SHORT QUESTIONS

Q.1 **What is a Computer?**

Ans. Computer is an electronic device or a programmable machine that accepts data process it into useful information according to the instructions given to it and gives output. It can stores process data on secondary storage devices for later use. There are four functions in this definition:

      (i)   Input

      (ii)   Processing

      (iii)   Output

      (iv)   Storage

Q.2 **What is Data?**

Ans. The collection of raw facts and figures is called data. Everything we give to the computer is called input. Data is entered in the computer through input devices e.g. keyboard, mouse etc.

Q.3 **Define Data Processing/Data Computing.**

Ans. The system that accepts data, manipulates it in the form of output and delivers it in a useful and meaningful form is called data processing. The operations carried out on data to convert it into useful information are called data processing. CPU is a device which is used to process the data arithmetically or logically in the form of output.

Q.4 **Define Information.**

Ans. The organized and meaningful form of data after processing is called information. Output devices show the results or information in the shape of output.

Q5. **What makes a computer powerful?**

Ans. Speed, Reliability, Accuracy, Automation and Storage make a computer powerful.

Q.6 **What is Storage of Data?**

Ans. Storage of data is about to keep data on some storage media for future use. Storage devices are used to store data permanently. Secondary storage devices are CD's, Hard Disk, and Floppy Disk etc.

Q.7 **Define Information Technology.**

Ans. It is a technology that merges computing with high speed communication links carrying data in the form of text, sound, images, video etc. from place to place

over this global village (all over the world). Internet is used as source of information technology.

Q.8   Define Digital Convergence.

Ans.   The digital convergence is the technological merger of the various industries/enterprises through some electronic gadgets that exchange information between them.

Q.9   Define a Program / Software.

Ans.   A set of instructions given to the computer to solve any problem is called a program or software. There are two types of software: System software and Application Software.

Q.10   Define System Software.

Ans.   It is used to control the usage and allocation of different hardware components and enables the other application programs to execute. This software is developed to control the hardware components. Operating system (DOS, Windows etc.), Utility programs (data backup programs etc.); Drivers are the kinds of system software.

Q.11   What is an Application Software?

Ans.   It is a software that has been developed to solve the specific problems or to provide audio, video or multimedia entertainment to the users. These are specially designed to solve the problems of users. Custom-built software and packaged software are two types of application programs.

Q.12   Define Custom-built software.

Ans.   This software is designed according to the requirement of a particular customer. These programs are developed by the professional team of programmers depending on the requirements. Patient information system, Inventory system, College admission system, Examination system are the examples.

Q.13   Define Packaged software with examples.

Ans.   These are also known as off-the-shelf programs. These are designed for sale to the general public and potential software developers. These facilitate the users in all fields of life. Microsoft Office Package (MS-Word, MS-Excel, etc), ORACLE, Graphics software, Communication programs are the examples

Q.14   What is a Hardware?

Ans.   Physical parts of the computer are called hardware. Keyboard, Mouse, camera, scanner, bar code reader Monitor, Printers, RAM, ROM, Hard disk, Floppy disk, CD, Cables, Ports, Modem , network cards, Bridge etc.

Q.15   What is an Input Devices?

Ans. The devices, which are used to enter data into the computer, are called input devices. The devices through which user can communicate with the computer. Keyboard, Pointing devices, Source data entry devices are the types of input devices.

Q.16 **What are Pointing devices/Point and Draw devices?**

Ans. Pointing devices control the position of the cursor or pointer on the screen. Mouse, Trackball, Pointing stick, Joystick, Touchpad, Touch screen, Light pen, Digitizing/graphic tablet, Pen-based systems are the examples.

Q.17 **What are Source data entry devices?**

Ans. These devices are used for direct data entry to the computer systems. Examples are: Bar-code reader, MICR, OMR, OCR, Magnetic strip cards, Smart cards, Fax machine, Video input device, Digital camera etc.

Q.18 **What is audio circuit board?**

Ans. Sound cards allow computers to produce sound like music and voice. It is a circuit board that converts analog signals into digital form. The older sound cards were 8 bit. Now a days 16, 32 and 64 bit cards are used. Microphones can capture sounds from the air which is good for sound effects or voices.

Q.19 **What is Video Capture card?**

Ans. Video-capture card is used to convert films and videos into digital form. Video cards allow computers to display video and animation. Some video cards allow computers to display television channels as well as capture frames from video. A video card with a digital video camera allows computers users to produce live video. It video capture card has two types:

  1. Frame-Grabber Video Card
  2. Full-Motion Video Card

Q.20 **What are Output Devices?**

Ans. Output devices are the devices through which computer can communicate with the user. We can view the processed information in the form of output on output devices. There are two types of output:

Soft copy: It refers to data is shown on screen or in audio or voice form.

Hard copy: It refers to the printed output on paper.

Q.21 **What is a Resolution?**

Ans. It determines how clear and detailed the image is. Pictures on a screen are made up of tiny dots and 1 dot on screen is 1 **pixel** (form "picture element"). The more pixels per inch, the clearer and more detailed the picture. Therefore the number of dots or pixels per inch determines resolution.

Q.22 **What are Video Display Adapter?**

Ans. A display screen must have a video display adapter card attached with the computer. It is known as video graphics card and it is a circuit board that determines the resolution, colors, and speed with which images appear on the screen. There are three types of the graphics card. VGA, SVGA and XGA

Q.23 **Define VGA.**

Ans. It stands for video graphics array. It supports 16-256 colors depending on the resolution. At 320 x 200 pixels, it will support 16 colors. At 640 x 480 pixels, it supports 256 colors. It is called 4 bit color.

Q.24 **Define SVGA -Super video graphics array?**

Ans. It determines what resolutions are available and how many colors can be displayed. It supports 256 colors at higher resolution. It has two graphics modes: 800 x 600 and 1024 x 768. It is called 8 bit color.

Q.25 **What is XGA -Extended graphics array?**

Ans. It supports 16.7 million colors. It has resolution of 1024 x 768. XGA will support 256, 65536 or 16777216 colors depending on video adapter memory chip. It is called 24 bit color or true color.

Q.26 **What are Flat Panel Displays?**

Ans. The flat panel displays are much thinner, weightless and consume less power than CRT. These are used in laptops. Flat panel displays are made up of two glass plates with a substance in between them, which is activate in different ways. There are three types of flat panel display screens: LCD, Gas Plasma and EL.

Q.27 **What are Impact Printers?**

Ans. These printers produce printing by physically touching the paper. These printers use striking mechanism such as print hammer, or wheel against the ink ribbon to print characters and images. Dot matrix, daisy wheel and line printers are the examples of impact printers.

Q.28 **What are Non-Impact Printers?**

Ans. This type of printer does not involve actually striking the paper. Instead, it uses ink spray or toner powder. Laser, Inkjet and Thermal are the examples of Non-Impact Printers

Q.29 **What are Plotters?**

Ans. A plotter is a special output device used to produce high-quality graphics in many colors. It is used for specialized application such as for printing, architectural drawing, maps, graphs and charts. Flatbed Plotters and Drum Plotters are the kinds of plotters.

Q.30 **What is a Flatbed Plotter?**

Ans. Flatbed plotter plots on a paper that lies on a flat bed like surface. The bed size varies according to the requirement. One to four pens move across the paper and images are printed accordingly.

Q.31 **What is a Drum Plotter?**

Ans. It is similar to flatbed plotter. Paper is mounted over a drum for continuous output. Its usage is to track earthquake reading.

Q.32 **Define a Bit.**

Ans. It stands for Binary Digit. The binary numbers 0 or 1 are called bits. It is the basic and smallest unit of data storage in computer memory. The circuit being on or off at a time. The complexity of computer circuitry is described in terms of the number of bits that can be transmitted simultaneously. This is determined by the number of wires that run parallel to one another on the circuit-boards. Current PCs use 8, 16, 32 and 64 bit paths.

Q.33 **What is a Byte?**

Ans. It is a combination of 8-bits. It can store a single character of data. The storage capacity or memory capacity is expressed in terms of number of bytes it can hold.

Q.34 **Define a Word.**

Ans. The number of bits that constitute a common unit of data as defined by the computer system. The length of word varies from computer to computer. The power of computer depends on the size of word.

Q.35 **What is a System?**

Ans. A system is a combination of some related components that interact with each other to perform some specific tasks.

There are five system components.

Hardware - The physical parts required to develop a system.

Software - The instructions run the system smoothly.

People/User - User uses the system and gets benefits from the system

Data/Information - Data is input provided to the system and information is output obtained from the system.

Communication Setup - The transmission of information from one location to another at right time and at right place is called communication setup.

Q.36 **Define SDLC?**

Ans. It stands for system development life cycle. It is an organized way to develop a successful system. Every organization requires some system in order to run smoothly; it consists of seven phases.

1. Preliminary investigation

2. Analysis
3. Design
4. Coding
5. Testing
6. Implementation
7. Maintenance

Q.37 **What is a Preliminary investigation?**

Ans. It is the first step in developing and managing system. Identifying the requirement for a new system and introducing an investigation, a feasibility study must be based on an administrative plan. The objective of preliminary investigation is to conduct an initial analysis, propose alternative solutions, describe cost and benefits and submit a preliminary plan.

Q.38 **What is a System Scope?**

Ans. The scope of the system is established at this stage. It is necessary to describe all the constraints of the system:

How much resources are required?

How much cost is required for the system?

What is Time limit of the system?

How many personnel are required for the system?

Q.39 **Define Preliminary plan?**

Ans. In this step, a feasibility report is submitted to the managers for approval. The feasibility report consists of all these findings in the shape of a written document. The managers will decide the future actions to be taken based on this report. It is possible that managers might make few amendments in the report based on the preliminary investigation.

Q.40 **What is the role of a System analysis?**

Ans. It is the study of the requirements of the end-user and the organization that is required before the design of the new system. **System analyst** is a person who is responsible for the analysis of the system. The analysts conduct three types of activities in system analysis phase.

1. Need analysis/Requirement analysis
2. Data gathering
3. Data analysis and analysis Report

Q.41 What is Need analysis/Requirement analysis?

Ans. Analyst sum up the requirements of the system from the users and the managers.

Q.42 What is Data gathering?

Ans. The system analyst collects the data about the new system. He uses different tools and techniques to collect data depending on the situation. These are: Written documents, Interviews, Questionnaires, Observations, Sampling.

Q.43 What are Written Documents?

Ans. The written documents are the reports, forms, memos, business plans, policy statements, organizational charts. The analyst collects all these manual documents to develop the new system or upgrade the existing computerized system.

Q.44 What are Interviews?

Ans. The project team or analysts interviews the managers, users, clients, suppliers and competitors. The questions in the interviews should be precise and relevant. These interviews will help the analysts to gain more knowledge about the system.

Q.45 What are Questionnaires?

Interviewing method is a time consuming method to get data; hence the analyst designs a questionnaires (a form) to collect information from different people. This method is inexpensive but the response of gathering data is insufficient and confusing.

Q.46 What are Observations?

Ans. The analyst and his team may collect information through observation of the working behavior and some related information of the existing system.

Q.47 What is a Sampling?

Ans. If there are large number of people and events involved in a system, then it is a better to work on a portion of all of them to save time.

Q.48 What is Data Analysis?

Ans. The collected data of the system is analyzed. The analyst ensures that the data is accurate, complete and readily available in the new system design. For this purpose the analyst and his team uses many tools which are: DFD (data flow diagrams), Flow Charts, Connectivity diagrams, Grid charts, Decision tables etc.

Q.49 What is Analysis Report?

Ans. This report is presented to management for the review and approval of the project. This report consists of three parts.

1. The working of the current system.

2. Problems in the existing system.

3. Requirements for the new system and recommendations for the future.

Q.50 **What is a Design?**

Ans. It is a logical representation of the system. It is divided into three steps.

1. Logical design

2. Physical design

3. Report

Q.51 **Define Logical design.**

Ans. It describes the general functional capabilities of the proposed system. The logical design describes the system components and their interaction. For logical design CASE tools, Project management software (MS-Project, Gantt Chart, PERT diagrams etc.) are used

Q.52 **What is a Physical design?**

Ans. The physical describes how a proposed system will deliver the general capabilities described in the logical design. Input requirements, Output requirements, Storage requirements, Processing requirements, System control requirements, Backup and recovery are the main characteristics of physical design.

Q.53 **What is a Coding?**

Ans. It is the core area of SDLC in which actual codes of the system are written. It needs a lot of time, effort, and budget to produce the system. The analysis and designs are given to the programmers and software engineers to produce the system. The programmers use packaged software to write the programs and save time.

Q.54 **What is Testing?**

Ans. In testing phase, system developers detect and remove the errors in the software. There is two type of testing: Unit testing and System-testing

Q.55 **What is Unit testing?**

Ans. It is also called modular testing. Each module of the software is tested individually using sample data.

Q.56 **What is System-testing?**

Ans. All the modules of the program are linked and tested as a single unit. Both sample data and actual data may be used to test the whole system. If the system fails then programmers removes those errors. If the system passes all the tests then the developers implement the system for the organization.

Q.57 **Define Implementation Phase?**

Ans. It means installation of hardware and software systems and data files for use to solve our problems. Users of the system are also trained in this phase. Implementation may be achieved in five steps.

1. Direct Implementation

2. Parallel Implementation

3. Phased Implementation

4. Pilot Implementation

5. Users Training

Q.58 **What is a Direct Implementation?**

Ans. Users stop working on the old system and start working directly with the new system.

Q.59 **What is a Parallel Implementation?**

Ans. The new and old systems are used side by side until it is felt that new system is better than the old system.

Q.60 **What is a Phased Implementation?**

Ans. Parts of the systems are implemented from time to time until the whole system is implemented.

Q.61 **What is a Pilot Implementation?**

Ans. This type of implementation allows to implement the complete system but to a selected group of users and departments.

Q.62 **What is Users Training?**

Ans. In this step of SDLC, developers provide training of users to run the new system. The training may conducted "In-House" or it may be "Contracted out". Different techniques are used to train the people. These are: Instruction Manuals, Video tapes, CD's, Lectures etc.

Q.63 **What is a Maintenance phase?**

Ans. It is never ending phase. The system must be monitored to ensure that it is successful. Maintenance includes:

      Keeping the machinery running.

      Update and upgrade the system according to the new requirements.

      Feedback and Evaluation.

      Help is also provided to the users against their queries or problems.