Summative assessment – Questions

## Computer systems

Q1. An electricity company is developing a new smart meter to help customers monitor and reduce their energy consumption. Which **two** of the following would be suitable output devices for the meter?

* Temperature sensor
* LCD display
* Microphone
* Speaker
* Keyboard

Q2. Which of the following statements most accurately describes how a passive cooling system works?

1. The speed that components operate at is reduced and heat sinks or vents are used to allow heat to dissipate
2. A fan is used to circulate air or a pump is used to distribute water in order to cool components
3. Components are submerged in mineral oil, which acts as a heat transfer fluid to dissipate heat away from components

Q3. Which of the following statements most accurately describes a real-time operating system?

1. Multiple applications can be run simultaneously
2. Uses a priority-based scheduling algorithm, which assigns the highest priority to tasks that require immediate attention
3. Processes large batches of data in sequential order
4. Manages and controls a computer network, enabling multiple computers to communicate and share resources



Q4. A developer wants to use an integrated development environment (IDE) to write and debug a new program. State **two** features that an IDE can provide that would support the developer.

Feature 1:

Feature 2:

Q5. Which **three** of the following are factors that can affect the performance of a processor?

* Operating system
* Cache size
* Manufacturer
* Clock speed
* Number of cores

Q6. Microsoft Windowsand macOSare both examples of operating systems.Name **two** roles of an operating system.

Role 1:

Role 2:

Q7. A parcel delivery company gives their delivery drivers smartphones so they can view their delivery schedule for the day and record proof of delivery. Explain **one** suitable operating system for the smartphones.

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