

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
GCE Ordinary Level

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**MARK SCHEME for the October/November 2011 question paper  
for the guidance of teachers**

**7010 COMPUTER STUDIES**

**7010/33**

Paper 3, maximum raw mark 60

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1 (a) Any **two** points from:

- Gantt chart
- Pert chart
- Project Management Software
- Spreadsheet (software)

[2]

(b) **One** mark for identification of method

**One** mark for identifying why the method identified would be suitable for the furniture retailer  
Up to **two** marks for a further explanation that matches chosen method.

**Method** - questionnaire

**Explanation** - each set of questions guides salesman/customer/filing clerk through their use of the existing system

- no need for analyst to be present can leave questionnaire for customers/salesmen filing clerks
- useful as can survey many customers
- allows customers/salesmen filing clerks to remain anonymous
- saves analyst's time etc.

**Method** - interview

**Explanation** - allows questions to be tailored to salesmen/filing clerk (NOT customers)

- allows salesman/filing clerk to give their own point of view
- allows follow up questions to be asked
- suitable for the small number of salesmen/filing clerks working in the furniture showroom etc.

**Method** - document search/inspection

**Explanation** - allows close scrutiny of all customer/supplier orders

- allows identification of data required for computerised furniture ordering system
- provides information for the design of order forms
- there is plenty of paperwork available to look at in the filing cabinets etc.

**Method** - observation

**Explanation** - gives first-hand knowledge of how furniture ordering system works

- close supervision of salesmen/ filing clerk ensures that that nothing is missed
- can observe salesmen and clerks in the showroom without disrupting the processes etc.

[8]

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(c) **One** mark per device, **one** mark per reason must be relevant to specified computer furniture ordering system.

- hi resolution screen
- pictures of furniture/order forms need to be clear
  
- large hard disk /DVD writer/CD writer
- many order forms and pictures of furniture require large amount of storage space
  
- (laser) printer
- print out customers' and/or suppliers' order forms
  
- touch screen/tablet
- for salesman to choose item of furniture/enter customer details/orders
  
- barcode reader/scanner
- to identify item of furniture when sold/arrives
  
- keyboard
- to enter customer/order details

[4]

(d) **One** mark for per process, max 3

- Furniture item selection
- Produce customer order
- Update the daily takings
- Produce orders for suppliers
- Check days takings

**One** mark per input, max 2

- Customer details
- Furniture item choice
- Barcode

**One** mark per data store, max 2

- Supplier file/database
- Customer file/database
- Orders file/database
- Takings file/database
- Database

**One** mark per output, max 3

- Picture/Description of furniture item (screen not paper)
- Supplier order (paper)
- Customer order (paper and/or screen)
- Daily takings totals

[8]

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- (e) **Three** marks reasons given
- can be tailored to meet the needs of the furniture retailer
  - can contact the actual programmers if there is a problem/program errors can quickly
  - software can develop as it is used by the salesmen/filing clerk
  - doesn't contain any features not required by the furniture retailer
- [3]

(f) **One** mark per point

Test data max 2

- Use of test data sets
- normal test data has known outcomes
- extreme/boundary test data checks validation rules
- abnormal test data should produce error messages
- mention of normal, abnormal, and extreme data

Types of testing max 2

- Black box
- White box
- System
- Alpha
- Beta
- Acceptance
- User etc.

Other

- testing that the ordering system meets the requirements for the furniture retailer
  - volume testing etc.
- [4]

(g) **One** mark per example, **one** mark per reason

- 1234
  - this checks that system can accept appropriate inputs
  
  - 12345
  - this checks that data of the wrong length is rejected/data has the right number of digits
  
  - w2yz
  - this checks that non-numeric data is rejected
- [6]

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(h) **One** mark per point, **one** mark per reason

- how to load the software
- so it can be installed ready to use
  
- how to run the software
- so the application can be started for regular use
  
- frequently used general tasks
- how to save/delete/amend/update (etc.) files
  
- typical screen layouts
- so that users know what to expect
  
- typical printouts expected
- so that users know what hard copy is available
  
- sample runs
- provides knowledge of what to expect in everyday use
  
- show how to troubleshoot/what to do if errors occur
- so that common problems can be easily sorted out
  
- hardware requirements for the system
- so that there are no problems with installation
  
- software requirements to run the system
- so that the application works as expected
  
- how to carry out specific tasks
- ...such as printing orders/checking takings etc.
  
- how to do bar code scanning
- ...for selecting an item of furniture to be purchased/when an order arrives from a supplier
  
- etc.

[8]

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- (i) **One** mark for chosen method  
**Two** marks for description of that method  
**Two** marks for reasons chosen, must match method chosen and be applied to the furniture retailer.

**Method** - Direct changeover  
**Description** - new system replaces old system immediately/overnight  
- no transition time/overlap  
**Reason** - no need to run 2 systems side by side so less expensive for furniture retailer  
- immediate benefits to furniture retailer from new system  
- less disruptive to showroom staff/salesmen/filing clerk  
- more likely to work when first installed the furniture showroom since it will have been fully tested first

**Method** - Parallel implementation  
**Description** - operate both systems together side by side  
- for a period of time  
**Reason** - good for training showroom staff/salesmen/filing clerk since both systems can be compared  
- if new system fails showroom staff/salesmen/filing clerk can use old manual system as a back up

**Method** - Pilot implementation  
**Description** - adopt new system for one supplier only  
- then adopt for others when fully operational  
**Reason** - can easily re-introduce old manual system if problems occur at pilot supplier  
- makes sure system fully works before adopting for all suppliers

**Method** - Phased implementation  
**Description** - part of system (e.g. furniture database)  
- introduced initially for trials  
- if it is OK, gradually introduce other parts of the new system  
**Reason** - if a problem occurs, showroom staff/salesmen/filing clerk can stop using it any stage  
- allows training and showroom staff/salesmen/filing clerk to gain confidence in its operation [5]

- (j) **One** mark per advantage must be relevant to computerised furniture ordering system.
- much faster response to customer requests
  - less likelihood for ordering/supplier/customer/furniture information to be lost
  - fewer salesmen/filing clerks are now required/less wages need to be paid
  - reduction in paperwork for orders
  - fewer errors in order forms etc.
  - less space needed for large filing cabinets etc.
- [3]

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- (k) **One** mark per limitation must be relevant to computerised furniture ordering system
- at busy times salesmen may have to wait for a computer
  - salesmen and filing clerks will require training
  - cannot operate in case of a power cut
  - need to have alternative arrangements for taking orders if computer system fails etc. [2]

(l) **Content**

**One** mark for each item up to a maximum of 5 marks

- name of furniture retailer/logo
- space to write customer details
- space to write credit card/payment details
- search facility box
- help facility
- email address of customer/password for "my account"
- tracking of your order facility
- login/logout/recognise returning customers
- facility/drop down boxes to choose items of furniture
- place/cancel/amend order/item
- terms and conditions
- delivery options
- shopping basket
- customer reviews
- accessibility/language options

**Layout**

**One** mark for any one of these to a maximum of 2 marks

- screen is well laid out e.g. heading at top, good use of tabs/sub-menus, screen not to cluttered or too empty
- order of boxes etc. is logical
- navigation aids visible [7]