

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

P.M. THURSDAY, 8 June 2006

(1½ hours)

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1	3	
2	7	
3	3	
4	4	
5	11	
6	5	
7	7	
8	3	
9	2	
10	5	
11	10	
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) One feature of a word processing package is a thesaurus. How could a teacher use this feature when writing end of year reports? [1]

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- (b) A section of a spreadsheet that a teacher uses to produce examination results is shown below with formulae being displayed. An *IF* function is used to determine whether a pupil has passed or failed the examination.

	A	B	C
1			
2	Pass Mark	60%	
3			
4	<i>Pupil Name</i>	<i>Exam Mark</i>	<i>Pass or Fail</i>
5			
6	David Blithe	23%	=IF(B6>=B2, "PASS", "FAIL")
7	Helen Carter	70%	=IF(B7>=B2, "PASS", "FAIL")
8	Harry Davies	42%	=IF(B8>=B2, "PASS", "FAIL")
9	Jane Evans	95%	=IF(B9>=B2, "PASS", "FAIL")
10			
11			

- (i) When the formulae are not displayed, what will appear in cell C6 and in cell C7? [1]

C6

C7

- (ii) Describe **one** other feature of a spreadsheet that the teacher could use to analyse this data. [1]

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2. A school is about to equip a new computer room. The headteacher asks the computing department to recommend either installing twenty stand-alone computers or installing a network of twenty computers.

(i) Apart from sharing hardware such as a printer, give **two** reasons why the department would probably recommend installing a network. [2]

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(ii) Give **one** reason why the department might recommend installing stand-alone computers. [1]

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(iii) The department recommends that spooling is used for printing on the network.

(I) Give **two** reasons why the department would recommend spooling when printing on the network. [2]

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(II) Explain **in detail** how *spooling* is used for printing on a network. [2]

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3. (a) State what is meant by *disc cache* memory, and explain why disc cache memory is used. [2]

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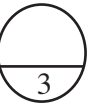
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(b) Disc drives use *blocks* when transferring data to and from disc. What is a *block*? [1]

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4. (a) Data entered into a database is often *verified*. Define the term *data verification* giving a suitable example. [2]

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(b) (i) One method of calculating a check digit for a three digit code is given below.

- The right digit is multiplied by 1.
- The middle digit is multiplied by 2.
- The left digit is multiplied by 3.
- The three numbers calculated above are then added.
- The check digit is the right digit of the resulting number.

Find the check digit for the code **147**. [1]

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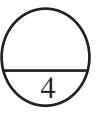
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(ii) What is the purpose of a check digit? [1]

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(b) The gym members pay by bank direct debit and their bank and payment details are stored on the database. The owner of the gym will have to comply with the Data Protection Act. Two of the principles that the owner has to comply with are:

- the data will be obtained lawfully,
- the data will only be used for its intended purpose.

Describe **three other** principles with which the owner of the gym will need to comply. [3]

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6. (a) The mode of operation that controls an aeroplane is known as real-time processing. Describe **in detail** how real-time processing works in this case and explain why it is the most suitable mode of operation. [3]

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- (b) The mode of operation that is used to book theatre tickets is known as real-time transaction processing. Describe **in detail** how real-time transaction processing works in this case and explain why it is the most suitable mode of operation. [2]

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7. (a) Explain the difference between *serial file organisation* and *sequential file organisation*. [2]

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(b) Records within a file can be *fixed* length or *variable* length. Give **one** advantage of a *fixed* length record and **one** advantage of a *variable* length record. [2]

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(c) Draw a **detailed diagram** that clearly shows how the master file is updated using a transaction file when a company runs the monthly payroll. [3]

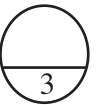
8. A local council has its own web site, accessed via the Internet. The council is considering setting up a staff Intranet.

(i) What is the difference between the Internet and an Intranet? [1]

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(ii) Giving an example, explain what type of information the council would have on their staff Intranet but not on their Internet web site. [2]

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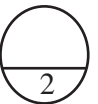
9. Explain what is meant by each of the following terms:

(i) address bus; [1]

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(ii) data bus. [1]

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10. (a) Many people now use a Personal Digital Assistant (PDA) or a handheld computer. Often these devices are too small to have a usable keyboard and many use handwriting recognition.

(i) Give **one** advantage and **one** disadvantage of using handwriting recognition as a method of input. [2]

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(ii) Describe **one** other suitable method of input for this type of device. [1]

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(b) PDAs and handheld computers are often used to store personal and confidential information. Some devices now have *Biometric Fingerprinting* that scans the owner's fingerprints to confirm their identity.

Describe **two** reasons why this method of security may be preferred to passwords. [2]

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Area with horizontal dotted lines for writing.



