

Name:

Class Teacher:

Date:



OCR J276

GCSE Computer Science




REVISION BOOKLET

1.3 STORAGE

Content in J276 GCSE Computer Science:

- 1.1 Systems Architecture
- 1.2 Memory
- 1.3 Storage
- 1.4 Wireless and Wired Networks
- 1.5 Network Topologies, Protocols and Layers
- 1.6 System Security
- 1.7 Systems Software
- 1.8 Ethical, Legal, Cultural and Environmental Concerns
- 2.1 Algorithms
- 2.2 Programming Techniques
- 2.3 Producing Robust Programs
- 2.4 Computational Logic
- 2.5 Translators and Facilities of Languages
- 2.6 Data Representation

1.3 STORAGE

TOPIC			
The need for secondary storage			
Data capacity and calculation of data capacity requirements			
Common types of storage:			
Optical			
Magnetic			
Solid State			
Suitable storage devices and storage media for a given application, and the advantages and disadvantages of these, using characteristics:			
Capacity			
Speed			
Portability			
Durability			
Reliability			
Cost			

1.3 STORAGE

THE NEED FOR SECONDARY STORAGE

DATA CAPACITY AND CALCULATION OF DATA CAPACITY REQUIREMENTS

COMMON TYPES OF STORAGE

OPTICAL

MAGNETIC

SOLID STATE

SUITABLE STORAGE DEVICES AND STORAGE MEDIA FOR A GIVEN APPLICATION, AND THE ADVANTAGES AND DISADVANTAGES OF THESE, USING CHARACTERISTICS

CAPACITY

SPEED

PORTABILITY

DURABILITY

RELIABILITY

COST

EXAM QUESTIONS

QUESTION 1

Ann wants to purchase a new computer and is looking at two models. The specification of the CPU in each computer is shown below.

Fig. 1

Computer 1	Computer 2
Clock Speed: 1 GHz	Clock Speed: 1.4 GHz
Cache size: 2 MB	Cache size: 2 MB
Number of Cores: 4	Number of Cores: 2

Identify **two** internal components that are now shown above, which could improve the performance of the computers.

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[2]

QUESTION 2

Vicky has been on holiday and has taken lots of photos. The memory in her camera is now full and she needs to transfer her photos to an external secondary storage device. Define what is meant by 'secondary storage'.

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[1]

Identify **three** common storage technologies Vicky can choose from.

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[3]

State **four** characteristics of secondary storage devices that Vicky should consider when choosing a device.

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[4]

QUESTION 3

Most computer systems use at least one storage device. Explain **one** reason why a secondary storage device is needed in most computer systems.

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[2]

QUESTION 4

Apu has a handheld e-book reader that allows him to store and read electronic books. Types of secondary storage devices are magnetic, optical or solid state. State which type of storage is most suitable for storing the electronic books inside the e-book reader.

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[2]

Explain **one** reason why this type of storage is the most suitable.

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[2]

Apu gets a free e-book on a CD-ROM from a magazine. Give **two** reasons why a CD-ROM is suitable in this case.

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[2]

State whether a CD-ROM is magnetic, optical or solid state storage.

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[1]

QUESTION 5

A computer has 1024 megabytes of RAM. How many gigabytes of RAM does the computer have?

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[1]