

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
 General Certificate of Education
 Advanced Subsidiary/Advanced



CYD-BWYLLGOR ADDYSG CYMRU
 Tystysgrif Addysg Gyffredinol
 Uwch Gyfrannol/Uwch

342/01

COMPUTING CP2

THE COMPUTER, DATA AND APPLICATIONS

A.M. TUESDAY, 22 May 2007

(1½ hours)

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1	4	
2	4	
3	6	
4	4	
5	9	
6	3	
7	8	
8	4	
9	7	
10	11	
Total	60	

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Answers should be written in the spaces provided. Where the space is not sufficient for your answer, continue the answer at the back of the book, taking care to number the continuation correctly.

The intended marks for questions or part questions are given in brackets []. You are advised to divide your time accordingly. The total number of marks available is 60.

You are reminded of the necessity for good written communication and orderly presentation in your answers.

1. (a) A teacher uses a word processor to produce cards with a picture on one side and large text on the other side describing the picture.
Describe **two** features of a word processing package that would be **essential** in producing these cards. [2]

Feature 1

.....

Feature 2

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- (b) The teacher also uses the spreadsheet below to manage her classroom expenditure.

	A	B	C
1			
2	<i>Expenditure to date</i>	<i>Amount</i>	
3			
4	Photocopying	£125.00	
5	Posters	£39.00	
6	Stationery	£130.00	
7	Books	£250.00	
8	Miscellaneous	£50.00	
9	TOTAL EXPENDITURE TO DATE		
10			
11	BUDGET AVAILABLE FOR YEAR	£1000.00	
12			
13	AMOUNT STILL AVAILABLE		
14			
15	OVERSPEND FOR YEAR YES/NO		

- (i) Write down the formula that should be contained in cell **B9** to calculate the total expenditure to date and the formula that should be contained in cell **B13** to calculate the amount still available. [1]

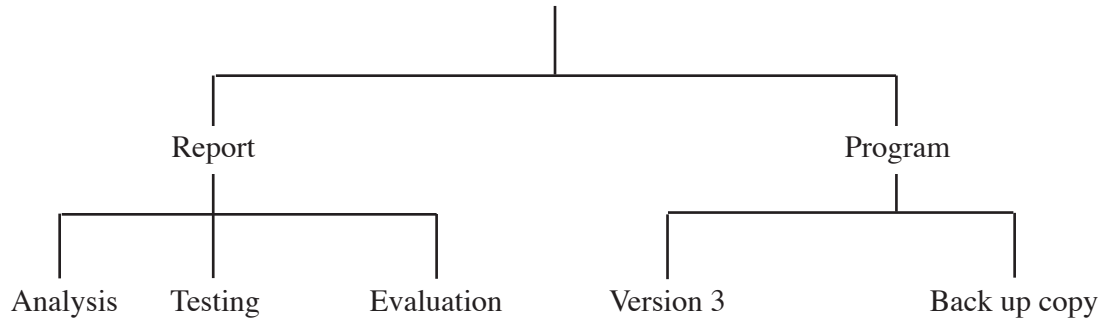
Cell B9:

Cell B13:

- (ii) Write down the formula that should be contained in cell **B15** to display 'YES' or 'NO' depending on whether an overspend has occurred or not. [1]

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2. (a) A computing student has organised the storage of his files on a hard disc, as shown in the diagram below.



- (i) What name is given to this type of file structure? [1]
-
- (ii) Explain why this is a sensible way of organising file storage. [1]
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-
- (b) One *attribute* a file may have is *read only*; state **one** other attribute a file may have. [1]
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- (c) Disc drives use *blocks* when transferring data to and from disc. What is a *block*? [1]
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3. (a) Explain the difference between data *validation* and data *verification*. [2]

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(b) Validation and verification checks are carried out on data being entered into a database at a video rental shop. One item of data to be entered is:

- *number of films in stock*

Describe a suitable **validation** check that could be carried out on the *number of films in stock*, and give an example of **invalid** data that would be detected by this **validation** check.

[2]

Description of the **validation** check

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Example of **invalid** data

(c) Employees at the shop log in using a password. Employees' passwords are changed on a regular basis. Describe a suitable **verification** check that should be carried out when an employee changes their password. [2]

Description of the **verification** check

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Describe what happens if **verification** fails

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4. The file server of a small business has a large hard disc that needs to be backed up.

- (i) Name a secondary storage device that would be suitable for making a back up of a large hard disc. Describe a suitable strategy for backing up this data. [2]

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- (ii) Describe how the secondary storage device should be stored and how this may then be used to restore the data after a fire has completely destroyed the server. [2]

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5. (a) Using an example in **each** case, explain the meaning of the following terms: [6]

Field

Example

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Record

Example

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File

Example

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(b) Explain how a record is added to:

(i) a serial file; [1]

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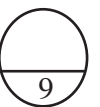
(ii) a sequential file. [2]

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6. (a) Using a suitable example, explain the computer term *bit*. [1]

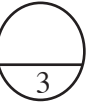
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(b) Using a suitable example, explain the computer term *byte*. [1]

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(c) Explain the computer term *word*. [1]

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7. (a) Describe **three** examples of how an operating system manages resources. [3]

Example 1

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Example 2

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Example 3

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(b) (i) Explain how *spooling* is carried out on a computer when several documents need to be printed. [2]

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(ii) Describe a benefit of *spooling* for the user. [1]

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(c) Explain the term *time slice* when used in a multi-user operating system. [2]

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8. Some hand held devices use voice input commands to operate the device.

(i) Why is voice input a suitable method of input? [1]

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(ii) Describe **two** situations where commands may not be recognised by the device. [2]

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(iii) How could the device be operated when the voice input does not recognise a command? [1]

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9. A local council stores data on residents. The data includes names, addresses and the value of their houses. Employees access the council’s computer system using usernames and passwords and have access to residents’ data.

(a) The council suspects that some staff are benefiting illegally from having access to residents’ data.

(i) Describe how a council employee could illegally benefit from having access to the residents’ data. [1]

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(ii) All employees are required to comply with the council’s code of conduct. Explain how this code of conduct may reduce such illegal activity. [1]

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(iii) Apart from passwords and a code of conduct, describe **two** other measures that the council might adopt to try and prevent employees taking part in such illegal activities. [2]

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(b) The council complies with the Data Protection Act by ensuring that residents’ data is obtained lawfully, held securely and held for no longer than necessary. Describe **three** other ways in which the council must operate in order to comply with the Data Protection Act. [3]

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10. A mother, father and two children have three computers in their house. The computer in the study is used by the parents to help with their business and has Internet access and email. This computer has a printer and a scanner attached.

The children have a stand-alone computer in each of their bedrooms that they use for school homework and to play games. When the children want to access the Internet or print or scan a document they use the computer in the study.

The children have suggested networking all three computers.

Describe the **benefits** and **drawbacks** of this home-based network.

The children sometimes spend long periods on the computer. What effect might this have on their health? [8+3]

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Area with horizontal dotted lines for writing.

L3

C8

T11

