

MARK SCHEME for the October/November 2014 series

0417 INFORMATION AND COMMUNICATION TECHNOLOGY

0417/02

Paper 2 (Practical Test A), maximum raw mark 80

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2014 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

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	Cambridge IGCSE – October/November 2014	0417	02

Candidate name, Centre number, candidate number

Header

Name, candidate number, Centre number 1 mark

Input devices for a gaming computer

Title

Title entry accurate, formatted 36 pt sans-serif 1 mark
 Italics and centred 1 mark

Mice for gamers by: name

This is the fourth of our articles on building

Section break after titles

3 columns 1 mark
 1 cm space 1 mark

Subtitle

Subtitle entry accurate, formatted 18pt sans-serif 1 mark
 Underlined right aligned to margin (not italic) 1 mark

There are mouse types
 diverse applications.

may only
 articles, we
 explored choosing a motherboard and CPU
 for a maximum speed gaming machine. Then
 we looked at cases, power supplies and hard
 disk drive storage. This week we consider
 input devices suited to a gamer.

mechan
 mouse a
 rollers. One roller moved the pointer along
 the x-axis, the other along the y-axis.

The optical mouse types were the first break
 from conventional **mechanical** technology.

Crude prototypes of mouse pointing and

Paragraph deleted 1 mark

developed and
 computer mouse types have evolved since
 then to become faster and more responsive
 and improve user experience. A lot of
 improvements have been made in the field of

Now the mouse could be moved more freely
 and was

Both spelling errors corrected 1 mark

limitations of materials. This technology used
 a light emitting diode (LED) and sensors to
 detect movements for operation and can provide
 under



Many types of
 computer mouse
 have
 designed since
 mouse device

Appropriate Image found 1 mark
 Correct place, aligned top of text and to left margin 1 mark
 Resized to fill half column with no distortion 1 mark
 Text wrapped round image 1 mark

Body text format

12pt serif 1 mark
 1.5 line spacing 1 mark
 Fully justified 1 mark
 All paragraphs consistent spacing 1 mark

first developed. When user interfaces became
 more and more graphic based, the need for a
 mouse as a pointing device for input was
 desired by users. Up until the late 90s the
 Date

optical mouse technology.

more ergonomic use, reducing the risk of
 Repetitive Strain Injury to the user.

There are several computer mouse types
 available and the buyer can be overwhelmed

Footer

Date left aligned to margin 1 mark
 File name with full path aligned to right margin 1 mark

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An improvement over the optical mouse was the laser mouse. This device used an infrared laser instead of an LED light. This improves the resolution and makes the mouse more responsive, improving navigation capabilities. Apart from these, there are several specialised and novel computer mouse types. There are mice designed for gamers. They have extra buttons on the sides

to help gamers have better control

Bullets applied to specified paragraphs

1 mark

atmosphere. In fact, one mouse takes it to the extreme by opening up as a clamshell and offering a fully-fledged joystick inside!

The development of the cordless mouse means you no longer have to wrestle with that irritating cord that always keeps getting in the way. The disadvantage is that you have to keep replacing the batteries. There are several different computer mouse types being developed by companies all the time. One of

Date

them is the tactile mouse, which allows the user to feel vibrations as the mouse is moved over certain areas, like over the boundary of a window frame.

You can find a computer mouse for just about any use. To figure out what kind of mouse would work best with your PC, you need to know your mouse options:

- Mechanical mouse: Houses a hard rubber ball that rolls as the mouse is moved. Sensors inside the mouse body detect the movement and translate it into information that the computer interprets.
- Optical mouse: Uses a sensor to

Page layout

- A4 (mark from screenshot) landscape 1 mark
- Left and right margins 1.5cm
- Top and bottom margins 2cm (mark from screenshot) 1 mark
- No widows, orphans, or blank pages 1 mark
- Document complete with paragraphs intact 1 mark

types, the mouse relays a signal to a base station wired to the computer's mouse port. The cordless mouse requires power, which comes in the form of batteries.

- A mouse with many buttons: The extra buttons can be programmed to do specific things, such as navigate the Web or turn pages when you're reading a document. The typical programmable mouse has about five buttons.
- Stylus mouse: Another mouse mutation enjoyed by the artistic type is the stylus mouse, which looks like a pen and draws on a special pad.
- Cordless 3-D mouse: This kind of mouse can be pointed at the computer screen like a TV remote control.

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Candidate name, Centre number, candidate number
 Compare these three gaming mice and their
 features. One of them is bound to suit your
 needs!

Make	Razer	Logitech	Alienware
Model	Imperator	Gaming Mouse G700	TactX Mouse
Features	<ul style="list-style-type: none"> • 6400dpi 4G Dual Sensor System • Rubberised contoured thumbgrip for added control • Ergonomic right handed design • Adjustable side buttons • On-board memory • Rapid acceleration • Seven programmable buttons • On-the-fly Sensitivity adjustment • Zero-acoustic Ultra slick mouse feet 	<ul style="list-style-type: none"> • 200-5700dpi • Image processing: 12 megapixels / second • Thirteen programmable controls • Natural curves to fit the hand effortlessly • Dynamic coefficient of friction • Acceleration 30G max up to 4.19m/second 	<ul style="list-style-type: none"> • 5000dpi laser Engine • Smooth scrolling and movements • Nine programmable buttons • Dual vertical scroll modes • Ergonomic design for long, comfortable play

Table:

Table resized to fill page width	1 mark
Text inserted correctly in column 2	1 mark
Text inserted correctly in column 3	1 mark
Text inserted correctly in column 4	1 mark
Font matches body text (12pt serif)	1 mark
Left column text bold	1 mark
Top two rows only shaded light grey	1 mark
All gridlines printed. Outside lines only thick e.g. 3 point	1 mark

Date

Order for new mice

Make	Model	Features	Connection	Buttons	Programmable	Gaming	Cost_Price	Stock	Reorder	Item_Value
Acer	Ferrari		Wireless	2	No	No	€24.74	9	5	€123.70
Acer	Camaro Black		Wireless	2	No	No	€23.99	9	5	€119.95
Creative	Fatal1ty		Wired		Yes	Yes	€23.99	6	5	€119.95
Cyborg	R.A.T. 9		Wired	2	No	Yes	€62.35	9	5	€311.75
Eclipse	Touch mouse		Wired		No	No	€33.99	4	5	€169.95
Hippus	Hand shoe	stress free	Wired		No	No	€25.99	5	5	€129.95
Logitech	G700		Wireless	9	Yes	Yes	€89.99	3	5	€449.95
Logitech	Performance MX		Dual	4	No	No	€64.99	5	5	€324.95
Logitech	M105		Wired	2	No	No	€12.99	2	5	€64.95
Razer	Deathadder	Ergonomic	Wired		No	Yes	€26.99	3	5	€134.95
Razer	Taipan	Ambidextrous	Wired	9	Yes	Yes	€27.99	7	5	€139.95

Report heading correct 1 mark

Two records added with no errors 2 marks

Item_Value field heading 1 mark
Field calculated 1 mark

Value of order €2,090.00

Stock less than 10 1 mark

Sorted in ascending order of Make 1 mark

Order value calculated (mark from screenprint) 1 mark
Label **Value of order** 1 mark

All fields except Notes 1 mark
All data and labels fully visible 1 mark
Fits one page wide 1 mark
Orientation is landscape 1 mark
Name, Centre number, candidate number on left below report 1 mark

Currency values all Euros 2dp 1 mark

Candidate name, Centre number and candidate number

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Mice for Gamers

Make: Logitech
Model: G700
Connection: Wireless
Retail Price: €107.99
Notes:

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Naga Epic
Connection: Dual
Retail Price: €65.99
Notes: Features downloadable in-game addons for most MMO games.

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: The Old Republic
Connection: Wireless
Retail Price: €65.99
Notes: The Old Republic Gaming Mouse will execute battle plans faster with 17 buttons at your fingertips.

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Imperator
Connection: Dual
Retail Price: €65.99
Notes: The Imperator is fitted with an ultra - precise 4G Dual Sensor system that makes use of both a laser and an optical sensor to enhance tracking precision.

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Naga
Connection: Wireless
Retail Price: €65.99
Notes:

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Orochi
Connection: Dual
Retail Price: €41.99
Notes: Bluetooth connectivity to most laptop computers.

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Mamba
Connection: Dual
Retail Price: €40.79
Notes: Unrivalled gaming grade wireless technology means the Razer mamba performs as well cordless as it does corded giving you utter freedom of motion whilst you win gloriously in games.

Candidate name, Centre number, candidate number

Mice for Gamers

Make: Razer
Model: Ouroboros
Connection: Wireless
Retail Price: €31.19
Notes: Interchangeable side panels make this suitable for left or right handed users. Adjustable size to suit different hands make for minimised fatigue and maximised comfort.

Candidate name, Centre number, candidate number

Selection Wireless or Dual and gaming	1 mark
Retail Price calculated	1 mark
Sorted on Retail Price descending order	1 mark
Two labels side by side layout in portrait	1 mark

Labels have heading in larger font	1 mark
Five specified field contents	1 mark
Appropriate field labels added	1 mark
Candidate details at bottom of label	1 mark

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Mice for gamers
Presentation by: Name

Connection

- Wired
- Wireless
- Dual

Sensors

- Infrared
- Laser

Programmable Buttons

- Record game specific macros
- Rapid response in games

Features

- Adaptable for left or right hand use
- Use on any surface
- On-the-fly switching

Slide 1 title and subtitle layout 1 mark
Subtitle added 1 mark

Slides created from source file as titles and bullets 1 mark
Bullets consistent across slides 1 mark

Audience notes 6 per page 1 mark

Slide master
Two thick vertical lines drawn 1 mark
Name, Centre no, candidate no. bottom left 1 mark
Slide numbers bottom right 1 mark
No overlap master slide items or slide items 1 mark

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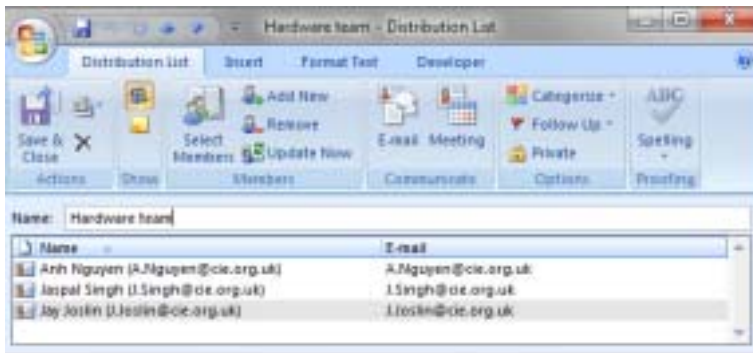
Candidate name, Centre number, candidate number

Step 1 – Contact details stored in address book



Contacts added 1 mark

Step 2 – Email group

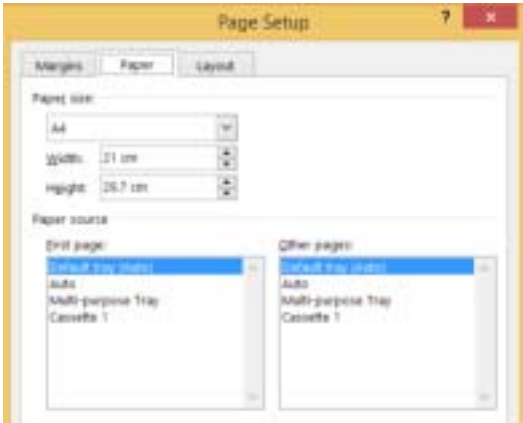


Group created 1 mark

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Steps 4 and 5 - Page size and layout evidence



Paper size A4
Mark from screenshot



Margins setting and orientation evidence
Mark from screenshot

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Step 28 – Database field structure

Field Name	Data Type
Make	Short Text
Model	Short Text
Features	Short Text
Connection	Short Text
Buttons	Number
Programmable	Yes/No
Gaming	Yes/No
Cost_Price	Currency
Stock	Number
Reorder	Number
Notes	Long Text

- Fields as given with correct data types 1 mark
- Min_Stock level field not imported 1 mark
- Cost_Price field number / Currency 1 mark
- Programmable and Gaming as Boolean 1 mark
- Boolean fields displayed as Yes/No or checkbox in report 1 mark
- Notes text or memo (long text) 1 mark

Step 32 – Automatic calculation of the Value of order

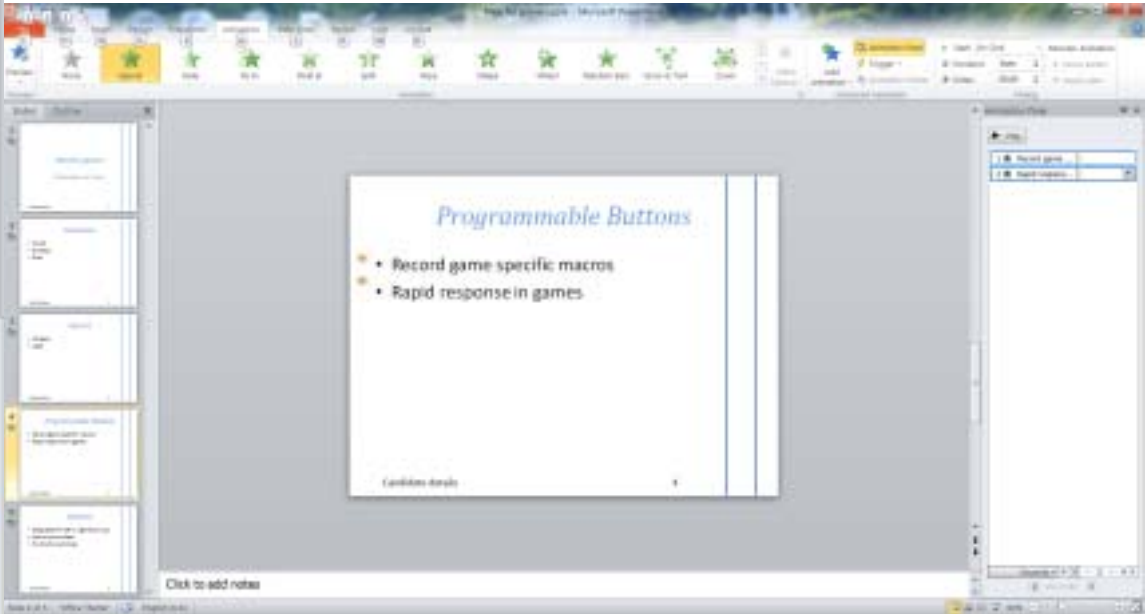
Value of order	=Sum([Item_Value])
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Field calculation evidence

Step 42 – Transitions and animations evidence



- Transitions evidence 1 mark
- Animations evidence 1 mark



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Candidate name, Centre number, candidate number

Step 46 – Email message

The screenshot shows an email draft in Microsoft Word. The 'To' field is filled with 'design.h@cie.org.uk'. The 'Cc' field contains 'Hardware team'. The subject line is 'Draft article'. An attachment named 'Input device report.odt (15 KB)' is listed. The main body of the email contains the following text:

Candidate name
 Centre number
 Candidate number

The document for your editorial comments is attached.

- Message to design.h@cie.org.uk 1 mark
- Copied to group 1 mark
- Subject correct 1 mark
- Attached file 1 mark
- Message content 1 mark