

7 Data is transmitted between a computer and a printer using a wired connection. The computer transmits the data to the printer. The printer transmits data and interrupts to the computer.

(a) State whether the method of transmission should be serial or parallel. Justify your choice.

method of transmission

justification

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[2]

(b) State whether the method of transmission should be simplex, half-duplex or full-duplex. Justify your answer.

method of transmission

justification

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[2]

(c) The transmitted data may contain an error.

(i) Give **one** way in which an error can occur during data transmission.

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(ii) The computer and printer agree to use automatic repeat query (ARQ).

Explain how ARQ using negative acknowledgement is used to establish that data is received without error.

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[3]

Turn over