

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

**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<sup>®</sup>, Cambridge International A and AS Level components and some Cambridge O Level components.

<b>Page 2</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

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 mechan

**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.

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.

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

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

from conventional **mechanical** technology.

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

**Body text format**  
12pt serif 1 mark  
1.5 line spacing 1 mark  
Fully justified 1 mark  
All paragraphs consistent 1 mark  
spacing



Many types of  
computer

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

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.

There are several computer mouse types

available and the buyer can be overwhelmed.

movements for operation and can provide

more ergonomic use, reducing the risk of

Repetitive Strain Injury to the user.

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

<b>Page 3</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

Candidate name, Centre number, candidate number

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

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.

#### 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

<b>Page 4</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

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

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

**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

Automated file name and full path

<b>Page 5</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

## Order for new mice

Report heading correct 1 mark

Two records added with no errors 2 marks

Item\_Value field heading 1 mark  
Field calculated 1 mark

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

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

Page 6	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2014	0417	02

## 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:** 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:** Naga  
**Connection:** Wireless  
**Retail Price:** €65.99  
**Notes:**

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:** 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:** 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:** 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:** 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

<b>Page 7</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

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

<b>Page 8</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

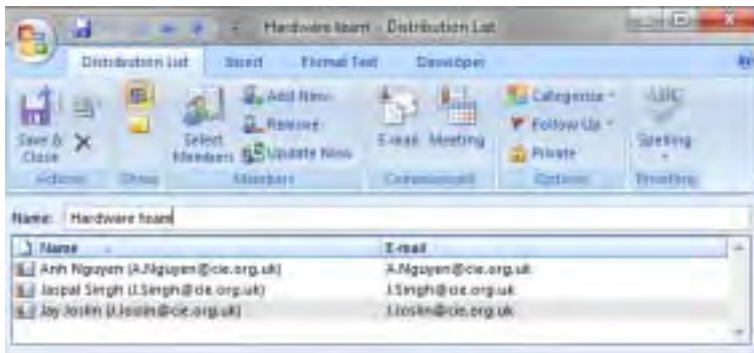
Candidate name, Centre number, candidate number

**Step 1 – Contact details stored in address book**



Contacts added 1 mark

**Step 2 – Email group**



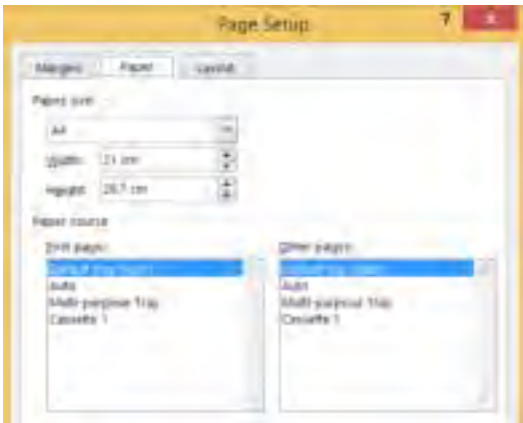
Group created 1 mark



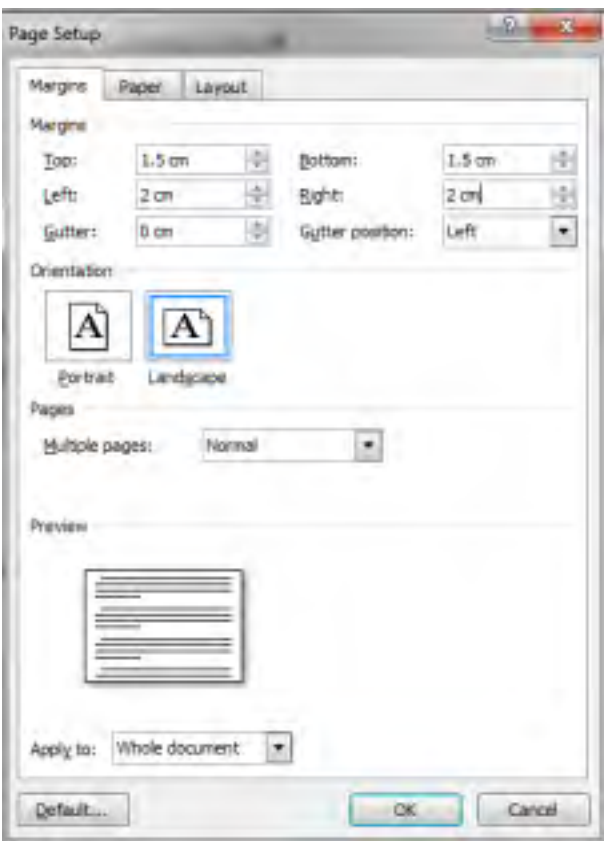
<b>Page 9</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2014</b>	<b>0417</b>	<b>02</b>

Candidate name, Centre number, candidate number

**Steps 4 and 5 - Page size and layout evidence**



Paper size A4  
Mark from screenshot



Margins setting and orientation evidence  
Mark from screenshot

Page 10	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2014	0417	02

Candidate name, Centre number, candidate number

**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**

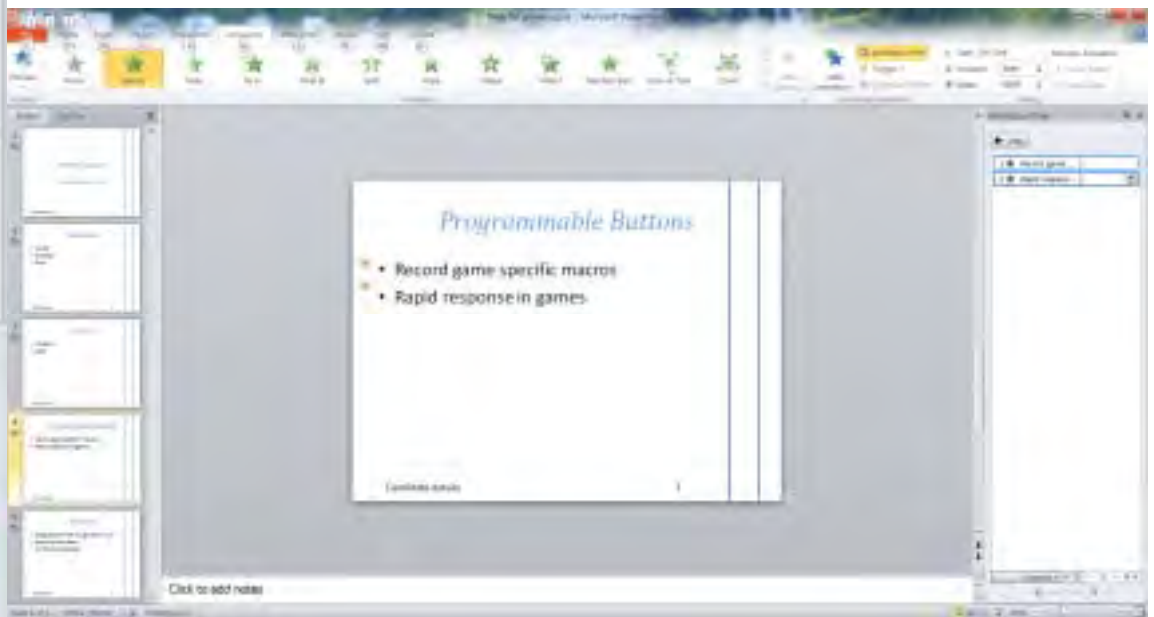
Value of order	=Sum([Item_Value])
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Field calculation evidence

**Step 42 – Transitions and animations evidence**



- Transitions evidence 1 mark
- Animations evidence 1 mark



Page 11	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2014	0417	02

Candidate name, Centre number, candidate number

Step 46 – Email message

The screenshot shows a Microsoft Word interface for drafting an email. The 'To' field is filled with 'design.h@cie.org.uk', the 'Cc' field with 'Hardware team', and the subject line is 'Draft article'. An attachment named 'Input device report.odt (15 KB)' is listed. The main text area 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