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| Q1 | Define an Operating System. |
| Ans | An O is a program that manages the computer hardware. It also provides a basis for application programs and acts as an intermediary between a user and the computer hardware. The OS system controls and coordinates the use of the hardware among the various application programs for the various users. |
| Q2 | **Name any five operating Systems.** |
| Ans | 1. Macintosh 2. Unix/Linux 3. Android 4. Windows 5. MS-DOS |
| Q3 | Describe the basic components of the OS. |
| Ans | The basic components of an OS are as following:  1. Kernel: the kernel provides the most basic level of control over all of the computer's hardware devices. It manages memory access for programs in the RAM, it determines which programs get access to which hardware resources, it sets up or resets the CPU's operating states for optimal operation at all times, and it organizes the data with File Systems.  2. Program execution: The operating system provides an interface between an application program and the computer hardware, so that an application program can interact with the hardware  3. Interrupts: Interrupts are central to operating systems, as they provide an efficient way for the operating system to interact with and react to its environment. Interrupts provide a computer with a way of automatically saving local register contexts, and running specific code in response to events. Even very basic computers support hardware interrupts, and allow the programmer to specify code which may be run when that event takes place.  4. Memory management  5. Multitasking & Disk access and file systems  6. Networking & Security  7. Graphical user interface: Most of the modern computer systems support graphical user interfaces (GUI). Graphical user interfaces evolve over time. For example, Windows has modified its user interface almost every time a new major version of Windows is released, and the Mac OS GUI changed dramatically with the introduction of Mac OS X in 1999 |
| Q4 | **Overview of the MS-DOS OS.** |
| Ans | **MS**-**DOS** (**Microsoft** Disk **Operating System**) is a single-user, single-tasking **computer operating system** that uses a command line interface. MS-DOS originally written by Tim Paterson and introduced by Microsoft in August 1981 and was last updated in 1994 when MS-DOS 6.22 was released.  This operating system is designed to manage the computer so that one **user** can effectively do one thing at a time. The Palm OS for Palm handheld computers is a good example of a modern **single**-**user**, **single**-**task** operating system. |
| Q5 | **What are the diff types of applications?** |
| Ans | **There are basically four types of applications, which are as follows:**  **Console Applications:** A **console application** is a [computer program](https://en.wikipedia.org/wiki/Computer_program) designed to be used via a text-only computer interface, such as a [text terminal](https://en.wikipedia.org/wiki/Text_terminal), the [command line interface](https://en.wikipedia.org/wiki/Command_line_interface) of some [operating systems](https://en.wikipedia.org/wiki/Operating_system) ([Unix](https://en.wikipedia.org/wiki/Unix), [DOS](https://en.wikipedia.org/wiki/DOS), etc.) or the text-based interface included with most [Graphical User Interface](https://en.wikipedia.org/wiki/Graphical_user_interface) (GUI) operating systems, such as the [Win32 console](https://en.wikipedia.org/wiki/Win32_console) in [Microsoft Windows](https://en.wikipedia.org/wiki/Microsoft_Windows).  A user typically interacts with a console application using only a [keyboard](https://en.wikipedia.org/wiki/Computer_keyboard) and [display screen](https://en.wikipedia.org/wiki/Computer_display).  **Web Applications**: In computing, a **web application** or **web app** is a [client–server](https://en.wikipedia.org/wiki/Client%E2%80%93server_model) [software application](https://en.wikipedia.org/wiki/Software_application) in which the client (or user interface) runs in a [web browser](https://en.wikipedia.org/wiki/Web_browser).  **Mobile Applications:** A **mobile app** is a [software application](https://en.wikipedia.org/wiki/Application_software) designed to run on [mobile devices](https://en.wikipedia.org/wiki/Mobile_device) such as [smartphones](https://en.wikipedia.org/wiki/Smartphone) and [tablet computers](https://en.wikipedia.org/wiki/Tablet_computer). Most such devices are sold with several apps bundled as [pre-installed software](https://en.wikipedia.org/wiki/Pre-installed_software), such as a [web browser](https://en.wikipedia.org/wiki/Web_browser), [email client](https://en.wikipedia.org/wiki/Email_client), [calendar](https://en.wikipedia.org/wiki/Calendaring_software), mapping program, and an app for [buying music](https://en.wikipedia.org/wiki/Mobile_music) or other media or more apps.  **Desktop Applications** By definition, a desktop application means any software that can be installed on a single computer (laptop or a desktop) and used to perform specific tasks. Some desktop applications can also be used by multiple users in a networked environment. Word processors and media players can be considered to be typical desktop applications. |
| Q6 | **What type of software w is used for creating letters papers and other documents?** |
| Ans | Word Processor |
| Q7 | **What is a pixel?** |
| Ans | A pixel is the smallest unit of a digital image or graphic that can be displayed and represented on a digital display device.  The physical size of a pixel depends on how you've set the [resolution](http://searchcio-midmarket.techtarget.com/definition/resolution) for the display screen. If you've set the display to its maximum resolution, the physical size of a pixel will equal the physical size of the dot pitch of the display. |
| Q8 | **What are the advantages of MS-Excel?** |
| Ans | * **Easy and effective comparisons -** With the powerful analytical tools included within Microsoft Excel you have the ability to analyze large amounts of data to discover trends and patterns that will influence decisions. * Microsoft Excel’s graphing capabilities allows you to summarize your data enhancing your ability to organize and structure your data. * **Powerful analysis of large amounts of data -** Recent upgrades to the Excel spreadsheet enhances your ability to analyze large amounts of data. * With powerful filtering, sorting and search tools you are able to quickly and easily narrow down the criteria that will assist in your decisions. Combine these tools with the tables, Pivot Tables and Graphs you can find the information that you want quickly and easily even if you have hundreds of thousands of data items. * **Working Together -** With the advent of the Excel Web App you can now work on spreadsheets simultaneously with other users. The ability to work together enhances your ability to streamline processes and allows for ‘brainstorming’ sessions with large sets of data – the collaboration tools allow you to get the most out of the sharing capabilities of Microsoft Excel. * **Microsoft Excel Mobile & iPad Apps -** With the advent of the tablet and the smart phone it is now possible to take your worksheets to a client or a meeting without having to bring along your Laptop. * The power of these mobile devices now allows you to manipulate data and update your spreadsheets and then view the spreadsheets immediately on your phone or tablet. |
| Q9 | **Which technology is used in compact disks?** |
| Ans | Laser |
| Q10 | **What is the file extension used for MS Word document?** |
| Ans | **.doc** |
| Q11 | **What is primary memory?** |
| Ans | Primary storage, also known as *main storage* or [memory](http://searchmobilecomputing.techtarget.com/definition/memory), is the area in a computer in which [data](http://searchdatamanagement.techtarget.com/definition/data) is stored for quick access by the computer's [processor](http://searchcio-midmarket.techtarget.com/definition/processor). The terms random access memory ([RAM](http://searchmobilecomputing.techtarget.com/definition/RAM)) and [memory](http://searchmobilecomputing.techtarget.com/definition/memory) are often as synonyms for primary or main [storage](http://searchstorage.techtarget.com/definition/storage).  Primary storage is [volatile](http://whatis.techtarget.com/definition/volatile) and can be contrasted with [non-volatile](http://searchstorage.techtarget.com/definition/nonvolatile-storage) [secondary storage](http://searchstorage.techtarget.com/definition/secondary-auxiliary-storage), also known as auxiliary storage. The terms *main storage* and *auxiliary storage* originated in the days of the [mainframe](http://searchdatacenter.techtarget.com/definition/mainframe) computer to distinguish the more immediately accessible [data storage](http://searchstorage.techtarget.com/definition/storage) from data stored on [punch cards](http://whatis.techtarget.com/reference/History-of-the-punch-card) that required input/output ([I/O](http://whatis.techtarget.com/definition/input-output-I-O)) operations. In the days when mainframe data storage contained ferrite cores, the term *core storage* was often used in place of primary storage.  **Primary Memory / Volatile Memory:**  Primary Memory also called as volatile memory because the memory can’t store the data permanently. Primary memory select any part of memory when user want to save the data in memory but that may not be store permanently on that location. It also has another name i.e. RAM.  **Random Access Memory (RAM):**  The primary storage is referred to as random access memory (RAM) due to the random selection of memory locations. It performs both read and writes operations on memory. If power failures happened in systems during memory access then you will lose your data permanently. So, RAM is volatile memory. RAM categorized into following types.   * DRAM * SRAM * DRDRAM |
| Q12 | **What is Logical Memory?** |
| Ans | Logical memory is the address space, assigned to a logical partition that the operating system perceives as its main storage. For a logical partition that uses shared memory,a subset of the logical memory is backed up by physical main storage and the remaining logical memory is kept in auxiliary storage.  You can configure minimum, maximum, desired, and assigned logical memory sizes for a shared memory partition.   | Table 1. Logical memory sizes | | | --- | --- | | **Logical memory size** | **Description** | | Minimum | The minimum amount of logical memory with which you want the shared memory partition to operate. You can dynamically remove logical memory from the shared memory partition down to this value. | | Maximum | The maximum amount of logical memory that the shared memory partition is allowed to use. You can dynamically add logical memory to the shared memory partition up to this value. | | Desired | The amount of logical memory with which you want the shared memory partition to activate. | | Assigned | The amount of logical memory that the shared memory partition can use. A shared memory partition does not have to use all of its assigned logical memory at any given time. | |
| Q13 | **What is Virtual memory?** |
| Ans | A computer can address more memory than the amount physically installed on the system. This extra memory is actually called **virtual memory** and it is a section of a hard disk that's set up to emulate the computer's RAM.  The main visible advantage of this scheme is that programs can be larger than physical memory. Virtual memory serves two purposes. First, it allows us to extend the use of physical memory by using disk. Second, it allows us to have memory protection, because each virtual address is translated to a physical address.  Following are the situations, when entire program is not required to be loaded fully in main memory.   * User written error handling routines are used only when an error occurred in the data or computation. * Certain options and features of a program may be used rarely. * Many tables are assigned a fixed amount of address space even though only a small amount of the table is actually used. * The ability to execute a program that is only partially in memory would counter many benefits. * Less number of I/O would be needed to load or swap each user program into memory. * A program would no longer be constrained by the amount of physical memory that is available. * Each user program could take less physical memory; more programs could be run the same time, with a corresponding increase in CPU utilization and throughput. |