4. Software

Starter Quiz · 课前小测

IGCSE Computer Science Name: _____ Score: _____

1. Which is system software?

   ☐ the operating system

   ☐ a word processor

   ☐ a web browser

   ☐ a spreadsheet

2. A high-level language (like Python):

   ☐ reads like English and runs on different types of computer

   ☐ is written in binary

   ☐ only runs on one CPU

   ☐ is the same as machine code

3. Which is a role of the operating system?

   ☐ managing memory and files

   ☐ spraying ink onto paper

   ☐ storing data magnetically

   ☐ displaying pixels

4. A compiler:

   ☐ translates the whole program at once, then it runs fast without the compiler

   ☐ translates and runs one line at a time

   ☐ stops at the first error

   ☐ must be present every time the program runs

5. An interrupt is:

   ☐ a signal telling the processor something needs attention now

   ☐ a permanent stop of the computer

   ☐ a type of file

   ☐ a network cable

6. A compiler translates the whole program once so it then runs fast without the compiler, whereas an interpreter translates and runs line by line, stopping at the first error — handy while testing.

   ☐ True ☐ False

7. A hardware interrupt comes from a device (e.g. a printer out of paper), while a software interrupt comes from a program (e.g. dividing by zero) — both make the CPU pause and service the event.

   ☐ True ☐ False

8. Which is a feature of an IDE?

   ☐ auto-completion and error diagnostics in a code editor

   ☐ a magnetic hard disk

   ☐ a network cable

   ☐ a CPU socket

IGCSE Computer Science

1. **the operating system**

   The OS (and drivers, utilities) is system software; the others are application software.

2. **reads like English and runs on different types of computer**

   High-level languages are easy to read/write and portable; low-level languages are CPU-specific.

3. **managing memory and files**

   The OS manages files, memory, peripherals, multitasking, interrupts, the UI and security.

4. **translates the whole program at once, then it runs fast without the compiler**

   A compiler translates everything once into a fast stand-alone program; an interpreter goes line by line.

5. **a signal telling the processor something needs attention now**

   An interrupt makes the CPU pause, service the event, then resume — for quick reactions.

6. **True**

   Compiled code is faster and stand-alone; interpreted code is easier to debug because it stops where the error is.

7. **True**

   Interrupts can be hardware, software or user-triggered; in every case the CPU saves state, handles it, then resumes.

8. **auto-completion and error diagnostics in a code editor**

   An IDE bundles an editor, translator, run-time, diagnostics, auto-complete and prettyprinting.