CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0417 INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13   Paper 1 (Written), maximum raw mark 100

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 2015 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

CAMBRIDGE
International Examinations

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0417	13

1   **Six** from:

Indent
Bold
Subscript
Superscript
Underline
Text highlight
Italic
Fully justified
Border   **[6]**

2

Use	Web cam ✓	Keyboard ✓	Scanner ✓	
Applications where text has to be created rather than copied		✓		**[1]**
Inputting hard copy documents directly into a computer			✓	**[1]**
Inputting moving pictures from a fixed position into a computer	✓			**[1]**
Entering text into a word processing document		✓		**[1]**

3   MICR –
     Magnetic Ink Character Recognition/Reader   **[1]**
     Used for processing bank cheques/Reads the characters at the bottom of bank cheques   **[1]**

     OMR –
     Optical Mark Recognition/Reader/position of <u>pencil/pen</u> marks are read by scanner/Reader   **[1]**
     Used for processing exam papers/school registers/lottery/multiple choice questionnaires/positions
     of marks identified on exam papers/school registers/lottery/multiple choice questionnaires   **[1]**

4

	Numeric ✓	Date ✓	Text (alphanumeric) ✓	
A student's name			✓	**[1]**
How many times a student has been late to a lesson	✓			**[1]**
The amount of money it costs to travel to school	✓			**[1]**
When the end of term is		✓		**[1]**

5 (a) The software used to find information on the internet is **a search engine [1]**

(b) The software which is a component of an expert system is **an inference engine [1]**

(c) The type of software used to create financial models is **a spreadsheet [1]**

6 Three from:

Is a means of identifying yourself to a system
Something you know such as PIN/password
Something belonging to you such as a bank card
Something unique about you such as a biometric feature **[3]**

7 Three from:

It might lead to double booking
Customer would not be sure booking has been successful
Would take a long time to receive confirmation/ticket
Processing would take a long time which would cost company money **[3]**

8 Move n units forward **[1]**

Repeat the following instructions n times **[1]**

Turn left t degrees **[1]**

Turn right t degrees **[1]**

Lift the pen **[1]**

Lower the pen **[1]**

9 (a) Temperature **[1]**
Time **[1]**

(b) Five from:

The sensor feeds back data to computer
Data is converted from Analogue to Digital
Readings are stored in a spreadsheet/software package
Graphs are automatically produced by computer…
…plotted against time
Calculations performed on spreadsheet to show rate of cooling
Graphs examined to see general overview of rate of cooling **[5]**

Page 4	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0417	13

10 **Four** from:

WiFi technology enables local area network…
… and Internet connections
Using WiFi, a laptop or desktop computer can connect to a network's wireless router
Bluetooth connects two devices together
Usually Bluetooth peripherals are powered by batteries that need to be charged or replaced
WiFi covers a larger distance than Bluetooth
WiFi requires more than ten times more bandwidth than Bluetooth   **[4]**

11 **Six** from:

Optical discs such as CDs DVDs and Blu-ray discs…
…are read from and written to using a laser beam
Magnetic disks are read from and written to using read/write heads
Optical discs are more portable
Magnetic disks are more likely to spike
Optical discs are cheaper to buy
Magnetic disks store more data
Optical discs have slower access times
Optical discs have slower transfer rates
Optical discs can be more easily lost/stolen
Optical discs can be more easily scratched
Both store videos, music
Both use direct access   **[6]**

12 **Six** from:

Initial cost of <u>hardware/software</u> is expensive
Fewer staff needed – less spent on wages
Fewer shops needed – less spent on rates/rent/utilities
Potentially larger customer base
Need to retrain staff
Less customer loyalty/loss of customers/more difficult to sell other services/products due to lack
of personal touch
Costs of system maintenance
Greater costs due to more delivery staff/vans   **[6]**

13 **(a)** **Three** matched pairs:

Interview
Manager

Questionnaire
Drivers

Observation
Secretaries   **[6]**

www.dynamicpapers.com

Page 5	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0417	13

(b) **Three** from:

Data type for each field
Appropriate field names
Validation rules
Field lengths
Field descriptions [3]

14 (a) **Four** from:

Tests to see whether the condition A1>12 is true or false
If the condition A1>12 is true the function will return "strong"
If the condition A1>12 is false, the function will test if A1>6 is true or false
If the condition A1>6 is true the function will return "medium"
If the condition A1>6 is false the function will return "weak" [4]

(b) Should be A1<=6 [1]
Should be A1<=12 [1]
Should be "strong" (second speech mark missing) [1]
Should be two right-hand brackets [1]

(c) **Three** from:

Simulations
Mathematical models
Civil engineering models
Flight/pilot simulation/training
Design of fairground rides
Traffic control
Building fire simulation
Weather forecast models
Population modelling [3]

15 (a) **Four** from:

Can use the final part of a URL to identify reliability
.ac, .gov, .org are usually fairly reliable
If information matches that from reliable sites or reliable/authenticated text books
If responsible bodies have endorsed the site information will be reliable
If it has links to other reliable sites then information will be reliable
If site has testimonials it is likely to be reliable
If the author's credentials are good it is likely to be reliable [4]

(b) **Three** from:

If site has excessive advertising it could be unreliable
If the advertising is related only to its own products it could be unreliable
If the date of the last update was a long time ago it is likely to be unreliable
If it has links to other unreliable sites it could be unreliable [3]

(c) Four from:

An intranet is a computer network
Exists usually within one organisation/school
Meets the internal needs of an organisation/school
Can be expanded to become an extranet
Intranet is private
Intranets tend to be policed/managed
Intranet has an extra layer of security
Data found in an intranet is likely to be more relevant to the students' needs **[4]**

16 **Four** from:

Easy to keep in immediate contact with friends/make new friends
Easy to communicate to more than one friend/to communicate with people overseas
Can search for people who you've fallen out of touch with
Easy to arrange meetings/visits to cinemas/theatre
Can share photographs/videos/images/opinions/views **[4]**

17 **Three** matched pairs from:

Headaches/eyestrain
From staring at screen <u>continuously</u>

RSI in fingers
From <u>continual</u> typing/repetitive clicking of mouse

RSI in wrists
From repetitive clicking of mouse/<u>continual</u> typing

Backache
From sitting in same position <u>all day</u> **[6]**

18

	✓
A wiki is an example of a spreadsheet.	
A wiki is quicker to search than a database.	
Wiki entries are in chronological order.	
A wiki can have several contributors.	✓
Wikis are always a reliable source of information.	
Wikis can be edited using a web browser.	✓
Anybody can create a wiki.	✓
Wikis never contain hyperlinks.	

(A wiki can have several contributors. **[1]**)
(Wikis can be edited using a web browser. **[1]**)
(Anybody can create a wiki. **[1]**)