

**ADVANCED SUBSIDIARY GCE UNIT
INFORMATION & COMMUNICATION TECHNOLOGY**

2513

Structured Practical ICT Tasks

MARK SCHEME

JUNE 2008

This mark scheme must be kept secure.

Its contents may not be divulged to candidates until after the publication of results by OCR.

Centre Name	Centre Number
Candidate Name	Candidate Number

This mark scheme must be kept secure by the examinations officer and not given to the teacher until the teacher is ready to mark the work. The examinations officer can release to teachers the mark schemes for individual tasks if required for marking before other tasks are completed.

This mark scheme is intended as a working document for Centres as well as an aid to moderation. Please use one copy **per candidate** and attach securely to each candidate's work.

If a candidate meets the requirements for a mark then tick the box next to that mark. You **may** use the numbers on the left hand side of the tick boxes to cross-reference evidence on the candidate's work.

Indicate whole marks for each task in the box marked 'Centre' after each part. Some centres find it useful to identify the page numbers where evidence can be found next to the marking points in the mark scheme. Only whole marks can be awarded for each mark point; half marks cannot be used. Use blue or black ink only on this mark scheme, do not use red or green ink.

Candidates must not make improvements to work once it has been marked.

Marks must be received by OCR and the moderator no later than 15 May 2008.

This mark scheme consists of **13** printed pages, **2** blank pages and **1** cover sheet.

Task 1

Tick Box

1 a (i) 1 2nd screenshot clearly shows a sharper image (**zero** marks if original image not shown or a different image used) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

a (ii) 2 screenshot shows evidence of routine to sharpen image (1)
3 description of sharpening image (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

a (iii) 4 screenshot evidence shows how image was cropped or similar with written commentary (1)
5 screenshot evidence shows how only a small white border remains with written commentary (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

a (iv) 6 screenshot evidence of correct transparency colour being set with clear written commentary (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

b (i) 7 logo (must be derivation of wheel.gif) **and** “Glen’s Wheels” included at **top** of page (1)
8 full address of “Priory Walk, Herne Bay, Kent, CT6 1AA” included at **bottom** of page (1)
9 telephone number of 01227 555 555 **and** fax number of 01227 555 550 included at **bottom** of page with indication of which is telephone and fax (1)
10 bikehire@glenswheels.co.uk **and** www.glenswheels.co.uk included at **bottom** of page (words “email” and “web” are not necessary) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

Note:

zero marks for any mark point where incorrect contact details or spelling have been used

Tick Box

- b (ii)** 11 evidence of the header being used (must be evidence, not just implied) (1)
 12 evidence of the footer being used (must be evidence, not just implied) (1)

Note: the header and footer must relate to the question must be clear evidence that header and footer have been used, not just information at the top and bottom of the page.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- b (iii)** 13 evidence shows how document could be saved as a template, **not** an ordinary text document (eg saved as a “.dot” file, not a “.doc” file) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- c** 14 **annotated** “delighted”, “single” and “interested” are **all** spelt correctly (1)
 15 **annotated** evidence that font size has been increased **and** a single font style has been used throughout (1)
 16 text is left aligned or fully justified for main body of letter (allow indented or blocked paragraphs) (1)

Note: **zero** marks if template from (b) is not used mistakes from (b) should not be penalised again

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

- d (i)** 17 screenshot evidence of main document being linked to data source (accept customer.txt file or other file if data has been imported into other software) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- d (ii)** 18 evidence of merge field codes for all of (**zero** marks if any item is missing):
- title
 - surname
 - forename
 - address1
 - address2
 - address3
 - post code
- 19 “Dear” forename (accept “Dear” title surname) (1)

Note: do **not** accept “Dear” title forename surname
 do **not** accept “Dear” forename surname
 different names for fields acceptable.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

Tick Box

- d (iii)** 20 evidence shows how **single** customers are selected using a **filter** or **query** or similar (1)
- 21 evidence shows the date range to be $\leq 01\ 08\ 90$ **and** $> 01\ 08\ 77$ (accept alternatively $< 02\ 08\ 90$ **and** $\geq 02\ 08\ 77$ or other correct combinations of the above) (1)

Note: if a candidate has used a variable parameter query, then allow the marks as long as sufficient evidence exists that the query will work

- e** 22 at least **one** mail merged letter produced with data matching any of the data from customers.txt (1)
- 23 mail merged letters produced are **only** for (**zero** marks if any letter missing **or** extras produced):
- Brian Hepburn
 - Martha Cannings
 - Keith Reid (1)

- f (i)** 24 evidence of a variable date field being inserted (1)

- f (ii)** 25 evidence of an **ASK** or **FILL-IN** word field being created (1)
- 26 evidence of prompt appearing to ask for the start date of the event to be entered (1)

Note: the prompt must ask for the **start** date or **holiday** date or **event** date or **departure** date or similar and must **not** be worded in such a way that the user is just asked to enter any date

- g** 27 clear instructions for how to open mail merge master document **including** name and location of file or direct link to file (1)
- 28 clear instructions for how to run the mail merge **and** how to change the criteria (1)
- 29 clear instructions for how to enter (or change if word field not used) the start date of the holiday (1)
- 30 clear instructions for how to print the letters (1)
- 31 screenshots **and** consistent style used (1)
- 32 **no** spelling errors (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	6

Task 1 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	32

Task 2

Tick Box

- 2 a (i)
- 1 home page in diagram (1)
 - 2 **all** of the following in diagram (**zero** marks if any page missing):
 - bikes
 - prices
 - routes
 - activity weekends (1)
 - 3 help page or similar in diagram (1)
 - 4 Bicycle Association link shown (eg by an arrow) (1)
 - 5 links to **all** pages **from** home page (1)
 - 6 **all** pages (bikes, prices, routes, activity weekends) link back **to** home page (arrows or description) (**zero** marks if any page missing)(1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	6

Note: if **no** diagram then **zero** marks

- a (ii) Only accept hand drawn designs. Development without design = **zero** marks.

Max 5 from:

- 7 identification of space for "Glen's Wheels" (1)
- 8 identification of space for logo on screen (1)
- 9 space for contact details (1)
- 10 space for links to pages in the website (must be clear they are links and **not** just words) (1)
- 11 space for link to Bicycle Association of Great Britain (1)
- 12 space for instructions **or** link to help page (1)

Max 5 from:

- 13 background specified not implied (1)
- 14 font style, colour and size of general text specified, not implied (1)
- 15 font style, colour and size of company name specified, not implied (1)
- 16 hyperlink style specified, not implied (1)
- 17 logo size/resolution specified not implied (1)
- 18 download time specified (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	10

Tick Box

- b (i)** 19 logo **and** "Glen's Wheels" included on home page in same location as design (1)
 20 home page includes links to different types of bikes **and** routes (1)
 21 home page includes link to Bicycle Association of Great Britain (1)
 22 different types of bikes page includes pictures of all the following bikes (**zero** marks if any picture is missing):
- male mountain bike
 - female mountain bike
 - male racing bike
 - female racing bike
 - tandem bike
 - trailer (1)
- 23 routes page includes link back to home page (1)
 24 routes page includes reference to 4 routes and an option to download map(s) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	6

- b (ii)** 25 the hyperlink from the home page to the routes page is relative to the pages (ie they do **not** have full address of site or hard disk location – eg they should have "../pagename.htm" or similar) (1)
 26 screenshot evidence of hyperlink to www.ba-gb.com is present for Bicycle Association of Great Britain (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- b (iii)** 27 suitable page names used (eg index.htm, bikes.htm, routes.htm), **not** page1.htm, page2.htm, page3.htm etc (1)
 28 separate folders used for each page (except home page) (1)
 29 pictures are within the folder for each page (1)

Note: evidence for page names may also be found in hyperlinks or at the bottom of printouts

pictures may be in a subfolder of the folder for each page
 e.g. bikes/images

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

Task 2 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	27

Task 3

Tick Box

- a (i)**
- 1 spreadsheet matches design layout in fig. 3.1 including **all 3** input areas highlighted (1)
 - 2 income for trailers is £30 (1)
 - 3 intermediate staff required is 2 **and** junior staff required is 4 (1)
 - 4 profit is £1,167 (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

- a (ii)**
- 5 formula for profit is total income minus total cost of staff (1)
 - 6 correct function used for intermediate staff required (eg =VLOOKUP(G16,H21:K30,3)) (1)
 - 7 correct function used for any price per day (eg =VLOOKUP(D5,B\$21:C\$24,2)) (1)
 - 8 function used for price per day includes **absolute** cell references for the lookup table rows and a **relative** cell reference for the lookup value row (eg =VLOOKUP(D5,B\$21:C\$24,2) and **not** =VLOOKUP(D\$5,B21:C24,2) (1)
 - 9 correct formula used for total cost of junior staff (eg =L6*F21*5) (ie number of junior staff * cost per hour of junior staff * 5 hours) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	5

Note: **zero** marks for any marking point where a macro has been used
zero marks if row and column headings not visible and thus impossible to determine if formulae are correct

- a (iii)**
- 10 evidence shows that a cell **reference** has been used to compare the quantity booked to be **less than or equal to** the quantity available (eg whole number less than or equal to F5) – **zero** marks if actual value has been used (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

Tick Box

- b (i)** 11 first test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s) (1)
- 12 second test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified and is logically correct based upon the input value(s) (1)
- 13 third test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s) (1)
- 14 fourth test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s) (1)
- 15 fifth test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	5

Note: only mark first 5 tests
input location may be a description rather than a cell reference (eg “quantity available”)
the answers from candidates must be presented in a table which includes the columns above. **Zero** marks if no table is used.
each test must be for a different formula or function within the model.
formulae or functions that are replicated, are not classed as different.

Examples of acceptable tests:

Test Number	Description of Test	Type of Test	Input Data Value(s)	Expected Output Value
1	Price per day function is correct	Valid	£10 for mountain bike in cost of bike hire table	£10 for price per day for short, male, mountain
2	Income is correct	Valid	£10 for price per day for mountain bike and 35 for quantity booked	£350 for income
3	Total quantity booked is correct	Valid	35, 23, 26, 14, 9, 8, 7, 9, 4, 5 used for quantity booked cells	140 for total quantity booked
4	Cost of intermediate staff is correct	Valid	£10.50 for intermediate staff hourly rate, 2 for number of intermediate staff	£189 for cost of intermediate staff
5	Number of intermediate staff required is correct	Valid	140 for total quantity booked	2 for intermediate staff required

Examples of unacceptable tests:

Test Number	Description of Test	Type of Test	Input Data Value(s)	Expected Output Value
1	Price per day function is correct	Valid	£10	£10 for price per day for short, male, mountain
2	Income is correct	Valid	Enter values for price per day for mountain bike and quantity to use	Income calculation works
3	Total quantity booked is correct	Valid	Values that add up to £140 used for quantity booked cells	140 for total quantity booked
4	Cost of intermediate staff is correct	Valid	£10.50 for intermediate staff hourly rate, 2 for number of intermediate staff	Correct answer for cost of intermediate staff

Note: Those cells which are shaded show the unacceptable part of the test.

- b (ii)** 16 first test has a clear **invalid** input **value(s)** with a clear **location(s)** identified for input **and** the **error message** is clearly identified (1)
- 17 second test has a clear **invalid** input **value(s)** with a clear **location(s)** identified for input **and** the **error message** is clearly identified (1)
- 18 third test has a clear **invalid** input **value(s)** with a clear **location(s)** identified for input **and** the **error message** is clearly identified (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

Note: only mark first 3 tests

input location may be a description rather than a cell reference (eg “quantity available”)

invalid data requires a customised error message as output, therefore expected output of #Value or #Error receives **zero** marks

all tests must be for **different** areas of the spreadsheet, so 2 tests for “cost of bike hire per day” would not be acceptable

sheet protection does **not** give a customised error message so is **not** acceptable

Example

Test Number	Description of Test	Type of Test	Input Data Value(s)	Expected Error Message
1	Cost per day only accepts numerical values	Invalid	“a” for cost per day of a racer	Please only enter numerical values
2	Staff hourly rates must be less than £100	Invalid	101 for Junior hourly rate	Please only enter values less than 100
3	Quantity booked must be less than or equal to the quantity available	Invalid	68 for Tall Male Mountain Quantity booked and 60 Tall Male Mountain Quantity available	Please only enter values less than or equal to the quantity available

Tick Box

- c**
- 19 contents or index page including reference to pages (eg numbers) (1)
 - 20 introduction or overview relating to the documentation (1)
 - 21 how to open existing spreadsheet (including name of file **and** location or direct link to file) (1)
 - 22 how to change **input** values (variables) within the spreadsheet (1)
 - 23 how to view the net profit value (1)
 - 24 how to print the spreadsheet (1)
 - 25 trouble shooting – with at least 2 validation error messages and solutions related to the task (1)
 - 26 glossary of terms – with at least 8 explanations of terms used within the spreadsheet (eg “type of bike = the type of bike that is being hired such as mountain, racing, tandem or trailer” (1)
 - 27 well presented consistent style **and** screenshots used (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	9

Task 3 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	27

Task 4

Tick Box

- a**
- 1 primary keys or composite primary keys used for CUSTOMER and BIKE tables (ie **not** based on name) (1)
 - 2 CUSTOMER contact number is text data type (1)
 - 3 validation for CUSTOMER status field is only “single” or “married” (1)
 - 4 BOOKING table has “BookingID” (spelt precisely like this) as primary key (1)
 - 5 BOOKING table has **all** of the following fields (**zero** marks if any item is missing) allow alternative field names with the same meaning:
 - booking date
 - start date
 - end date
 - customer id (1)
 - 6 BOOKING table has “end date must be after start date” or similar as validation rule (1)
 - 7 CATEGORY table has “CategoryCode” (spelt precisely like this) as primary key (1)
 - 8 BIKE working order field is a Boolean data type or a validation is set to “yes” or “no” or similar (1)
 - 9 BIKE table has “CategoryCode” (spelt precisely like this) as foreign key (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	9

- b**
- 10 all security for managers is RUD (1)
 - 11 security for intermediate staff is as shown in table below (1)
 - 12 security for junior staff is as shown in table below (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

Data Item / Record	Managers	Intermediate Staff	Junior Staff
CUSTOMER record	RUD	RU	R
BOOKING record	RUD	RUD	R
HIRE record	RUD	RUD	R
CATEGORY record	RUD	R	R
BikeID in BIKE table	RUD	R	R
CategoryCode in BIKE table	RUD	R	R
Working status in BIKE table	RUD	RU	RU

Tick Box

- c (i)** 13 all **four** relationships are shown in database software **and** match the example in fig. 4.2 (1)

Note: Degree of relationship must be shown.
Zero marks for design – must be implemented in database software.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

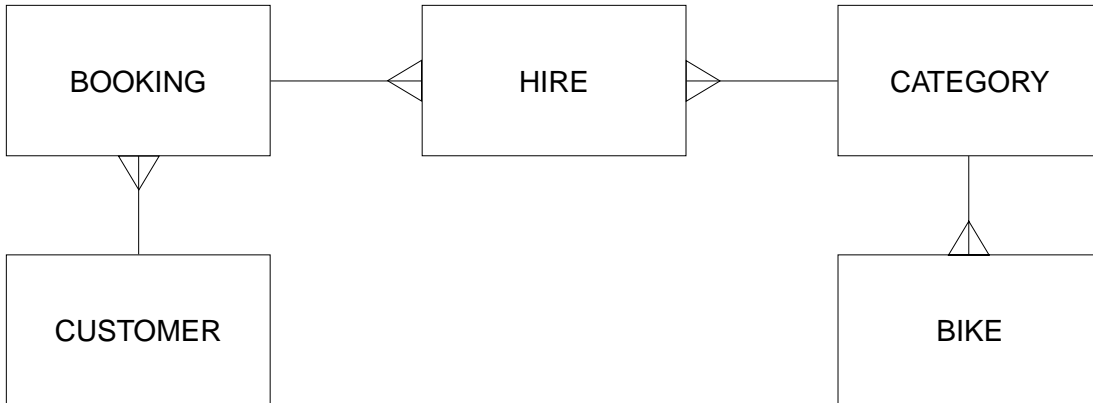


Fig. 4.2

- c (ii)** 14 all data for **CATEGORY and CUSTOMER** match category.txt and customer.txt with a CustomerID or similar allocated to each customer (1)
- 15 data for **BIKE** table has category codes (eg MMS, MFS) instead of descriptions. **Zero** marks if description field remains as redundant data. (1)
- 16 all data for **BOOKING and HIRE** match booking.txt and hire.txt with **BOOKING.CustomerName** replaced with CustomerID or similar (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

- d** 17 non-numerical character (eg "A") with reason (1)
- 18 number below one (eg 0) with reason (1)
- 19 number above the quantity available for that category (eg 61 for mountain female small with reason (1)
- 20 real number (eg 1.5) with reason (1)

Note: max 2 marks
 reason must match the data given

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

All of the following must be on one single screen.

- e (i)** 21 screen includes all of (**zero** marks if any item missing or repeated):
- date booking placed
 - start date
 - end date (1)
- 22 customer details (name and address) are shown as well as booking details (1)
- 23 data entry screen includes list of hires (eg sub form / portal) (1)
- 24 all the following displayed for **each** hire (**zero** marks if any item missing):
- category code
 - quantity
 - quantity available
 - daily cost
 - total charge per day (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

- e (ii)** 25 drop down list for customer is in alphabetical order of surname **and** includes forename **and** one other identifying field (1)
- 26 drop down list for category includes all of the following (**zero** marks if any item is missing):
- category code
 - description
 - intended gender
 - size (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

Note: unexpanded drop down box = **zero** marks

- e (iii)** 27 validation rule for quantity is “<= quantity available” (quantity available must be the **field** and **not** a static value) (1)

Note: the assessor must be satisfied that the validation rule works.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- e (iv)** 28 annotated (purpose stated) evidence of correct calculation for **charge per day for the category** (eg quantity * costperday) (1)
- 29 annotated (purpose stated) evidence of correct calculation for **total due per day** (eg sum(quantity * costperday) (1)
- 30 annotated (purpose stated) evidence of correct calculation for **number of days** booking is for (eg enddate-startdate+1) (1)
- 31 annotated (purpose stated) evidence of correct calculation for **total due** for the booking (eg totaldays * sub-form-hire.[form]!totalperday)(1)
- 32 annotated (purpose stated) evidence of correct calculation for **deposit due** (eg totaldue * 0.2) (1)
- 33 annotated (purpose stated) evidence of correct calculation for **balance due** (eg totaldue-deposit) (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	6

Note: **zero** marks if **no** annotation

- f** 34 first test has been run showing **TRA** being selected as the input and quantity available is **10** with cost of **£6** per day (1)
- 35 second test has been run with **TRA** selected as the category and **11** attempted to be entered as the quantity (labelled as input) – a **customised error message** (similar to table 4.3) appears and is labelled as the output (1)
- 36 third test has been run with booking number **5** labelled as the input and **£960** labelled as the output (1)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

Note: **zero** marks if inputs and outputs are **not** labelled
 inputs must be those shown in table 4.3 – if different inputs used then **zero** marks for that test
 tests must **pass** – if they fail then **zero** marks

Task 4 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	34

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