Storage devices

Seek time – the average time required for the read/write head of a hard disk to move and access data (also called access time)

Transfer rate – the average speed at which data can be transmitted from one device to another, measured in megabytes per second

Tracks – a circular path on the surface of a disk or diskette on which information is magnetically stored

Directory – an alphabetical or chronological list of files on a disk (also known as catalogue)

Head crash – a hard-disk failure that occurs when the read/write head of a hard disk comes into contact with its rotating platter

Storage density – also known as areal density, a measure of the quantity of information bits that can be stored on a given volume of a computer storage medium

Cluster – a fixed number of contiguous sectors

Sectors – tracks are divided into these

Disk partitioning – the process of dividing a hard disk into isolated sectors

Output devices

Graphics – designs and images used in magazines, books etc.

Hue – a particular colour within the colour spectrum

Toner – an ink powder used in laser printers and copiers

Barcode – a rectangular pattern of black lines of magnetic ink printed on an object so that its details can be read by a computer system

Printing plate – a surface that carried a reproduction of an image from which the pages are printed

LCD – type of screen composed of two parts: the actual liquid crystal display and a light source at the back of the screen (called backlight). The crystals block light in different quantities to create the image

OLED – thin-film LED displays that don't require a backlight to function. The material emits light when stimulated by an electrical current, which is known as electroluminescence

Plasma – also called gas charge display, this type of display contains noble, non-harmful gases

LED – a flat panel display that uses an array of light – emitting diodes (LEDs) as a source of light behind the screen

CRT – this type of screen contains millions of tiny red, green and blue phosphor dots that glow when struck by an electron beam that travels across the screen and creates a visible image

Resolution – the maximum number of pixels in the horizontal and vertical directions of the screen

Aspect ratio – the width of the screen divided by its height

Brightness – the amount of light produced by a monitor, usually measured in cd/m2

Colour depth – the number of bits used to hold a colour pixel; this determines the number of colours a monitor can display

Anti-glare filter – a treated glass panel or plastic sheet that is placed over a monitor screen to reduce glare

Degaussing – the process of removing magnetism from a monitor

Refresh rate – determines how many times a display can refresh itself in a second

Response time – the time it takes for a pixel to change colour from one colour to another

Active matrix – a technology used in LCD displays, in which the brightness of each pixel is directly controlled

Passive matrix LCD – an LCD technology that uses a grid of vertical and horizontal wires to display an image on the screen; each pixel is controlled by an intersection of two wires in the grid

Privacy filter – a panel or filter placed over a display, used to protect data on the screen

Input devices

Magnetic stripe reader – a device that reads information encoded in the magnetic strip located on the back of a plastic badge

MIDI keyboard – a piano-style user interface keyboard device used for sending audio signals to a computer

Concept keyboard – a type of keyboard where each button relates to a particular item or function

Stylus – a small pen-shaped instrument that is used to input commands to a computer screen

Handheld scanner – small scanner that is moved by hand over the material being captured

Flatbed scanner – a scanner that provides a flat, glass surface to hold a sheet of paper, book or object for scanning

Digitiser / graphics tablet – a device that allows one to hand-draw images and graphics, similar to the way one draws images with a pencil and paper

Magnetic ink card reader – a type of input device that reads numbers printed in magnetized ink

Slide scanner – a type of scanner that is specialized for scanning 35mm slides and film negatives

Optical mark reader – a device that reads marks made by pencil on a printed form into the computer

Light pen – a highly sensitive photo-sensitive device that allows the user to enter or modify data through the screen

Computer types & architecture

Microprocessor chip – consists of an arithmetic-logic unit, one or more working registers to store the data being processed, and accumulators for storing the results of calculations

Registers – groups of bistable devices used to store information in a computer system for high-speed access

Accumulators – used to store numeric data during processing

Data bus – a group of signal lines used to transmit data in parallel form from one element of a computer to another

Control bus – a group of signal lines dedicated to the passing of control signals

Address bus – used to send address details between the memory and the address register

Clock – an electronic circuit, usually a quartz crystal that generates electronic pulses at fixed time intervals to control the timing of all operations in the processor

RAM – used for the temporary storage of application programs and data; can be written to and read from

ROM – used for storing part of the operating system and application software known as 'firmware'; can only be read: cannot be written or altered in any way

Transfer time – the amount of time it takes for data to be delivered in a single transaction

Bandwidth – the product of the number of bits that can be transferred in parallel in any one transaction by the number of transactions that can occur in one second

Block – unit of information transferred between items in the hierarchy

Page – unit of information transferred between primary and secondary memory

Access time – refers to how quickly the memory can respond to a read or write request

Cycle time – refers to the minimum period between two successive requests

Tenses & usage rules

Past Simple – a finished action or situation in the definite past

Past Continuous – an action in progress at a definite time in the past

Present Perfect Simple – an event that started in the past but with relevance to the present moment

Present Perfect Continuous – an event in progress in the immediate / undefined past, with emphasis on duration

Past Perfect Simple – an event that happened before another event in the past

Past Perfect Continuous – an event that was in progress up to a time / event in the definite past

Conditionals in English

Zero conditional – used to express general truths, scientific facts or laws of nature

FORM: If-clause	Main clause
If/When + Present Simple,	Present Simple
e.g *If you heat water to 100℃,*	*it boils.*

First conditional – the likely or possible conditional; used to talk about real conditions either in the present or the future and their likely outcomes either in the present or the future

FORM: If-clause	Main clause
If + Present Simple,	will + infinitive
e.g *If it rains,*	*I won't go to the park.*

Second conditional – used to talk about hypothetical, imaginary or unlikely conditions in the present or future, and their hypothetical, imaginary or unlikely consequences in the present or future

FORM: If-clause	Main clause
If + Past Simple,	would + infinitive
e.g *If I met the Queen of England,*	*I would say hello.*

Third conditional – known as the 'impossible' conditional; used to talk about hypothetical conditions in the past and their hypothetical results in the past; in other words, we use this conditional to say how something in the past would have been different if something before that had been different

FORM: If-clause   **Main clause**

          If + Past Perfect,   would + have + past participle

e.g   *If I had studied harder,*   *I would have passed the exam.*

Mixed third/second conditional – used to talk about present results of a past action; in other words, we use this conditional to say how something in the present (now) would be different if something different had happened in the past

FORM: If-clause   **Main clause**

          If + Past Perfect,   would + infinitive

e.g   *If she hadn't dropped out,*   *she would be more successful now.*

Mixed second/third conditional – used to talk about past results of a present or a continuing situation; in other words, this conditional is used to say how something in the past would have been different if something in the present moment were different

FORM: If-clause   **Main clause**

          If + Past Simple,   would + have + past participle

e.g   *If I weren't afraid of heights,*   *I would have claimed that mountain.*