MODULE B MEMORY AND STORAGE · B1

Primary storage, RAM and ROM

Original practice questions · ~25 minutes · 20 marks · Cambridge 0478 syllabus 3.3.1

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **20 marks**.

1

Total: 3 marks

A museum lends visitors a handheld audio guide. A visitor types an exhibit number on its keypad and the guide plays a spoken description of that exhibit. The guide contains a processor, primary storage and secondary storage.

(a) State what is meant by primary storage. **[1]**

(b) Give **two** examples of primary storage. **[2]**

1

2

2

Total: 4 marks

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

Statement	True (✓)	False (✓)
ROM is volatile.		
RAM stores the data that is currently in use.		
The contents of ROM are normally changed every time a program runs.		
Both RAM and ROM can be directly accessed by the CPU.		

3 Total: 4 marks

Complete the sentences about the audio guide's memory. Use terms from the list. Not all terms are used. **[4]**

read only · volatile · non-volatile · start-up instructions · secondary · read and write · parity

ROM stores the ..... that the guide needs when it is switched on. ROM is ..... , so its contents are kept when the battery runs out. RAM is ..... , so the exhibit number typed in is lost when the guide is switched off. The processor can change the contents of RAM because RAM is ..... memory.

4 Total: 3 marks

The audio guide's battery runs out while a visitor is using it. The battery is then replaced and the guide is switched on again. Describe what happens to the contents of the guide's RAM and ROM. **[3]**

5 Total: 4 marks

Explain why the audio guide needs **both** RAM and ROM. **[4]**

6 **Total: 2 marks**

Give **two** differences between RAM and ROM. **[2]**

1

2

Total for this worksheet: 20 marks