

Question No 1

a. Enlist any five application software and explain any three.

Answer

- Word Processing software
- Data base software
- Spreadsheet software
- Multimedia software
- Presentation software

A. WORD PROCESSING SOFTWARE

Word Processing software is used to manipulate, format the text, to create memos, letters, faxes and documents. Processing Software is used to format and beautify the text.

EXAMPLE

- Microsoft Word
- Lotus Word Pro

B. DATA BASE SOFTWARE

Database is a collection of data related to any applications. Today is environment every application has some database where data regarding users stored. For this purpose, we used database software. Database Management System (DBMS) software tool used for storing, modifying extracting and searching for information within a database. MySQL, MS Access, Microsoft SQL Server and Oracle is the example of database application Software.

C. SPREADS SHEET SOFTWARE

Spreadsheet software is used to perform manipulate and calculations. In spreadsheet software data is stored in intersection row and column. The intersection of row and column is known as a cell. The cell labeled with the row and column label like A1, A2 etc.

EXAMPLE

- Microsoft Excel
- Lotus 1-2-3 for windows

b. Describe different types as well as applications of the computer.

Answer

Most of the beginners confused about types of Computer Applications and It is not easy to divide computer applications into any exact categories. At present there is no clear definition available to categorize

computer applications. Even though here is a small list of different types of computer applications.

1. Embedded Systems
2. Windows applications (also called 'Desktop applications')
3. Web Applications
4. Web Services
5. Console applications

✓ Embedded Systems

When we save a name, address and other information in to our Mobile Phone or Digital Diary, You know How it gets saved in it? Nothing but which is a small computer program 'Embedded' into a chip in the device inside the mobile phone or digital diary known as Embedded Systems.

✓ Windows applications

Windows Applications is a form based standard Windows, Microsoft word; Paint is example to the Windows application, and also called 'Desktop applications'.

✓ Web Applications

A web site is also called 'web Applications'. A web applications is a collection of web pages hosted on a special computer called 'web server'. Web server can be located anywhere and visitors can be located anywhere .It will work through Browsers (EG. Internet Explorer, Mozilla, Netscape).

✓ Web Services

Web services are web applications that give services to other applications through the internet, example Google search engine, Yahoo Search engine etc. which allows other applications to delegate the task of searching over the internet.

✓ Console Applications

Console applications runs inside the command prompt i.e. DOS window, It is a light weight program and which is used commonly for test applications.

➤ Types of computer

1. Supercomputer and Mainframe

Supercomputer is a broad term for one of the fastest computers currently available. Supercomputers are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations (number crunching). For example, weather forecasting requires a supercomputer. Other uses of supercomputers scientific simulations, (animated) graphics, fluid dynamic calculations, nuclear energy research, electronic design, and analysis of geological data (e.g. in petrochemical prospecting). Perhaps the best known supercomputer manufacturer is Cray Research.

Mainframe was a term originally referring to the cabinet containing the central processor unit or "main frame" of a room-filling Stone Age batch machine. After the emergence of smaller "minicomputer" designs in the early 1970s, the traditional big iron machines were described as "mainframe computers" and eventually just as mainframes. Nowadays a Mainframe is a very large and expensive computer capable of supporting hundreds, or even thousands, of users simultaneously. The chief difference between a supercomputer and a mainframe is that a supercomputer channels all its power into executing a few programs as fast as possible, whereas a mainframe uses its power to execute many programs concurrently. In some ways, mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute a single program faster than a mainframe. The distinction between small mainframes and minicomputers is vague, depending really on how the manufacturer wants to market its machines.

2. Minicomputer

It is a midsize computer. In the past decade, the distinction between large minicomputers and small mainframes has blurred, however, as has the distinction between small minicomputers and workstations. But in general, a minicomputer is a multiprocessing system capable of supporting from up to 200 users simultaneously.

c. Explain the main functions of an operating system.

Answer

An Operating System acts as a communication bridge (interface) between the user and computer hardware. The purpose of an operating system is to provide a platform on which a user can execute programs in a convenient and efficient manner. An operating system is a piece of software that manages the allocation of computer hardware.

▪ SECURITY –

The operating system uses password protection to protect user data and similar other techniques. it also prevents unauthorized access to programs and user data.

▪ CONTROL OVER SYSTEM PERFORMANCE –

Monitors overall system health to help improve performance. records the response time between service requests and system response to have a complete view of the system health. This can help improve performance by providing important information needed to troubleshoot problems.

▪ **JOB ACCOUNTING** –

Operating system Keeps track of time and resources used by various tasks and users, this information can be used to track resource usage for a particular user or group of user.

▪ **ERROR DETECTING AIDS** –

Operating system constantly monitors the system to detect errors and avoid the malfunctioning of computer system.

▪ **COORDINATION BETWEEN OTHER SOFTWARE AND USERS** –

Operating systems also coordinate and assign interpreters, compilers, assemblers and other software to the various users of the computer systems.

▪ **MEMORY MANAGEMENT** –

The operating system manages the Primary Memory or Main Memory. Main memory is made up of a large array of bytes or words where each byte or word is assigned a certain address. Main memory is a fast storage and it can be accessed directly by the CPU. For a program to be executed, it should be first loaded in the main memory. An Operating System performs the following activities for memory management It

keeps tracks of primary memory, i.e., which bytes of memory are used by which user program. The memory addresses that have already been allocated and the memory addresses of the memory that has not yet been used. In multi programming, the OS decides the order in which process are granted access to memory, and for how long. It Allocates the memory to a process when the process requests it and deallocates the memory when the process has terminated or is performing an I/O operation.

▪ PROCESSOR MANAGEMENT –

In a multi programming environment, the OS decides the order in which processes have access to the processor, and how much processing time each process has. This function of OS is called process scheduling. An Operating System performs the following activities for processor management. Keeps tracks of the status of processes. The program which perform this task is known as traffic controller. Allocates the CPU that is processor to a process. De-allocates processor when a process is no more required.

Question No 2

Explain utility programs and write down their purpose. Also describe important steps of installation and un-installation of software.

Answer

A utility program that performs a specific task related to the management of computer functions, resources, or files, as password protection, memory management, virus protection, and file compression.

INSTALL AND UNINSTALL A SOFTWARE IN COMPUTER

PRO: Removes all or the majority of all files copied to the computer during installation.

CON: Not all programs support or use this feature.

Open the Control Panel or press the Windows key, type Control Panel, and then press Enter. Under the Programs section, click the Uninstall a program link. Uninstall link in Control Panel. In the new window, select the program you want to uninstall and click the Change, Remove, or Uninstall button.

PROGRAMS AND FEATURES WINDOW

When prompted, click the Yes button. How do I know what to delete? If you don't know what it is, we suggest it not be removed or ask someone who knows before proceeding. If the program or game is not listed, continue reading this page for alternative methods to uninstalling software. Why can't I remove a program from Windows Add or remove programs?

UNWISE WIZARD

PRO: Created by a program's developer and allows for the deletion of any files that were originally installed.

CON: May cause errors as it can delete files currently used by other programs.

✓ CLICK START.

Open the Programs folder under Programs or All Programs.

In the folder, look for an Unwise or Uninstall shortcut.

Click the shortcut to begin the **uninstallation** process.

OR

✓ OPEN WINDOWS EXPLORER.

In Explorer, open the folder containing the program you want to uninstall. If you're not sure where the folder is located, a good place to check first is the Program Files folder.

Why do I have two Program Files folders?

Once the folder is opened, look for an Unwise or Uninstall shortcut link or executable file.

✓ NOTE

Do not search for unwise.exe since it's likely several of these files exist on your computer and may be associated with other programs.

b. What is spreadsheet? Elaborate the purposes served by this? Which software are used for spreadsheet development?

Answer

A spreadsheet is a computer application for organization, analysis, and storage of data in tabular form. Spreadsheets were developed as computerized analogs of paper accounting worksheets. The program operates on data entered in cells of a table. Each cell may contain either numeric or text data, or the results of formulas that automatically calculate and display a value based on the contents of other cells. A spreadsheet may also refer to one such electronic document.

Spreadsheet users can adjust any stored value and observe the effects on calculated values. This makes the spreadsheet useful for "what-if" analysis since many cases can be rapidly investigated without manual recalculation. Modern spreadsheet software can have multiple interacting sheets and can display data either as text and numerals or in graphical form. Besides performing basic arithmetic and mathematical functions, modern spreadsheets provide built in functions for common financial accountancy and statistical operations. Such calculations as net present value or standard deviation can be applied to tabular data with a pre-programmed function in a formula. Spreadsheet programs also provide conditional expressions, functions to convert between text and numbers, and functions that operate on strings of text.

Spreadsheets are an essential business and accounting tool. They can vary in complexity and can be used for various reasons, but their primary purpose is to organize and categorize data into a logical format. Once this data is entered into the spreadsheet, you can use it to help organize and grow your business.

○ **BUSINESS DATA STORAGE**

A spreadsheet is an easy way to store all different kinds of data. These data types can include financial data, customer data and product data. Excel spreadsheets can support more than a million rows and more than 16,000 columns, so you'll have plenty of space to store a huge amount. That's what makes them ideal for database creation.

○ **ACCOUNTING AND CALCULATION USES**

○ ***GENERATING REPORTS AND CHARTS***

Use spreadsheets to report trends or make business forecasts. These reports can be made available to everyone at the company; they can take the time to analyze the data for themselves. It's easy to make comparisons between sets of data. You can pivot tables to showcase particular aspects of your data as well, which is necessary when you've got huge amounts of data to sort through.

C. Explain different components of Multimedia with the help of suitable.

Answer

The various components of multimedia are **Text, Audio, Graphics, Video and Animation**. All these components work together to represent information in an effective and easy manner.

- 1) **TEXT:** Text is the most common medium of representing the information. In multimedia, text is mostly use for titles, headlines, menu etc. The most commonly used software for viewing text files are *Microsoft Word, Notepad, Word pad etc.* Mostly the text files are formatted with, **DOC, TXT** etc. extension.
- 2) **AUDIO:** In multimedia audio means related with recording, playing etc. Audio is an important components of multimedia because this component increase the understandability and improves

the clarity of the concept. audio includes speech, music etc. The commonly used software for playing audio files are:

- i) Quick Time
- ii) Real player
- iii) Windows Media Player

3) **GRAPHICS:** Every multimedia presentation is based on graphics. The used of graphics in multimedia makes the concept more effective and presentable. The commonly used software for viewing graphics are *windows Picture, Internet Explorer etc.* The commonly used graphics editing software is Adobe Photoshop through which graphics can be edited easily and can be make effective and attractive.

4) **VIDEO:**

Video means moving pictures with sound. It is the best way to communicate with each other. In multimedia it is used to makes the information more presentable and it saves a large amount of time. The commonly used software for viewing videos are:

- i) Quick Time
- ii) Window Media Player
- iii) Real Player

5) **ANIMATION:**

In computer animation is used to make changes to the images so that the sequence of the images appears to be moving pictures. An

animated sequence shows a number of frames per second to produce an effect of motion in the user's eye. Some of the commonly used software for viewing animation are:

- i) *Internet Explorer*
- ii) *Windows Pictures*
- iii) *Fax Viewer*

Question No 3

a. Identify basic elements of a communication system. Explain with examples.

Communication means sending, receiving and processing of information between two or more devices. A collection of elements (devices) which works together to establish a communication between the sender and receiver is called a communication system. Some examples of communication system include radio broadcasting, television broadcasting, radio telegraphy, mobile communication, computer communication etc. Two or more people communicating with each other by using sound signals is also known as the communication system.

✓ INFORMATION SOURCE

As we know that the communication system establishes the communication bridge between the sender (transmitter) and receiver. To

establish this communication bridge between the sender and receiver, first, we need an information to send. This information originates in the information source. The information generated by the source may be in the form of sound (human speech), picture (image source), words (plain text in some particular language such as English, French, German etc.) For example, if you are talking with your friend on a phone, you are considered as the information source who generates information in the form of sound

✓ **INPUT TRANSDUCER**

If you want to talk (communicate) with your friend who is sitting beside you, then you can directly talk with him by using voice signals (sound signals). But if the same friend is farther away from you, then you can't directly communicate with him by using voice signals (sound signals) because sound signals cannot travel larger distances. So in order to overcome this problem and transmit information to larger distances, first we need to convert this sound signal into another form of signal (electrical signal or light signal) which travel larger distances. The device which is used to convert this sound signal into another form of signal is called transducer.

✓ **BROADCASTING**

Broadcasting is the distribution of audio or video content to a dispersed audience via any electronic mass communications

medium, but typically one using the electromagnetic spectrum (radio waves), in a one-to-many model. Broadcasting began with AM radio, which came into popular use around 1920 with the spread of vacuum tube radio transmitters and receivers. Before this, all forms of electronic communication (early radio, telephone, and telegraph) were one-to-one, with the message intended for a single recipient. The term broadcasting evolved from its use as the agricultural method of sowing seeds in a field by casting them broadly about. It was later adopted for describing the widespread distribution of information by printed material or by telegraph. Examples applying it to "one-to-many" radio transmissions of an individual station to multiple listeners appeared as early as 1898.

b. What are the main types of programming languages? Discuss any three languages in detail.

Answer

Program is a set of instructions that help computer to perform tasks. This set of instructions is also called as scripts. Programs are executed by processor whereas scripts are interpreted. The languages that are used to

write a program or set of instructions are called "Programming languages". Programming languages are broadly categorized into three types –

- Assembly level language
- Machine Level Language
- High-level language

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✓ **MACHINE LEVEL LANGUAGE**

Machine language is lowest level of programming language. It handles binary data i.e. 0's and 1's. It directly interacts with system. Machine language is difficult for human beings to understand as it comprises combination of 0's and 1's. There is software which translate programs into machine level language. Examples include operating systems like Linux, UNIX, Windows, etc. In this language, there is no need of compilers and interpreters for conversion and hence the time consumption is less. However, it is not portable and non-readable to humans.

✓ **ASSEMBLY LEVEL LANGUAGE**

Assembly language is a middle-level language. It consists of a set of instructions in a specific format called commands. It uses symbols to represent field of instructions. It is very close to machine level language. The computer should have assembler to translate assembly level

program to machine level program. Examples include ADA, PASCAL, etc. It is in human-readable format and takes lesser time to write a program and debug it. However, it is a machine dependent language.

Assembly Language Machine Code

SUB AX, BX 0010101110000011

MOV CX, AX 100010111001000

MOV DX, 0 101110100000000000000000

✓ HIGH-LEVEL LANGUAGE

High-level language uses format or language that is most familiar to users. The instructions in this language are called codes or scripts. The computer needs a compiler and interpreter to convert high-level language program to machine level language. Examples include C++, Python, Java, etc. It is easy to write a program using high level language and is less time-consuming. Debugging is also easy and is a human-readable language. Main disadvantages of this are that it takes lot of time for execution and occupies more space when compared to Assembly- or Machine-level languages. Following is a simple example for a high level language –

```
if age < 18 {
    printf("You are not eligible to vote");
} else{
```



```
printf("You are eligible to vote");
```

```
}
```

C. down advantage and disadvantage of Technologies”. Communication

Answer

■ **COMMUNICATION TECHNOLOGY**

Electronic systems used for communication between individuals or groups. Communication technology facilitates communication between individuals or groups who are not physically present at the same location. Systems such as telephones, telex, fax, radio, television, and video are included, as well as more recent computer-based technologies, including electronic data interchange and e-mail. *Advantages and disadvantages* are listed below. Please comment based on your experience with communication technology.

ADVANTAGES OF COMMUNICATION TECHNOLOGY

- More efficient
- Faster method of communication during emergencies
- Able to communicate from anywhere in the world
- Long distance communication is easier
- Communication made easier

DISADVANTAGES OF COMMUNICATION TECHNOLOGY

- Harder to use for people of older generations
- Cyber-bullying and cyber-skipping made possible
- Not always reliable
- Makes communication less personal
- Not always sure who you are communicating with

d. Name at least 10 famous windows operating system. Explain at least 02 of these operating systems in detail.

The following is a **list of Microsoft written and published operating systems**. For the codenames that Microsoft gave their operating systems, see Microsoft codenames. For another list of versions of Microsoft Windows, see, List of Microsoft Windows versions.

- MS-Windows
- Ubuntu
- Mac OS
- Fedora
- Solaris
- Free BSD
- Chrome OS
- CentOS

- Debian
- Deepin

✓ MICROSOFT WINDOWS

Microsoft Windows, also called Windows and Windows OS, computer operating system (OS) developed by Microsoft Corporation to run personal computers (PCs). Featuring the first graphical user interface (GUI) for IBM-compatible PCs, the Windows OS soon dominated the PC market.

✓ MAC OS

macOS (/ˌmækoʊˈes/;[8] previously Mac OS X and later OS X) is a proprietary graphical operating system developed and marketed by Apple Inc. since 2001. It is the primary operating system for Apple's Mac computers. Within the market of desktop, laptop and home computers, and by web usage, it is the second most widely used desktop OS, after Windows NT. Mac OS succeeded the classic Mac OS, a Macintosh operating system with nine releases from 1984 to 1999. During this time, Apple cofounder Steve Jobs had left Apple and started another company the first desktop version, Mac OS X 10.0, was released in March 2001, with its first update, 10.1, arriving later that year. Releases from Mac OS X 10.5 Leopard and thereafter are UNIX certified. Apple's mobile operating system, iOS, has been considered a

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variant of macOS developing the Next STEP platform that would later be acquired by Apple to form the basis of macOS.

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