

9 A printer runs out of ink and needs a new ink cartridge. An interrupt is sent and a message is generated to notify the user that the ink cartridge is empty.

(a) Complete the paragraph about the use of an interrupt in this process.

Use the terms from the list.

Some of the terms in the list will **not** be used. You should only use a term once.

- binary
- clock
- computer
- data
- error
- fetch–decode–execute cycle
- hexadecimal
- higher
- interrupt queue
- interrupt service routine (ISR)
- lower
- printer
- priority level
- secondary storage
- sorting
- transmission

The sends an interrupt to the
..... . The interrupt is given a
..... . The processor completes its current
..... and checks the
..... to see if there is an interrupt with
..... priority than the current task. If there is, it stores
the current task and fetches the interrupt. It then calls the
..... , which is a sequence of instructions that
handles the interrupt. The interrupt is handled, which generates a message to the user to
notify them that the ink cartridge is empty.

[7]

(b) Handling interrupts is one function of an operating system.

Give **two** functions of an operating system that relate to memory.

1

2

[2]