
Ans.- Param Super Computer.

Q.8 We can use a computer without operating system. Is the following statement true ?
Ans.- No. A computer cannot be used without an operating system.

Q.9 Match the pairs.

Column A	Column B
1) Operating system	1) Information in its raw form
2) Program	2) Means of Communication between the computer and the user.

3) Data	3) Group of commands to be given to the computer.
	4) These computers had large size vacuum tubes as their main component.

Answer.-

Column A	Column B
1) Operating system	1) Means of Communication between the computer and the user.
2) Program	2) Group of commands to be given to the computer.
3) Data	3) Information in its raw form

Q.10 Define the term - Information Communication Technology.

Ans.- Different type of communication devices and the use of those devices as well as the services provided with their help are together known as Information Communication Technology.

Q.11 Describe the role and importance of information communication technology.

Ans.- The role of ICT - ICT plays a key role in creating, displaying, collecting, processing and communicating information in the field of science and technology.

Importance of ICT in Science and Technology -

1) Accessing wide range of information.
2) Storing of Data.
3) Processing data.
4) Securing work files.
5) Proper representation of data.

Q.12What precautions should be taken while using various types of software on the computer.

Ans.- 1) Antivirus must be installed. 2) Software should be downloaded form a trusted source. 3) All the applications should be scanned before using. 4) Pirates software should not be used. 5) Provide all necessary data to obtain the best possible results.

Q.13 Name the devices that are used directly or indirectly for collecting, sharing, processing and communicating information ?
Ans.- Computers, Laptops, Mobiles, Telephones, Memory card, Pen drive, Hard disks.

Q.14 List the Hardware and software items of a computer.
Ans.- 1) Hardware - Keyboard, Mouse, Printer, Monitor.
2) Software - Operating system, Application, Programs, Antivirus etc.

Q.15 Why is ROM a Read Only Memory.
Ans.- ROM means Read Only Memory. It is a part of internal memory of a computer. The characteristic of ROM is that the information stored in ROM can only be read. ROM helps store data permanently for a long period of time and the information stored cannot be deleted. The data in ROM cannot be modified and hence, it is called as Read Only Memory.

Q.16 How is information communication technology important for dealing with explosion of information ?
Ans.- Information explosion means a situation where information is available in plenty or we can say it has too much information. Devices like Computers, Laptops helps us in easier assessment of information that we need from all the data.

Q.17 Explain the working of a computer.
Ans.- The working of a computer is done mostly by three units.
a) Input unit - All the types of data or information are entered into the computer through this unit. Mostly a keyboard is used to enter data or information.
b) Processor - The processing unit consist of three units that perform the processing of data.
i) Memory unit ii) Control unit iii) ALU.
c) Output unit - The result is sent to the output unit generally a screen or printer is used as an output unit.

Q.18 What precautions will you take while entering the formula in Excel ?
Ans.- In Excel while using a formula, the ' = ' sign should be typed first. While typing any formula, no space should be inserted.
Q.19 What is C - DAC ?

Ans.- C - DAC is the Centre for Development of Advanced Computing. It is the leading institute in India which conducts research in the field of computers.

Q.20 What precautions should be taken while using various types of software on the computer ?
Ans.- 1) All the software used should be legal, from a trusted source. 2) An antivirus must be installed. 3) All applications should be scanned before using. 4) Pirated software's should not be used. 5) All data should be authentic and then necessary data, should be provided to obtain best results.
6) Always read the End used. License agreement while installing the software.

Q.21 What is a PDF ?
Ans.- A PDF is a Portable Document Format file which can be used to view the file, print it or to handle files.

Q.22 The first generation of computers used to shut down because of _____.
Ans.- Excessive heat generation.

Q.23 Write a note on first generation of computers ?
Ans.- The first generation computers were created during the period 1946 to 1959. ENIAC computer was the first generation computer. ENIAC stands for Electronic Numerical Integrator and Computer / calculator. These computers has large size vacuum tubes as their main component. The vacuum tubes consumed a lot of electricity and generated a lot of heat, which led to the frequent shut down of these computers.

Q.24 Write a note on Generation of computers, Input and Output.
Ans.- Generation of computers -
1) First and second generation - Input method was punched cards, paper tapes etc. Output was given through printer.
2) Third generation computers - Input was given through keyboard. The output was given through Monitor, Printer.
3) Fourth and fifth generation - Input was given through keyboard, mouse, scanner etc. Output was given through Monitor, Printer.

Q.25 What is the difference between RAM and ROM ?
Ans.- Data stored in RAM can be read and modified where as data stored in ROM can only be read.

Q.26 Define the term Hardware.
Ans.- All the electronic and mechanical parts used in computers are together, known as its hardware.

Q.27 What is the difference between Hardware and software in a computer ?
Ans.- In a computer, Hardware includes all the electronic and mechanical parts where as software refers to the commands given to the computers.

Q.28 What are the different opportunities in the software field of computers ?
Ans.- 1) Application Programming Development.
2) Software Package Development
3) Operating Systems and Utility Development
4) Special Purpose Scientific Applications.

Q.29 What are the different opportunities in the hardware field of computers ?
Ans.- The different opportunities in the hardware field is -
a) Hardware designing.
b) Hardware production.
c) Hardware assembly and testing.
d) Hardware maintenance, servicing and repairs etc.

Q.30 What devices will you use to share with others the knowledge that you have ?
Ans.- The following devices can be used to share your knowledge with others -
1) Computers - To write blogs and books, participating in online debate, answering online questions.
2) Mobile Phones - Solving queries on calls, participating in activities in various knowledge sharing social media platform.
3) Television - Participating in quiz, discussion and debates.

Q.31 What precautions should be taken while entering data in Microsoft Excel ?

Ans.- The following precautions need to be taken, while entering the data in Microsoft Excel.
1) The data should be entered in a tabular form.
2) Different types of data should be entered in different cells. 3) The data should be entered in a proper flow and unnecessary use of space and special characters should be avoided.
4) ' Smart tags ' should be used to fill data while using drag and fill data to get different available options for entering data.
5) The entered data should be formatted in different ways according to the application.
6) The ' = ' sign should be used first while typing a formula and without any space, the formula should be inserted while typing any formula.

Q.32 Explain the role and importance of information communication in science and technology.
Ans.- 1) Demonstration - While demonstrating certain topics in science, simulation and animation can be used. Experiments and concepts can be demonstrated easily.
e.g. Functioning of Nervous system.
2) Predication - Predictions can be made after compiling and processing information. e.g. - Meteorology.
3) Collecting scientific information - Internet, emails, newsgroups, blogs, chat rooms, Wikipedia, video conferencing etc.

Q.33 Enlist the places where computers are used.
Ans.- Schools Universities, Offices, Banks, Airports and Railway stations, libraries, Hospitals, Malls etc.

Q.34 Complete the following table.

Name of the device	Usage	Where it is used	Advantages
Computer			
Mobile			
Radio			
Television			

Ans.-

Name of the device	Usage	Where it is used	Advantages
Computer	Storing, processing, analyzing and displaying information.	Houses, offices, colleges, Railway stations, Airports and other organization.	Data and information transfer.
Mobile	Making voice calls, sending massages, entertainment etc.	Anywhere can be carried	Communication transfer of information
Radio	Listening audio programs, news, information on different topics	Houses, Remote areas, while travelling etc.	Broadcasted information in audio format.
Television	For watching various entertainment programs, news etc.	Houses	Broadcast of information in audio visual format.

Q.35 Write a note on difference between the different generations of computers. Explain the contribution of science to these developments.

Ans.- The computer that we use nowadays has gone through five generations. The different generations that the computer, have taken place through the five generations.

1) Development in the technology - There is a vast development and evolution of different generations of computers. Initially the vacuum tubes were used, that generated a lot of heat. Due to extensive heat computers would often shut down. Then, transistors were used. The transistors were replaced by Integrated circuits and later the Microprocessors were used.

2) Electricity Consumption and Heat generation - The first generation of computers consumed a lot of electricity and also generated a lot of heat. The improvement in the technology resulted in lesser consumption of electricity and led to the reduction of generated heat.

3) Size, Efficiency, Reliability and Memory - The improvements in technology led to reduction in size of computers while increasing its efficiency, reliability and memory.

4) Input / Output method - the Input and Output methods were developed as follows.

Generation of Computers	Input Method	Output method
First generation	Punched cards, Paper tapes	Printer
Second generation	Punched cards, Paper tapes	Printer
Third generation	Keyboard	Monitor, Printer
Fourth generation	Keyboard, Mouse, Scanner	Monitor, Printer
Fifth generation	Keyboard, mouse, scanner	Monitor, Printer.

5) Contribution of science to the developments of computers - The heavy, and less efficient computers got evolved into compact, more efficient and more responsive, quicker devices. The scientific advancements have brought the evolution of the computers.

Q.36 What are the types of Internal Memory.

Ans.- Internal memory is further classified in -

RAM - Random Access Memory, ROM - Read Only Memory

Q.37 Write a note on RAM.

Ans.- RAM means Random Access Memory. The data can be read and modified in RAM. It is volatile type of memory i-e information stored can get deleted immediately when the computer is switched off.

Q.38 Write a note on ROM.

Ans.- ROM means Read Only Memory. The information stored in ROM can only be read. The information originally stored in ROM cannot be modified. ROM is non - volatile, that means the information stored in ROM cannot get lost when the computer is switched off or shut down.

Q.39 Write a note on Second Generation of Computers.

Ans.- The second generation of computers used the transistors instead of vacuum tubes. Transistors were widely used in computers from 1956 to 1963. Transistors were smaller than vacuum tubes and allowed the computers to be smaller in size, faster in speed, and cheaper to build. The first computer to use transistors was the TX - O and was introduced in 1956 other computers that used transistors include the IBM 7070, Philco transac S - 1000 and RCA 501.

Q.40 Write a note on Third generation of computers.
Ans.- The third generation of computers used Integrated circuits. Due to use of IC in computers helped reduce the size of computers compared to second generation computers and make them work faster. Most of the computers since mid - 1960s have used ICs. ICs are still used in computers today.

Q.41Write a note on fourth generation of computers.
Ans.- The fourth generation of computers used the microprocessor, known as CPU. Microprocessors, along with integrated circuits, helped make it possible for computers to fir easily on a desk and for the introduction of the laptop. Some of the earliest computers to use a microprocessor include the Altair 8800, IBM 5100 and Micral. Today's computers still use a microprocessor, despite the fourth generation being considered to have ended in 2010.

Q.42 Write a note on Fifth generation of computers.
Ans.- The Fifth generation of computers is beginning to use Artificial Intelligence. AI is technology that has many potential applications around the world. Leaps have been made in AI technology and computers, but there is still much room for development. One of the more well - known examples of AI in computers is IBM's Watson, which has been featured on the TV show Jeopardy as a contestant. Other better known examples include Apple's siri on the Iphone and Microsoft's Cortana on Windows 8 and Windows 10 computers. The Google search engine also utilizes. AI to process user searches.
Q.43 Explain the Components of a computer.
Ans.- A computer has two basic Components -
1) The Hardware - The physical parts of a computer is known as Hardware.

2) The Software - The programs that is the commands or instruction sets tell the computer how to perform tasks.

Q.44 What are the components of computer Hardware.

Ans.- 1) Input devices - These devices allows the user to enter data and instruction into a computer. Examples of Input devices - Keyboard, Mouse, Microphone, Scanner, Touch screen, Joystick.

2) Central Processing Unit -

The CPU has three main parts -

ALU (Arithmetic Logical Unit) - This Unit performs all the calculations of computer.

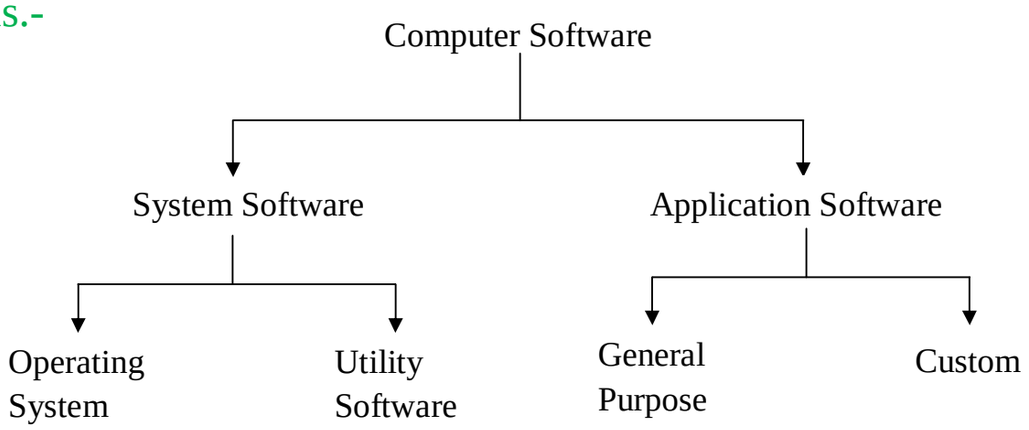
CU (Control Unit) - As the name indicates it controls all the working of a computer.

MU (Memory Unit) - It stores the data.

3) Output devices - It is used by the computer to display the result. E.g. Monitor, Printer, Speakers, Plotter.

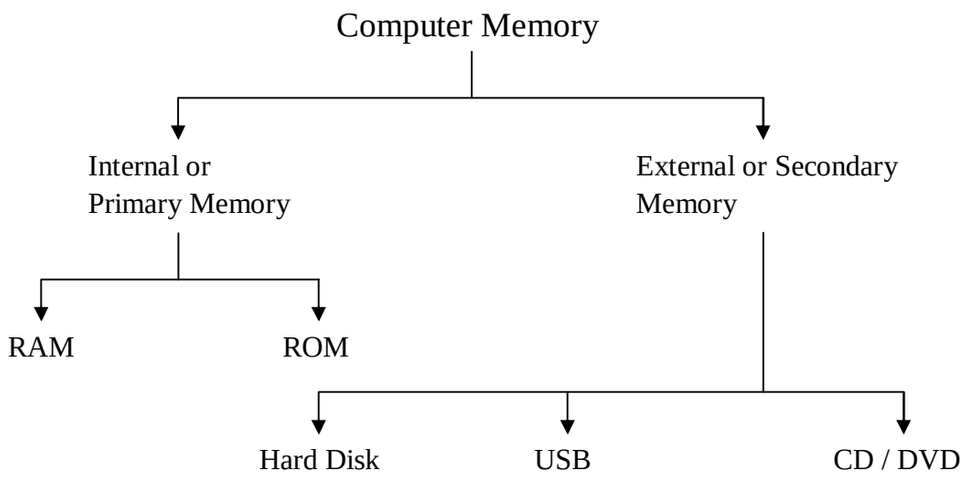
Q.45 Describe the types of Software.

Ans.-



Q.46 What is Computer Memory ? How is it classified ?

Ans.- The device used to store, data, instructions and information for a short term or long term, is called memory. Computer memory is classified as -



Q.47 State the opportunities in field of ICT.

Ans.- 1) Software field - Companies create software's for different purposes. There are different opportunities as - Application programming, software package, operating system and utility development, special purpose scientific applications.

2) Hardware field - Several companies manufacture computers. They sell self made computers. Others sell computers bought from different countries. They repair and take maintenance contracts, to keep their computes in big companies working efficiently. This has created job opportunities in hardware designing, hardware, production, hardware assembly, testing, hardware maintenance, servicing etc.

3) Training - The training of new entrants, it has become dedicated field.

Q. 48 State the uses of ICT in the field of education and Research work?

Ans.- 1) In the field of education – Online notes, video tutorials, video conferencing etc, can be used with the help of information communication technology for teaching students, at the comfort of their homes.

2) Research Work – Research work in various fields is conducted, in various parts of the world. This research can be made available to different scientific communities all over the world, with the help of information communication technology.

Q. 49 How does a computer work?

Ans.- 1) The working of a computer includes the following stages –

a) Data input
b) Processing of data.
c) Output information

2) First the data and the instructions are fed into the computer, which is known as input.

3) Later, series of operations are performed on the data based on the instructions given to it. This is known as processing.

4) Once the data is processed the final result is given by the computer, which is the known as the output.

Q. 50 What precautions should be taken while using various types of software on the computer?

Ans.- 1) Security updates should always be installed whenever they become available for your operating system.
2) Installed applications should be kept up to date.
3) Antivirus software should be installed and updated.
4) Use of pirated software should be avoided.
5) Always read the End User License Agreement (EULA) while installing any software so as to know. The risks before head.
6) Provide the data / input to the software in the required format.