

Kemnal Technology College – Computer Science Kemnal Key – Year 8 Term 5

KEMNAL KEY QUESTIONS

What components make up the internals of a PC?

What is an Input device / output device?

Describe what happens at the process stage.

Evaluate the effectiveness of chosen type of software.

Logic gates

In its most basic form, a computer is a collection of powered and unpowered *circuits* and *transistors*. A *logic gate* is a series of transistors connected together to give one or more *outputs*, each output being based on the *input* or combination of inputs supplied to it. There are three types of gate to consider:

AND gate
OR gate
NOT gate

Functions of operating systems

An operating system is a collection (or suite) of programs that manages and controls the computer. Operating systems have many functions:

controlling *hardware* components
providing a platform for software to run on
providing a user interface
managing processes
managing the computer's memory
managing input and output devices
managing applications
managing security

Microsoft Windows
Apple OS X
Linux
Android
IOS

Software

The software in a computer system enables the hardware to function and the user to perform tasks. Software within a computer system is divided into two main types, system software and application software.

System software

System software is any software that assists with the running or management of the computer system. This can include operating systems, security software and file management software.

Application software

Application software is any software added to the system that enables the user to perform a task. For example, a word processor allows the user to type a document and a browser allows the user to view web pages.

Capacity

Size	Unit
8 bits	1 byte (B)
1,000 bytes (1,000 B)	1 kilobyte (KB)
1,000 kilobytes (1,000 KB)	1 megabyte (MB)
1,000 megabytes (1,000 MB)	1 gigabyte (GB)
1,000 gigabytes (1,000 GB)	1 terabyte (TB)

Utility programs

Utility software helps maintain the system. Utility software includes:

encryption software
defragmentation software
data compression software
backup software

Encryption software

Encryption software disguises the contents of files so they can only be understood by authorised users. The software uses a complex algorithm to scramble the content so that it appears to be gibberish. Only authorised users can unscramble the content.

