

Applied ICT

Advanced Subsidiary GCE **G041**

How Organisations Use ICT

Mark Scheme for June 2010

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There are 100 marks available for this test. They are allocated as follows:

- Tasks 2 and 3 30
- Section A of the test paper 50
- Section B of the test paper 20

Task 2

1 mark each for boxes labelled

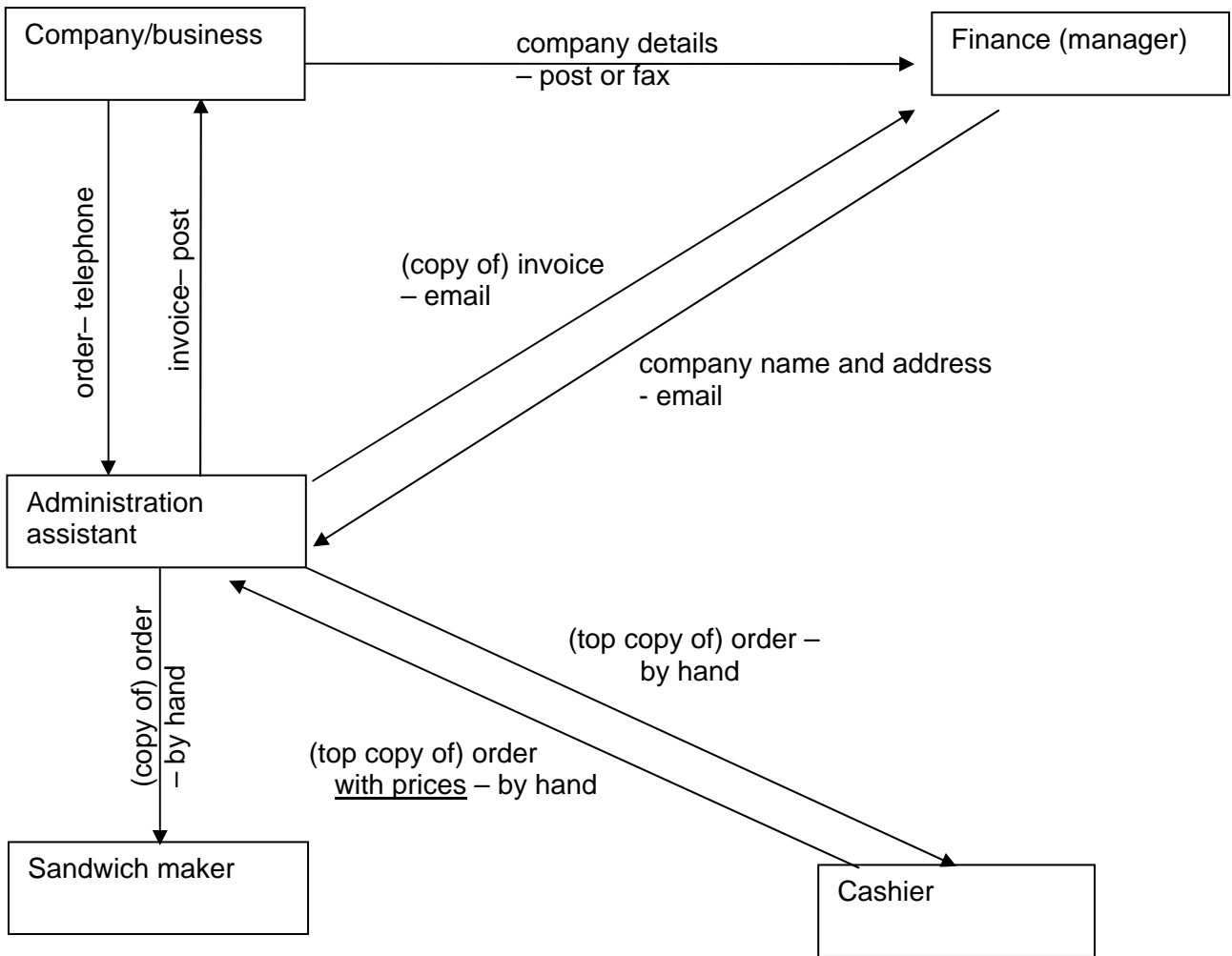
- Company/business
- Finance (manager)
- Administration assistant
- Cashier
- Sandwich maker

plus labelled arrows to show the following information flows (1 mark each) and methods (1 mark each)

Max 15 marks.

Note:

- Arrows should only be awarded points if they are drawn to and from the correct boxes.
- Marks may be awarded for unconventional diagrams provided they isolate the senders and receivers of information.
- Do not award marks for flow diagrams or series of text boxes linked by arrows.
- Marks cannot be awarded for 'How' if the information is not identified/is incorrect but can be awarded if information is essentially correct but vague or incomplete.
- Labels should not be awarded marks if they are contained within the description of a process.
- If lines cross, mark labels as long as it is clear where each arrow goes
- Marks should only be awarded for labels that can be unambiguously linked to a single arrow.



[15]

Task 3

AO4 is assessed through this task.

AO4 Marks	Guidance
3	A strength and a weakness in the method(s) used identified or suggestions for improving own performance.
2	A strength <u>or</u> a weakness in the method(s) used identified.
1	Some comment made on the method(s) used.

The quality of written communication is assessed through this task.

Tiered response based on:

Coded	Marks	Guidance
H	9-12	<p>Candidates will show a clear understanding of the task and include detailed explanations of the implications of the Health and Safety at Work Act (1974) and subsequent Health and Safety Regulations in relation to ICT, with both positive and negative impacts on staff.</p> <p>Examples are clearly applied to SandwichesPlus and its <u>head office</u> staff.</p> <p>The information will be presented in a structured and coherent form. There will be few if any errors in spelling, grammar and punctuation. Any technical terms will be used appropriately and correctly.</p>
M	5-8	<p>Candidates will show some understanding of the task and may include some explanations of the implications of the Health and Safety at Work Act (1974) and subsequent Health and Safety Regulations in relation to ICT, with either positive or negative effects on staff.</p> <p>Some examples are applied to SandwichesPlus / <u>head office</u> staff.</p> <p>The information will be presented in a structured format. There may be occasional errors in spelling, grammar and punctuation. Any technical terms will be mainly correct.</p>
L	1-4	<p>Candidates will demonstrate a limited understanding of the task.</p> <p>Information may be a list of points, with little or no explanations or application to SandwichesPlus.</p> <p>Information will be poorly expressed and there will be limited, if any, use of technical terms.</p> <p>Errors of grammar, punctuation and spelling may be intrusive.</p>

Candidates who simply state the requirements of the Health and Safety at Work Act and subsequent regulations without applying them to SandwichesPlus can only be awarded marks from the lowest mark band. Only statements/explanations relating the Health and Safety at Work Act to **the use of ICT** should be considered.

To include consideration of – examples must relate to specific personnel and activities within SandwichesPlus:

- in relation to computer equipment SandwichesPlus needs to
 - balance risks of (e.g.) poor workstation layout against time, cost etc of upgrading to avoid them
 - analyse work stations in relation to individuals' needs to assess and reduce risk
 - ensure workstations meet minimum requirements (implement health and safety measures found necessary)
 - keep record of findings of work station analysis and arrangements made
 - draw up health and safety policy for using ICT equipment and bring to attention of staff
 - appoint competent people to help implement health and safety arrangements
 - provide information and training on the safe use of ICT equipment
 - plan employees' work so that there are breaks or changes in activity
 - arrange eye tests on request and provide spectacles if special ones are needed
- staff need to
 - take reasonable care of own health and safety when using ICT and that of others
 - follow instructions provided for using ICT equipment / taking breaks
 - use e.g. adjustable chairs / anti-glare filters / footrests correctly
 - not interfere with or misuse e.g. anti-glare filters provided for their health and safety
- positive impact on **head office** staff
 - know they are working in a safe environment
 - will be provided with work station equipment needed
 - will be provided with necessary training to use ICT equipment
 - can request free eye tests if working with VDU
 - may have legal redress if breach of H&S rules causes injury
- negative impact on **head office** staff
 - must be aware of H&S rules for using ICT equipment and follow them
 - may have to use protective equipment such as anti-glare screens that they don't want to
 - following H&S rules may make tasks take longer/more complex
 - head office staff, such as the catering manager, who don't use ICT all the time may not be entitled to free eye tests

Annotation:

- CS – response has been applied to case study and ICT
- P – identifies points
- E – identifies expansions/explanations
- + – identifies positive impact
- - – identifies negative impact

[15]

Section A

- 1
- waiting staff (1st) plus **one** of
 - take orders from eat-in customers
 - serve food to customers
 - clear tables
 - counter staff (1st) plus **one** of
 - take orders from take-away customers
 - keep counter displays stocked (with drinks, snacks, cakes etc)
 - cashier (1st) plus **one** of
 - records and processes orders
 - take payment from customers
 - enter amount tendered
 - hand customer receipt
 - look up prices for delivery order
 - write prices on top copy of delivery order form
 - hand order form back to administration assistant

1 mark each for job function plus 1 mark each for matching tasks to max of 6

[6]

2 Any **five** of

- meeting with clients
- organising catering for events
- oversees work of chef and kitchen staff
- picks up details of client meetings from electronic diary
- maintains a folder that includes standard menus / guides to prices
- shows client content of folder
- finds out / writes down exact requirements
- enters details in database
- enter details of special requirements
- work out and enter price
- email quotation to catering assistant
- telephone agency to book waiting/washing-up staff
- meet with chef to pass on food requirements

1 mark per point to max of 5

[5]

PTO for Question 3

3 (a) Any **two** of:

- what has been sold each day
- quantity of non-perishable food items
- ingredients being used faster than expected

1 mark per point to max of 2

[2]

(b) A description including:

- accesses summary sheet (from cashier's computer)
 - uses (summary sheet) to find out / to see / which contains data of what has been sold each day
- obtains information from counter staff / sandwich makers
 - about quantity of non-perishable food items
 - ingredients being used faster than expected
- uses this information and knowledge of external factors
 - such as weather / public holidays / local events
 - obtained from websites / local and national newspapers / the local council / local knowledge

1 mark per point to max of 4

[4]

(c) Any **two** of:

- **Wholesale grocer**
- orders placed weekly by fax
- daily delivery of perishable items
- weekly delivery of non-perishable items
- weekly invoice posted

OR

Any **two** of:

- **Wholesale baker**
- orders placed weekly by telephone
- daily delivery
- weekly invoice posted

1 mark per point to max of 2

[2]

- 4 (a) (i)
 - drop-down list
 - keyboard
- 1 mark each: [2]
- (ii) Must match method
- drop-down list – type of bread / type of filling / other items
 - keyboard – quantity
- 1 mark each to max of 2 [2]
- (iii) handwritten (1) on 2-part carbonised (1) order pad (1)
1 mark per point to max of 2 [2]
- (b) (i) receipt (1) [1]
- (ii) A description including:
- item prices looked up
 - prices of bread and filling(s) added
 - sandwich / item prices multiplied by quantity
 - values added to give total cost of order
 - total cost of order subtracted from amount tendered (1st) to calculate any change due (1)
- 1 mark per point to a max of 4 [4]

5 A description to a maximum of **10** from:

hardware

- workstation on each desk (1st) linked in a local area network (LAN) (1) with a single server (1)
- (networked) mono laser printer (1st) within the department (1)
- router (1st) provides broadband connection to internet (1)

software

- electronic diary (1st) can be accessed by both catering manager and assistant (1) holds details of client meetings (1)
- word processing / spreadsheet / DBMS (1st) held on server (1)
- database (1st) of details and costs of all standard services (1)

input data

- details of client meeting (1st) entered by catering assistant (1)
- client details / details of event (1st) keyed in by catering manager (1)
- buffet or sit-down (1st) selected using radio buttons (1)
- selected standard menus required (1st) selected from drop down lists (1)
- quantity (added/removed) (1st) keyed in (1)
- details and price of special requirements (1st) entered by keyboard (1) by catering manager (1)

outputs

- quotation (1st) giving exact cost of catering services required (1) emailed to catering assistant (1)
- total price of order (1st) displayed on screen (1)

processes

- look up unit price of each menu (1st) when selected from drop-down list (1)
- multiply unit price by quantity (1st) to give total price for each menu (1)
- calculate number of waiting and washing-up staff (1st) based on number of guests and whether buffet or sit down (1)
- multiply number of staff by hourly rate and number of hours required (1st) to find price for staff (1)
- add all prices (1st) to give sub-total (1)
- calculate VAT (1st) and add to sub-total (1)

To achieve maximum marks there must be at least one point from each section.

[10]

6 (a) Any **one** strength identified and explained:

e.g.

- spreadsheet used to produce receipts (1) so accurate calculations (1)
- drop-down lists used to input order details (1) reducing input errors (1)
- only one person dealing with money (1) so less likelihood of pilfering (1)

[2]

(b) Any **one** weakness identified and explained:

e.g.

- paper orders passed by hand (1) may become damaged / lost / mixed up (1) so customers may not get their sandwiches on time (1)
- orders are handwritten (1) sandwich makers / cashiers may not be able to read handwriting (1) resulting in incorrect sandwiches / total costs (1)

[2]

(c) (i) Any suitable improvements identified and explained:

e.g.

Add a computer in the kitchen (1) linked to wireless network. (1)

Provide counter staff with overlay keyboards / touch screens (1) with all types of bread and filling displayed (1) linked to network. (1)

Counter staff select sandwich items (1) order displayed on kitchen computer screen (1) and on cashier's computer. (1)

Cashier only has to add drinks and other food items. (1)

Provide waiting staff with hand-held tablets / PDAs. (1) use stylus to select customers order (1) send wirelessly to kitchen and cashier (1)

Do not accept answers relating to bar codes – not appropriate for sandwich orders.

1 mark per point to maximum of 4

[4]

(ii) Any **one** problem identified and explained:

e.g.

- this would be expensive to implement (1) because a number of additional devices would be needed (1)
- new software may be required (1) because the systems may not be compatible with that currently used (1)
- staff may need training (1) because only the cashier currently uses a computer (1)
- the computer in the kitchen may need protection (1) because sandwich makers may have greasy / wet / dirty hands when using it (1)

Up to **two** marks each to max of 2

[2]

Section B

7 (a) Any **one** of:

- gain unauthorised access (1st) to computer material (1)
- gain (unauthorised) access to computer material (1) with the intent to commit further offences (1)
- carry out unauthorised (1) modification of computer material (1)
- gain (unauthorised) access to computer systems (1) to facilitate denial of services (1)

2 marks each to max 2

[2]

(b) An explanation that includes **two** of:

- hackers can now be prosecuted (1) if they attempt to access a computer system (1)
- they do not need to be in this country (1) providing the targeted computer system is (1)
- people who spread viruses can be prosecuted (1) if they intend to modify the content of a computer system (1)
- this does not have to be directed at a specific computer (1) or a specific program or data (1)

2 marks each to max 4

Do not accept Act **stops** hacking and viruses

[4]

8 (a) (i) • item code / part number / serial number / barcode number

1 mark

[1]

(ii) Any **one** of:

- entered when new parts arrive (1) to add to stock record (1)
- entered when parts used (1) to remove from stock record (1)
- entered to check number in stock (1)

1 mark per point to max of 2

[2]

- (iii) Any **two** of:
- number / quantity
 - cost
 - location
 - supplier code
 - re-order level
- 1 mark each to max of 2 [2]

- (b) Any **three** of:
- number of each part used subtracted from number in stock
 - number in stock compared with re-order level
 - if less than or equal to re-order level
 - subtract number in stock from required stock level
 - to calculate number to order
- 1 mark each to max of 3 [3]

- (c) Any **three** impacts identified and explained from:
- risk of job losses (1st) as less staff will be needed (1)
 - parts will be retrieved faster (1st) as robotic system will be programmed to go directly to the correct location (1) humans may get distracted / go to the wrong place (1)
 - high initial costs (1st) robotic equipment is expensive to buy and install (1)
 - fewer workers needed (1) meaning a lower wage bill (1) lower on-going costs (1)
 - increased maintenance costs (1st) as more specialist skills / tools / personnel required (1)
 - safer working environment for remaining staff (1st) because no heavy lifting / danger from fork-lift trucks (1) robotic system will have sensors to prevent collisions (1)
- Up to 2 marks each to a max of 6 [6]

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