MODULE D DATA TRANSMISSION · D3

The USB interface

Original practice questions · 20 marks · ~25 minutes · Cambridge 0478 syllabus 2.1.3

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. No calculator. Where a question gives a context, refer to it in your answer. The marks for each part are shown in brackets [ ]. The total for this worksheet is **20 marks**.

1

Total: 2 marks

(a) State what the letters USB stand for. **[1]**

(b) Tick (✓) **one** box to show the method of data transmission that USB uses. **[1]**

Method	Tick (✓) one
Parallel	
Serial	

2

Total: 4 marks

A graphic designer connects a new drawing tablet to their desktop computer using a USB connection.

(a) Explain how data is sent from the drawing tablet to the computer using the USB connection. **[2]**

(b) Describe what happens when the drawing tablet is plugged into the computer for the first time. **[2]**

3 **Total: 3 marks**

A library connects a wired keyboard to the computer on its help desk using a USB connection.

(a) Give **two** benefits of using a USB connection for the keyboard. **[2]**

1

2

(b) Give **one** drawback of using a USB connection for the keyboard. **[1]**

4 **Total: 4 marks**

(a) Tick (✓) **one** box in each row to show whether each statement about USB is true or false. **[4]**

Statement	True (✓)	False (✓)
A USB connection sends several bits at the same time down several wires		
A device can be powered through its USB connection		
The user must always install the device driver for a USB device by hand		
A USB connection is backward compatible		

5 **Total: 2 marks**

A technician at a printing company says: "A USB connection is always faster than a parallel connection over a short distance."

(a) Explain why the technician is wrong. **[2]**

6 **Total: 5 marks**

An architecture office buys new desks. Each desk has a computer with a wired mouse, a wired webcam and an external storage drive, all connected using USB.

(a) Explain why USB is a suitable interface for the office to use. Include at least **one** drawback in your answer. **[5]**

Total for this worksheet: 20 marks