



ADVANCED SUBSIDIARY GCE
INFORMATION & COMMUNICATION TECHNOLOGY
 Structured Task

G062

MARK SCHEME

Instructions for Examination Officer:

JUNE 2009

Please inform the Head of ICT, and any GCE assessors for this unit, that this document has arrived in your Centre.



INSTRUCTIONS TO TEACHERS

- 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 2009**.
- This document consists of **20** pages. Any blank pages are indicated.

Task 1

Tick Box

- 1 a (i) 1 **annotated** screenshot evidence of how red eye was removed successfully using photo of Darren Martin.



Note: no annotation means **zero** marks.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- a (ii) 2 **annotated** screenshot evidence of how the resolution of the photo of Darren Martin was reduced **without** losing any content of the picture
- 3 annotated screenshot evidence of how the photo of Darren Martin has been reduced to the exact size of 90 pixels wide and 120 pixels tall – **zero** marks if either dimension is incorrect

Note: no annotation means **zero** marks.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- b 4 **database** report includes all 10 staff members from staff.txt – **zero** marks if any staff member is missing or if any data is truncated or if any of the following fields are missing:
- forename
 - surname
 - job title
 - mobile
 - email
- 5 **database** report includes the correct photograph for each and every member of staff (must include the original 10)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- c (i) 6 name badge includes all of the following (**zero** marks if any item is missing):
- logo for DM Carpets (must be correct one)
 - name of company: "DM Carpets"
 - forename of staff member
 - surname of staff member
 - job title of staff member
 - photo of staff member



- 7 10 name badges are shown using the data from staff.txt with the correct photograph for each staff member and appropriate size (maximum A6) (**zero** marks if not all 10 badges)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- c (ii) 8 **annotated** evidence of image **field** (not just a photograph) being a part of the name badge – eg using a form / portal or report with an OLE object / container field / attachment

Note: no annotation means **zero** marks.

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

Tick Box

- d**
- 9 clear and sufficient instructions included for how to change digital camera to its lowest resolution setting
 - 10 clear and sufficient instructions included for how to (**zero** marks if any item missing):
 - reduce resolution
 - remove red eye
 - 11 instructions for adding a new member of staff include all of (**zero** marks if any item missing):
 - how to open the database, including filename **and** folder or direct link to file (eg shortcut)
 - how to open table or form
 - where to start typing the details
 - 12 instructions for printing new name badge include all of (**zero** marks if any item missing):
 - opening form / portal or report or similar
 - searching for the new staff member
 - how to print the new name badge (only one badge)
 - 13 all of the following used within the helpsheet (**zero** marks if any item missing):
 - screenshots
 - consistent style
 - sub-titles
 - no spelling mistakes
 - stand alone (starts on a new page)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	5

Task 1 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	13

Task 2

Tick Box

- 2 a (i) 1 design specification to include (**zero** marks if any item is missing):
- style / type of fonts
 - colour of font
 - size of fonts
 - background (image / colour)
- 2 space for buttons (**not** just hyperlinks) to all the following web pages is included – may be part of layout and/or specification (**zero** marks if any button is **not** specified):
- home page
 - carpets page
 - anti-stain treatment page
- 3 space for all of the following to be **input** – design specification or design layout must state that **input** is required – eg “text box” or “space to enter data” (**zero** marks if any item is missing):
- name
 - address
 - telephone number
 - mobile number
- 4 space is provided for (**zero** marks if any item is missing):
- instructions
 - confirm button
 - cancel button

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	5


Note: alternative names may be used for cancel and confirm buttons

- 5 design specification for buttons (**zero** marks if text hyperlink used instead of button)
- a (ii) 6 **home** page has a link **to** all of:
- carpets page
 - anti-stain treatment page
 - customer request form
- (direction specified or indicated by arrow)
(**zero** marks if any page missing)
- 7 carpets, anti-stain and request form pages **all** have links **to**: every other internal page
- home page
 - carpets page
 - anti-stain treatment page
 - customer request form
- (direction specified or indicated by arrow)
(**zero** marks if any page missing)
(link from a page to itself may or may not be included)
- 8 a link from the home page to the Carpet Foundation (one-way only)
- 9 customer request form has a link for confirm button – eg confirmation page **or** database **or** email **and** a link for cancel button – eg home page or loop to same page

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

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

Tick Box

- b** 10 home page includes all of (**zero** marks if any item is missing):
- name of company “DM Carpets”
 - logo for DM Carpets (must be correct one)
 - contact details for DM Carpets
 - a picture of a fully fitted carpet
 - a quote from a satisfied customer
 - the logo for the Carpet Foundation
 - buttons to other pages
- 
- 11 most popular carpets page includes all of (**zero** marks if any item is missing):
- names of 10 different carpets
 - photos of 10 different carpets clearly next to the names
 - price per square metre of each carpet including currency (£) symbol and “sq m” or m² or “square metres”
 - buttons to other pages
- 12 anti-stain treatment page includes all of (**zero** marks if any item is missing):
- photos of 4 different types of stains
 - anti-stain treatment price £3.49 per square metre is displayed including currency (£) symbol and “sq m” or m² or “square metres”
 - at least 2 reviews
 - buttons to other pages
- 13 customer request form **matches** design including (**zero** marks if any item is missing):
- name (label and input area)
 - address (label and input area)
 - telephone number (label and input area)
 - mobile number (label and input area)
 - confirm button
 - cancel button
 - instructions
 - buttons to other pages
- 14 web pages are of a **good** quality (**zero** marks if any of the following criteria are not met):
- consistent use of titles
 - navigation buttons in the same place on every page and of consistent style
 - sensible use of colour
 - sensible font sizes
 - no spelling errors
- c** 15 screenshot evidence of the **button link** from the home page to the anti-stain treatment page is relative to the pages (ie it does **not** have full address of site or hard disk location – eg it should have “../treatment.htm” or similar)
- 16 screenshot evidence of the creation of the hyperlink to **www.comebacktocarpet.com** is present for Carpet Foundation and is linked to the **logo**

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	5

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

Note: If a button has not been used for the link to the anti-stain treatment page then **zero** marks.
If a Carpet Foundation logo has not been used for the link to the Carpet Foundation website then **zero** marks.

Tick Box

Each test must be for a different aspect/feature.

- d**
- 17 first test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method
 - 18 second test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method
 - 19 third test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method
 - 20 fourth test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method
 - 21 fifth test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method
 - 22 sixth test has a clear testing method identified so that the tester knows exactly how to run the test and the expected result is clearly identified and is logically correct based upon the testing method

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	6

Note: Only mark first 6 tests.

Each test must be for a different aspect of the website (for example, do **not** allow marks for 2 tests for buttons that link to pages within the website, although a button to a page, a button to confirm, a button to cancel and a logo hyperlink to an external website would be acceptable).

The answers from candidates must be presented in a table which includes the columns from Table 2.1. **Zero** marks if no table is used.

It must be very clear how to carry out each test for this specific website.

It must be very clear what the expected results are for this specific website (eg “all pictures appear”) does not say which pictures.

Examples of tests are shown on the next page.

Task 2 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	22

Examples of **acceptable** tests:

Item to Test	How to test	Expected Result
Works on different types of computers	Open carpets website on Apple Mac and PC	Carpets website can be viewed on both Apple Mac and PC
Consistency	Visually check each page of the carpets website	Text should all be the same font style (Arial) and background colour should always be white
Logo appears on each screen	Visually check each page of the website	Logo of "DM Carpets" appears in bottom right hand corner of each page
All the text and images on the anti-stain treatment page fit on one screen	Visually check the anti-stain pages in 800 x 600 resolution	All the text and images on the anti-stain screen are visible from "Anti-Stain Treatment" title down to "disclaimer ..."
The URL works	Type www.dmcarpets.biz into Internet Explorer	The DM Carpets website opens with the home page showing
Works in different browsers	Open the DM Carpets website in Firefox	The DM Carpets website opens with the home page showing
Check the anti-stain treatment price is accurate	Visually check the anti-stain treatment page	The price of the anti-stain treatment should show as £3.49 per sq m including the currency symbol and units
Submit button works	Open the form page and enter "Peter Piper" as the name, "Test Address" as the address, "0777 777" as the telephone number and "0888 888" as the mobile number	An email should be received by customerrequest@dmcarpets.biz with the following information included: "Name: Peter Piper Address: Test Address Telephone: 0777 777 Mobile: 0888 888"
Button from home page to carpets page works	Open the home page and click on the "Popular Carpets" button	The carpets page should open in the same window

Examples of **unacceptable** tests:

Item to Test	How to test	Expected Result
Works on different types of computers	Open on different computers	Presentation can be viewed on different computers
Consistency	Visually check each page of the website	Each page should be the same
Buttons work	Click on each button	Correct page should appear
The URL works	Type the URL into a browser	The website appears
Check the spelling of the names of the carpets	Visually check the website	The names are spelt correctly
Check the anti-stain treatment price is accurate	Visually check the anti-stain page	The price is correct
Submit button works	Click on the submit button	An email is sent
Works in different browsers	Open in a different browser	Web page works

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

Task 3

Tick Box

- a (i)**
- 1 the following values have been entered (**zero** marks if any item is missing):
 - longest width is displayed as 6.5 m or metres
 - longest length is displayed as 7.2 m or metres
 - perimeter is displayed as 26.3 m or metres
 - 2 carpet area required is displayed as **57.6**
 - 3 drop down box for underlay has all of (**zero** marks if any item is missing or spelt incorrectly):
 - basic
 - comfort
 - extra comfort
 - not required (or suitable alternative)
 - 4 gripper strip is shown as **£26.73** with £ sign and 2 decimal places
 - 5 tick boxes exist and are **checked** for all of (**zero** marks if any item is missing or unchecked):
 - gripper strip
 - anti-stain treatment
 - 6 mutually exclusive option buttons exist for all of (**zero** marks if any item is missing or any item other than 10% is selected):
 - 0%
 - 5%
 - 10%
 - 15%
 - 20%
 with **only** 10% selected
 - 7 price of fitting the carpet is **£105.82** or **£105.83**
 - 8 total price of quotation is **£1,985.60** (+ or – 0.05)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	8

Note: **zero** marks for 3a(i) if spreadsheet software is **not** used.

Tick Box

- a (ii)** 9 correct formula or function used for the total which includes the following:
- carpet cost
 - gripper strip
 - underlay
 - anti-stain treatment
 - fitting
 - plywood base
 - discount (unless incorporated into carpet cost)
- 10 function for “width of carpet roll required” determines correctly whether 4, 6 or 8 m widths are required
- 11 correct functions included for all of (**zero** marks if any item is missing or incorrect):
- area of carpet required (width of carpet roll x longest length of room) not just width of room
 - carpet cost (area of carpet required x cost per square metre of carpet)
- 12 evidence of rounding function being used to 2 decimal places exists within the functions (ie not just formatted to 2 decimal places)
- 13 both of the following functions are correct (**zero** marks if any item is missing or incorrect):
- lookup (or similar) for the carpet square metre price
 - lookup (or similar) for the underlay square metre price
- 14 function(s) used for fitting includes all of (**zero** marks if any item is missing or incorrect):
- determination of whether tick box has been selected
 - addition of £20 (basic fee)
 - multiplication of a cell reference for the price per square metre **and** a cell reference for the area of carpet required
- 15 function(s) used for discount amount includes all of (**zero** marks if any item is missing or incorrect):
- correct percentage discount used determined by the radio button selected
 - reference to the carpet cost

Note: **zero** marks if row and column headings not visible and thus impossible to determine if formulae are correct
zero marks if the formula or function is not fully visible (it must not be truncated)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	7

Tick Box

- b**
- 16 description of how option buttons have been set up includes all of (**zero** marks if any item is missing or not described sufficiently):
 - how option buttons were set up to be mutually exclusive
 - identification of which cell contains the data from the buttons
 - 17 description of how the gripper strip tick box has been set and includes reference to the cell to which it links
 - 18 description of how the drop down boxes for carpet and underlay have been set up include references to the data source(s) for both (**zero** marks if any item is missing or not described sufficiently)
 - 19 description of how the option for choosing a plywood base has been set up so that it only appears if fitting has been chosen as an extra includes all of (**zero** marks if any item is missing or not described sufficiently):
 - how determination is made of whether fitting has been chosen
 - how the option to select plywood base displays if fitting has been chosen
 - how the option to select plywood base does not appear if fitting has not been chosen
 - 20 description of how plywood base cannot be charged for if fitting has not been chosen
 - 21 description of how the security has been set up so that (**zero** marks if any item is missing or not described sufficiently):
 - input areas can be accessed by anybody (eg unlocked)
 - non-input areas **cannot** be edited by anybody (eg locked)
 - evidence that password protection has been applied to enable only Jade to change the prices
 - 22 five of the following must be used within the technical documentation:
 - contents page with page numbers
 - page numbers on the documentation
 - screenshots should be clearly visible
 - consistent style
 - sub-titles
 - index **or** glossary **or** trouble-shooting

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	7

Note: technical documentation should be sufficient for somebody unfamiliar with the system to know how to make changes to the system

Task 3 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	22

Task 4**Tick Box**

- a (i)** 1 evidence of the implemented ERD is shown and includes the degree of any relationship

Note: must be implemented, not just design (**zero** marks if design only)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- a (ii)** 2 atomic data used for customer (**zero** marks if any below not atomic):
- separate forename and surname
 - separate address, town and postcode
- 3 all tables have sensible primary key
- 4 all of the following data types are used (**zero** marks if any item is missing or incorrect):
- perimeter = number
 - fitting = boolean (or equivalent)
 - fitting date = date/time
- 5 all of the following data types are used (**zero** marks if any item is missing or incorrect):
- telephone number = text
 - fitting time = date / time
 - price of anti-stain per square metre = number / currency

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

Tick Box

- b (i)** 6 **all** the following are shown on the data entry screen (**zero** marks if any field is missing; other appropriate field names are acceptable):
- customer forename
 - customer surname
 - customer address
 - customer town
 - customer postcode
 - customer telephone number
 - (order) date
 - fitting?
 - fitting date
 - fitting time
 - perimeter
 - sales rep ID (or name)
- 7 **all** the following are shown on the data entry screen (**zero** marks if any field is missing; other appropriate field names are acceptable):
- total due (displayed as £778.36)
 - discount (rate is 10% and value is –£50.58 or £50.58)
- 8 the 6 items from Fig 4.1 are all included on the same data entry screen with “Hardeep Kanth” only showing once (**zero** marks if any of the following are missing) – allow if quantity or unit missing, but **must** have the item and total price included:
- Golden Berber Twist £505.78
 - Gripper Strips £17.82
 - Comfort Underlay £109.78
 - Anti-Stain £76.78
 - Fitting £52.78
 - Plywood £66.00
- 9 the data entry screen must include **all** of the following (**zero** marks if any of the following criteria are not met):
- DM Carpets Logo included (must be correct one)
 - all field names and data fully showing (ie not truncated)
 - fields are aligned sensibly
 - all currency values displayed to 2 decimal places with £ sign



MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

- b (ii)** 10 customer drop down list when expanded includes at least 5 customer records **and** all of (**zero** marks if any item is missing):
- name
 - other identifying field – eg customer ID or post code
- 11 product drop down list when expanded includes at least 5 product records

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

Tick Box

- b (iii)** 12 each job line multiplies quantity by unit price and is syntactically correct
- 13 a syntactically correct function determines if fitting is chosen and displays the fitting charge if this option is chosen or £0 if it is not chosen
- 14 evidence for the following calculations (zero marks if any field is missing):
- total due
 - fitting charge
 - discount

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	3

Note: calculations should be syntactically correct and may be done as a single calculation or combination of calculations

Tick Box

- c (i)** 15 validation rule for area of carpet includes the rule ≥ 1 and ≤ 100 or between 1 and 100 or > 0 and < 101 or equivalent and is syntactically correct
- 16 validation rule for fitting date includes the rule $>$ order date **AND** $>$ [today's date] or equivalent and is syntactically correct

Note: allow alternative appropriate names for fields and functions

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

- c (ii)** 17 **all** of the following are evident in the screenshot (**zero** marks if any item is missing):
- -10 input as area of carpet required
 - customised error message is informative in telling the user what to do

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	1

- d** 18 first test has been run with the fitting option **not chosen** and the fitting charge shows as **£0** (if actual input and output values are not labelled then **zero** marks)
- 19 second test has been run with the fitting option **chosen**, the carpet area shown as **51** sq m and the fitting charge shows as **£95.99** (if actual input and output values are not labelled then **zero** marks)
- 20 third test has been run with **all 4** input values for test 1 clearly displayed and the total of the job lines shows as **£1,426.98** (if actual input and output values are not labelled then **zero** marks)
- 21 fourth test has been run with **all 6** input values for test 4 clearly displayed and the total due shows as **£1,354.75** (if actual input and output values are not labelled then **zero** marks)

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	4

Note: the assessor must be satisfied that the candidate has carried out these tests using a real system and has not simply entered the input and output data values into text boxes

- e** 22 description of invalid test for area of carpet, input data value(s) are clearly defined as actual values with enough to make comparisons if necessary and expected error message relates to the validation rule
- 23 description of invalid test for fitting date input data value(s) are clearly defined as actual values with enough to make comparisons if necessary and expected error message relates to the validation rule

MARKS:	
Centre	
Internal Mod	
Moderator	
Max	2

Note: Examples of tests are shown on the next page.

Task 4 – Total Marks	
Centre	
Internal Mod	
Moderator	
Max	23

Examples of **acceptable** tests

Test Number	Description of Test	Type of Test	Input Data Value(s)	Expected Error Message
1	Delivery date before today's date	Invalid	Delivery date 4 June 2009	"Delivery date must be after today and after the order date"
1	Delivery date before order date	Invalid	Delivery date 20 June 2009, order date 21 June 2009	"Delivery date must be after today and after the order date"
2	Quantity that isn't either the area or the perimeter	Invalid	Perimeter = 30 m Carpet Area = 59 sqm Quantity = 31	"Quantity must be either perimeter or carpet area for this job."

Examples of **unacceptable** tests

Test Number	Description of Test	Type of Test	Input Data Value(s)	Expected Error Message
1	Text entered into delivery date	Invalid	A	"Delivery date must be a date"
The test above is not testing the validation rule from (c)				
1	Delivery date before order date	Invalid	Delivery date 20 June 2009	"Delivery date must be after today and after the order date"
The test above does not have an order date to compare with as an input data value				
2	Quantity that isn't either the area or the perimeter	Invalid	Quantity = 31	"Quantity must be either perimeter or carpet area for this job."
The test above does not have a perimeter or carpet area to compare with as input values				
2	Quantity that isn't either the area or the perimeter	Invalid	Enter a quantity that doesn't match the perimeter or carpet area	"Quantity must be either perimeter or carpet area for this job."
The test above does not give any data value(s) – they must be actual data values, not descriptions				
2	Quantity that isn't either the area or the perimeter	Invalid	Perimeter = 30 m Carpet Area = 59 sqm Quantity = 31	"Quantity must be numeric"
The test above has an error message that is not related to the validation rule				

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