Name: Class: Mark:

1. Javid is looking to set up a home network and is becoming puzzled by some of the data transmission terminology.

Draw a line to match each description to the appropriate technical term. [3]

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| --- | --- | --- |
| Simplex |  | Data travels in both directions simultaneously |
| Half-duplex | Data travels in one direction only |
| Full duplex | Data travels in both directions, but not simultaneously |

2. A cable contains eight wires that are used for the transmission of data.

(a) State whether the cable is serial or parallel. [1]

(b) One problem that the method of data transfer will have is skew.

Explain what is meant by skew in data transfer. [2]

(c) It is also possible that the signal sent through one wire may interfere with the signal sent through another wire. This may cause an error in the transmitted data.

State the name for this problem. [1]

(d) State a method of transmission that will have neither of the problems that are   
given in parts (b) and (c). [1]

(e) A CPU communicates with RAM using parallel transmission.

Describe the reasons why parallel transmission is used over serial transmission   
in this case. [2]

(f) Explain whether simplex, half-duplex or full duplex is used for transmitting data between RAM and CPU. [2]

[Total 12 Marks]