Quick guide to Word Processing theory

- All computers rely on memory to operate. There are several types. Main memory is the memory used by the computer to run programs. Secondary storage is the name used for disks, which are used to store the programs when they are not in use by the computer. Secondary storage also stores user data files. Disks are also called permanent storage. Main memory is normally called RAM (Random Access Memory). The computer can change RAM but its contents are lost when the computer is turned off. RAM is said to be volatile. To store small, important amounts of data permanently ROM (Read-only Memory) is used. The computer cannot change ROM but its contents are kept when the computer is turned off. For this reason ROM is said to be non-volatile.

- All computer data is stored as 1s and 0s – whether stored in main memory (RAM) or secondary memory (disk). The smallest unit of storage is the bit – capable of storing just a single 1 or 0. Because there is so much data to work with we use some larger units to work with instead. A byte is 8 bits. And is large enough to store a letter of the alphabet. A kilobyte is 1,024 bytes.

- The capacity of computer disks defines how much data they can store. The normal unit of measurement for disks is the MegaByte (MB). Larger disks have their capacity measured in Gigabytes (GB). A GB is 1,000MB. Ordinary High-Density floppy disks have a capacity of 1.44MB. CD-ROM disks have a capacity of 650MB.

- Computer hardware is the physical bits of the computer that you can touch. Software is the programs that you run. The main types of software are the Operating System – such as Windows ’95 – and the applications – such as Microsoft Word. There are many different types of computer hardware. The most obvious are keyboard, mouse, monitor, system unit, printer, scanner, modem.

- If you wish to use a computer to modify documents, photographs and other items that exist on paper they must be converted to digital format. This is normally done using a scanner. A scanner, rather like a digital photocopier, can capture images of documents using light and make the captured image available onscreen. The item can then be modified. A good Windows scanner will be TWAIN-compliant.

- A document which has been scanned and modified can be printed again. There are two main types of printers in use today – impact and non-impact printers. Impact printers press ink onto the page using a hammer action. Dot-matrix printers are an example of this type of printer. These types of printers tend to be quite noisy. The other type of printer, the non-impact printer is much quieter and also faster. Examples include the inkjet and the laser printer. Inkjet printers drop ink onto the page where it dries quickly in the air. Laser printers place a fine powder called toner onto the page which is then heat-sealed onto the page.

- When data is stored in a computer system on disk it is stored in what are called files. Files are nothing more than bundles of related data with a recognisable external name. A modern computer system contains many thousands of files for many different purposes. Each word-processing task you do is stored in a file – the more you use a computer the more files you will accumulate. Occasionally you will want to remove files that you are finished with or that are out of date. This process is known as deleting. Sometimes you will want to duplicate important files. This process is know as copying. Sometimes you will want to change the external name of a file without changing the contents. This process is known as re-naming.

- A computer connected to other computers is a networked computer. A computer that is not connected to other computers is called a standalone computer. There are advantages to networked computers, mainly the ability to communicate via e-mail and the web, the ability to share files, and to share devices such as printers. There are potential security risks with networked computers that don't necessarily exist for standalone computers.

- To connect computers to a network permanent wiring can be used. However, to temporarily connect to a network – such as the internet – phone lines are normally used. However since phone lines are designed for carrying the sounds of voice – but computers don't talk using voices – a hardware device called a modem is used to translate computer talk to sounds you can hear. To connect you also need software – but that's generally freely available.

- One of the things which seems to cause new users difficulties with computers is the large number of acronyms that are used. An acronym is a word made up of the initial letters of other words. There have been examples on these pages already – such as RAM, ROM, CD-ROM etc. Some of these are rather strange – such as TWAIN – which doesn't stand for anything. WYSIWYG on the other hand stands for What You See Is What You Get. This refers to the fact that the appearance of your document on screen will be the same as the appearance of the document on paper when you print it.

- Also confusing is the fact that almost everything on screen has a name. In the Microsoft Word screen the top blue line is called the title bar and should contain the title of the program and the title of the current document. Beneath that is the Menu bar which has pull-down menus from which you can make selections. At the bottom of the window is the status bar. This tells you how many pages are in the document and what page you're on. It will also indicate whether you're in over-write or insert mode. At the bottom and on the right of the screen are scroll bars which allow you to navigate through your document.

- The Health & Safety Act of 1989 tries to regulate the correct and safe means to use a computer workstation. This is because users can spend very long periods of time using computers in uncomfortable positions which can lead to such difficulties as RSI (Repetitive Strain Injury) and back pain from poor seating posture. The act stipulates some simple things as the provision of adjustable seating with proper back support; provision of proper lighting and the use of anti-glare screens; provision of document holders, where appropriate; provision of footrest, where appropriate.

- Because of the large numbers of computers now in use and the amount of private data being stored on them, regulations were introduced in the Data Protection Act to control how this data can be obtained, stored and used. All personal data must be fairly and legally obtained. It must be stored securely. It must be accurate – the person that the data relates to has the right to check this and to have inaccuracies corrected. The data can only be used for the purposes for which it was originally gathered and may not be passed on to any third parties.