**Data Transmission**

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| **Q** | **Answer** |
| 1 | The payload contains the actual data being sent in the packet.  • The trailer is a way of identifying the end of a packet and it also contains an error checking method, such as a cyclic redundancy check (CRC). |
| 2 | • The 500 KiB file is split up into a number of packets.  • Each packet will follow its own path from 'A' to 'B'.  • Routers (R1 to R10) will determine the path of each data packet.  • The routing selection depends on the number of packets (at each router).  • The shortest path available is always selected. |
| 3 | Three from:  • There is no need to tie up a single communications line.  • It is possible to overcome failed, busy or faulty lines by re-routing packets.  • It is relatively easy to expand package usage.  • A high data transmission rate is possible. |
| 4a | Four from:  − Multiple bits are sent at the same time  − Uses multiple wires  − Data is sent in both directions …  − … but only one direction at a time |
| b | Any two from:  − Bits may arrive skewed  − More expensive to setup/manufacture/purchase cable  − Limited distance  − More prone to interference/error |