

Topic: 1.3.2 Main Memory

May/June 2005

2 (a) State **two** differences between random access memory (RAM) and read only memory (ROM). [2]

(b) Describe what is stored on

- (i) RAM,
- (ii) ROM

explaining why that type of memory is appropriate. [4]

May/June 2006

1 (a) Explain the differences between RAM and ROM, stating a use for each. [4]

Oct/NOV 2007

3 (a) State one difference between random access memory (RAM) and read only memory (ROM). [1]

(c) An embedded processor contains all the software needed to control an automatic washing machine.

- (i) State why the software is stored on ROM. [1]
- (ii) Explain why it is important that ROM has some of the characteristics of RAM. [2]

May/June 2008

3 (a) (i) State two types of data stored in RAM when a computer is running. [2]

(ii) State one piece of software which is entirely contained in ROM and say why it is stored in ROM rather than RAM. [2]

May/June 2010. P11/ P12

1 (a) (i) State two differences between ROM and RAM. [2]

May/June 2010. P13

1 (a) (i) State two features of RAM which would not be true of ROM. [2]

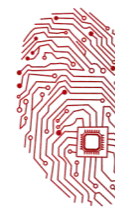
May/June 2012. P11/P12/P13

1 (a) (i) Give two differences between ROM (Read Only Memory) and RAM (Random Access Memory). [2]

May/June 2013.P11

2 (b) A remote-controlled toy car contains both RAM and ROM. The car can be programmed to carry out a number of manoeuvres.





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(i) Describe the main differences between RAM and ROM. [2]

(ii) How are the two types of memory used in the car? [2]

Oct/Nov 2013.P11

6 (a) Describe the main differences between RAM and ROM. [3]

(b) Data logging devices contain both RAM and ROM. Describe the role of each type of memory in these devices. [2]

Oct/Nov 2013.P12

2 There are 4 processor component terms on the left and 10 descriptions of functions on the right.

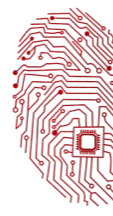
Draw a line connecting each description to the correct component.

ALU	Manages execution of instructions
Control unit	Carries out arithmetic operations such as addition and multiplication
RAM	Fetches each instruction in turn
ROM	Stores program in current use
	Carries out bit shifting operations
	Stores boot-strap loader
	Carries out operations such as AND, OR, NOT
	Issues timing signals
	Stores part of operating system in current use
	Stores data in current use



[10]





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May/June 2015.P11

3 (b) A toy designer is developing a new model aeroplane. The model will be radio-controlled. It will contain a microprocessor.

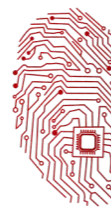
- (i) The model aeroplane needs memory to allow:
- the designer to store fixed data such as the factory settings
 - the operator to use one of the pre-programmed manoeuvres
 - the operator to program their own manoeuvres
 - the operator to store their own program manoeuvres for future use

Name two types of memory needed by the model aeroplane.

Justify your choice of memory in each case.

[4]





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9608 (Computer Science)

May/June 2015. P13

4 (a) There are two types of RAM: dynamic RAM (DRAM) and static RAM (SRAM).

Five statements about DRAM and SRAM are shown below.

Draw a line to link each statement to the appropriate type of RAM.

Statement	Type of RAM
requires data to be refreshed periodically in order to retain the data	
has more complex circuitry	DRAM
does not need to be refreshed as the circuit holds the data as long as the power supply is on	
requires higher power consumption which is significant when used in battery-powered devices	SRAM
used predominantly in cache memory of processors where speed is important	

[5]

(b) Describe three differences between RAM and ROM.

[3]

Oct/Nov 2015. P12

1 (a) Give three differences between Dynamic RAM (DRAM) and Static RAM (SRAM).

[3]





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(b) Examples of primary and secondary storage devices include:

- hard disk
- DVD-RW
- flash memory

For each device, describe the type of media used.

[3]

(b) Describe the internal operation of the following devices:

DVD-RW

DVD-RAM

[4]

Oct/Nov 2016. P11/P13

2 (a) State **two** differences between Static RAM (SRAM) and Dynamic RAM (DRAM).

[2]

Oct/Nov 2016. P12

6 (a) Describe **two** differences between RAM and ROM.

[2]

(b) State **three** differences between Dynamic RAM (DRAM) and Static RAM (SRAM).

[3]

May/June 2018. P11

7 A student plays computer games on a games console.

(b) The games console has random access memory (RAM) and read only memory (ROM).

(i) State **two** differences between RAM and ROM.

[2]

(ii) Give **one** use for RAM in the games console.

[1]

(iii) Give **one** use for ROM in the games console.

[1]

