

## **Cambridge National**

### **ICT**

Unit **R001/01**: Understanding Computer Systems

Level 1/2 Cambridge National Certificate/Award/Diploma in ICT

### **Mark Scheme for June 2017**

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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These are the annotations, (including abbreviations), including those used in scoris, which are used when marking

| <b>Annotation</b> | <b>Meaning of annotation</b> |
|-------------------|------------------------------|
| Tick              | Correct                      |
| Cross             | Incorrect                    |
| BOD               | Benefit of Doubt             |
| NBOD              | No Benefit of Doubt          |
| TV                | Too Vague                    |
| SEEN              | Seen Response                |
| BP                | Blank Page                   |
| L1                | Level 1                      |
| L2                | Level 2                      |
| L3                | Level 3                      |

| Question |   | Answer/Indicative content  | Mark | Guidance   |
|----------|---|--|------|--|
| 1        | a | <p>ONE from:</p> <ul style="list-style-type: none"> <li>• Database (Management Software)(1)</li> <li>• Spreadsheet (1)</li> </ul>  | 1    | <p>Accept trade names</p> <p>You can accept <b>word processor</b>, as tables can sorted into order and find can be used</p>  |
| 1        | b | <p>TWO marks, one for each:</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>• has fields/cells (1)</li> <li>• ability to hold text( (or suitable example) 1)</li> <li>• ability to hold numbers (or suitable example) (1)</li> <li>• ability to format as currency (1)</li> <li>• has rows/columns (1)</li> <li>• tables (1)</li> </ul> | 2    | <p>This answer is NOT dependant on 1a.</p> <p>Accept any suitable feature that would make the software suitable for the purpose of <b>storing data</b></p> <p>DO NOT award a feature to manipulate data (so, do not award use of functions or formulae, or features to INPUT data)</p> |
| 1        | c | <ul style="list-style-type: none"> <li>• Monitor (1)</li> <li>• Printer (1)</li> </ul>   | 1    |  |

| 2                        | a    | <p>A MAXIMUM of 7 marks available:<br/> <b>Section A – information to be collected (award if items are shown on the form)</b></p> <table border="1" data-bbox="353 338 1115 517"> <thead> <tr> <th>Number of items included</th> <th>Mark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> </tr> <tr> <td>3</td> <td>2</td> </tr> <tr> <td>5</td> <td>3</td> </tr> <tr> <td>7</td> <td>4</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• Title (Mr, Mrs etc)</li> <li>• First name (or equivalent) of customer</li> <li>• Surname (or equivalent) of customer</li> <li>• Landline number</li> <li>• Mobile phone number</li> <li>• Email address</li> <li>• (Home) address</li> <li>• House name/number</li> <li>• Street</li> <li>• Town/District/County</li> <li>• Postcode</li> </ul> <p><b>Section B Design and layout marks:</b></p> <ul style="list-style-type: none"> <li>• Text box OR input space used for <b>each</b> of the items awarded above (1 MAX)</li> <li>• Use of space (all space used) (1 mark)</li> <li>• Logical order to the inputs (1)</li> <li>• Title/Heading (1)</li> <li>• Other instructions (1)</li> </ul> <p>Any other relevant item that fits the scenario MAX 1 mark:<br/>                     e.g.</p> <ul style="list-style-type: none"> <li>• Logo (1)</li> </ul> | Number of items included | Mark | 1 | 1 | 3 | 2 | 5 | 3 | 7 | 4 | <p>7</p> <p>Section A – use ticks at rhs of answer to show the score<br/>                     Section B – tick individual items</p> <p>Marks are awarded for a combination of marks from section A of this answer AND from section B of this answer.</p> <p>Where a candidate indicates Address, or address 1 etc, award one item only- must specifically mention address item for mark to be awarded. .</p> <p>Only award one item (of name marks) if candidate just indicates “name”.</p> <p>For use of space, a candidate may have used some items that are irrelevant and will not have received a mark for these. However, these can still be included when considering whether the space has been well used, unless they are repeats of elements already included.</p> |
|--------------------------|------|--|--------------------------|------|---|---|---|---|---|---|---|---|--|
| Number of items included | Mark |  |                          |      |   |   |   |   |   |   |   |   |  |
| 1                        | 1    |  |                          |      |   |   |   |   |   |   |   |   |  |
| 3                        | 2    |  |                          |      |   |   |   |   |   |   |   |   |  |
| 5                        | 3    |  |                          |      |   |   |   |   |   |   |   |   |  |
| 7                        | 4    |  |                          |      |   |   |   |   |   |   |   |   |  |

|   |   |   |   |   |
|---|---|---|---|---|
| 2 | b | <p>Up to TWO marks (one reason plus explanation)<br/>e.g .</p> <ul style="list-style-type: none"> <li>• Data can be deleted/corrupted/damaged/lost/affected by virus (1) and so a copy is kept to replace it (1)</li> <li>• So that no data is lost (1) following a (named event) (1)</li> <li>• So that Indiana Motors can carry on operating (1) if the data is deleted/corrupted/damaged (1)</li> <li>• If the data is deleted/computer gets damaged (1) Indiana Motors still has the information it needs (1)</li> <li>• To protect against accidental loss/destruction (1) as required by the DPA (1)</li> </ul> | 2 | <p>Question is NOT about hacking or any attempt to protect. Focus should be on recovery of data.</p>  |
| 2 | c | <p>ONE from:<br/>e.g.</p> <ul style="list-style-type: none"> <li>• <u>External</u> hard drive (1)</li> <li>• USB storage device (1)</li> <li>• tape-based system for backup</li> <li>• Cloud (1)</li> </ul>   | 1 | <p>The discriminator here is that the backup must store the whole of the system. The scenario stresses that this is a sizeable system. <b>Therefore, USB stick is not acceptable.</b></p> <p>Accept “hard drive” where it is <u>clearly</u> on a machine in a different location.</p> |

| Question | Answer/Indicative  | Marks | Guidance |   |  |  |
|----------|--|-------|----------|---|--|--|
| 3        | <p>Explain how the features of shared online calendars could help sales staff at Indiana Motors keep track of bookings and improve customer service.</p> <p>Features:</p> <p>E.g.</p> <ul style="list-style-type: none"> <li>• Reminders</li> <li>• Warnings when bookings clash</li> <li>• Emails sent when booking made</li> <li>• Visual blocks on the screen</li> <li>• Clear beginnings and ends</li> <li>• Separate blocks for different bookings at concurrent times</li> <li>• Link to customer details</li> </ul> <p>DO NOT accept “calendar is shared” as a feature.</p> | 8     | Mark     | NB – for some mark points, there is more than one descriptor.   |  |  |
|          |  |       | 8 (L3)   | <p><b>Explanation</b> of more than one feature and how this helps staff to keep track of bookings AND improve customer service</p> <p>NB there must be use of more than one feature across the whole of the answer, NOT more than one feature for each area of focus.</p> |  |  |
|          |  |       | 7 (L3)   | <p><b>Explanation</b> of more than one feature and impact on keeping track</p> <p><b>Description</b> of more than one feature and impact on customer service</p>  | <p><b>Explanation</b> of more than one feature and impact on customer service</p> <p><b>Description</b> of more than one feature and impact on keeping track</p> | <p>Answer is based on an explanation of ONE feature on both keeping track and customer service</p> |
|          |  |       | 6 (L2)   | <p>Description of features and how they impact on keeping track of bookings AND impact on customer service</p>  |  |  |
|          |  |       | 5 (L2)   | <p>Description of a feature and how this impacts on keeping track of bookings AND impact on customer service</p>  | <p>Weak description of more than one feature and how they impact both of the two areas</p>   | <p>Description of more than one feature and how they impact either of the two areas</p>            |
|          |  |       | 4 (L2)   | <p>Description of ONE feature and how this impacts on either of the two areas</p>   | <p>General description of the use of online calendars and how impacts on <b>both</b> of the two areas</p>  | <p>Weak description of more than one feature and how they impact either of the two areas</p>       |
|          |  |       | 3 (L1)   | <p>Weak description of ONE feature and how this impacts on either of the two areas</p>  | <p>General description of the use of online calendars and how impacts on <b>either</b> of the two areas</p>  |  |

| Question |  |  | Answer/Indicative | Marks | Guidance    |   |
|----------|--|--|-------------------|-------|-------------|---|
|          |  |  |                   |       | 2 (L1)      | Comments made linking one feature to either area        |
|          |  |  |                   |       | 1 (L1)      | Any relevant point that is not a repeat of the question |
|          |  |  |                   |       | 0<br>(Seen) | No valid answer   |



|   |   |   |   |  |
|---|---|---|---|--|
| 4 | a | <p>TWO from:<br/>e.g.</p> <ul style="list-style-type: none"> <li>• Copyright infringement/contact by copyright holder/legal action (by copyright holder) (1)</li> <li>• Image may be pixelated (1)</li> <li>• images may not meet exact requirements/does not show what actual cars look like (1)</li> </ul>  | 2 | <p>Accept first level implication only – no developments of issues.</p> <p>Question is about using images that have been searched for and then used. Issues to do with cropping or editing or irrelevance of image/content are not relevant.</p> <p>“Copyright” on own – TV, but can be given if an extension to a previous argument</p>   |
| 4 | b | <p>Up to 6 marks, MAX two per individual description:</p> <p><b>Text:</b><br/>e.g.</p> <ul style="list-style-type: none"> <li>• To give information (1) about cars/prices (1)</li> <li>• To give/show an image/create impression of the cars (1) as desirable items (1)</li> </ul> <p><b>Images:</b><br/>e.g.</p> <ul style="list-style-type: none"> <li>• To create an impression of the cars (1) as desirable items (1) (IF NOT awarded above)</li> <li>• To show different features (1) of different cars (1)</li> <li>• To show images (1) of cars (1)</li> </ul> <p><b>Animation:</b><br/>e.g.</p> <ul style="list-style-type: none"> <li>• To enhance the presentation (1) by adding movement/emphasis (1)</li> <li>• To attract (customer) attention (1) by adding movement/emphasis (1)</li> <li>• To add movement (1) to attract customers’ attention (1)</li> </ul> | 6 | <p>Answers must be a description of how the feature is used within the presentation</p> <p>Candidate may be awarded marks for general comments about marketing, but DO NOT award repetition</p> <p>DO NOT accept “to look professional”</p> <p>Answer does not ask for one description for each feature, therefore, read whole answer and mark to best advantage</p> <p>Animation feature may refer to animation of slides, but can also be awarded for the use of animated features within the presentation</p> |

|   |   |  |   |  |
|---|---|--|---|--|
| 4 | c | <p>Identify benefit (1) plus impact/why it's a benefit (1)<br/>e.g.</p> <ul style="list-style-type: none"> <li>• User has control over the presentation (1) so can pause as necessary/navigate to sections (1)</li> <li>• Customer is able to pause (1) to call partner over to see a key message (1)</li> <li>• Customer is able to rewind (1) to watch an important message (1)</li> </ul> | 2 | <p>This must be a benefit to the customer.</p> <p>Benefits to Indiana Motors (such as “<b>customers will feel more valued (1) and so more likely to buy (1)</b>”) should be marked as wrong.</p> |
|---|---|--|---|--|

SECTION A TOTAL 32

SECTION B

| Question  | Answer/Indicative   | Marks | Guidance  |                          |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
|---|---|-------|---|--------------------------|----------------|--------------------------|---|---|--|--|--|---|--|---|--|--|-------------------|--|--|--|---|---------------------------------|--|--|---|--|---|---|
| 5   | <p>Ticks as shown:</p> <table border="1" data-bbox="320 312 1160 978"> <thead> <tr> <th></th> <th>RFID</th> <th>GPS</th> <th>Barcode reader</th> <th>Near field Communication</th> </tr> </thead> <tbody> <tr> <td><i>To track and record staff purchases from the canteen</i></td> <td style="text-align: center;">✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>To track the location of their breakdown vehicles</td> <td></td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>To accept payment</td> <td></td> <td></td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>To track stock in the warehouse</td> <td></td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> </tbody> </table> |       | RFID  | GPS                      | Barcode reader | Near field Communication | <i>To track and record staff purchases from the canteen</i> | ✓ |  |  |  | To track the location of their breakdown vehicles |  | ✓ |  |  | To accept payment |  |  |  | ✓ | To track stock in the warehouse |  |  | ✓ |  | 3 | DO NOT award relevant mark if more than one tick in the <b>column</b> |
|   | RFID  | GPS   | Barcode reader  | Near field Communication |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
| <i>To track and record staff purchases from the canteen</i> | ✓   |       |   |                          |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
| To track the location of their breakdown vehicles           |   | ✓     |   |                          |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
| To accept payment   |   |       |   | ✓                        |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
| To track stock in the warehouse                             |   |       | ✓   |                          |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |
| 6   | <p>a</p> <p>Four from:<br/>e.g.</p> <p>Opening of (particular) folders can be/is restricted (1) to specified users only (1) so sensitive personal data is only seen (1) by those permitted/authorised/ have need to view it (1)</p>   | 4     | <p>Answer may refer to data being accessed, or data being stolen.</p> <p>Read the whole of the answer and award to best advantage.</p> <p>Marks may be awarded for mark points listed here, even if rest of the answer is out of context.</p> |                          |                |                          |   |   |  |  |  |   |  |   |  |  |                   |  |  |  |   |                                 |  |  |   |  |   |   |

| Question |   | Answer/Indicative  | Marks | Guidance   |
|----------|---|--|-------|--|
| 6        | b | <p>Up to FOUR marks available for TWO full descriptions.</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>• SB must process the data fairly (1) only for the purpose for which it was collected /only collect names of customers for a legitimate reason (1)</li> <li>• SB can only collect personal data when they have told the person giving it (1) why it is being collected(1) for specified purposes (1) do not use the data for any other reason (1)</li> <li>• SB should only collect the data it needs (1) and do not ask for more information than you need (1)</li> <li>• SB has to review data periodically (1) to make sure that it is still accurate (1)</li> <li>• When a project is finished (1) SB must delete the data (1)</li> <li>• If a person asks to see the data held about them (1) SB must provide it (1)</li> <li>• SB should not store data outside of the EU (1) if the data protection laws are not a match for those in the EU (1)</li> </ul> | 4     | <p>Candidates do not need to state the principle in full, but marker should be able to identify the principle from what the candidate gives as an answer.</p> <p>Expansions are ALL examples of possible answers. Candidates do not need to give the exact answer.</p> |
| 6        | c | <p>Up to FOUR marks for a full explanation:</p> <p>Moral consideration (1) plus extension and explanation (3)</p> <p>E.g.</p> <ul style="list-style-type: none"> <li>• The person being asked should know why the data is being collected (1) so that they can make a decision (1) whether they want to answer (1) or refuse to take part (1)</li> <li>• The person being asked to give the data has the right to say no (1) this should be respected (1) by the person asking the questions (1) and no further pressure given (1)</li> <li>• Design/layout of forms (1) should be clear to understand (1) so that user is not confused/tricked into giving information (1) that they would not otherwise give (1)</li> </ul>  | 4     | <p>If the example is a legal rather than ethical issue, award no marks overall.</p> <p>Take the 8 principles of the DPA (Q6b) as the starting point for LEGAL issues.</p>  |

|   |   |  |   |  |
|---|---|--|---|--|
| 7 | a | <p>TWO marks:</p> <p>Identify benefit (1) describe benefit (1)</p> <p>E.g.</p> <ul style="list-style-type: none"> <li>• to ensure that she can be contacted (1) to pass on e.g. locations of breakdowns (1)</li> <li>• to ensure that she does not use/be distracted by her own phone (1) while on work time (1)</li> <li>• to be able to navigate (1) to where the customer is (1)</li> </ul> | 2 | <p>Answer must be a benefit to Safe Breakdown. As Dulcie works for Safe Breakdown, any impact that means she is more/better able to do her job is acceptable.</p>  |
| 7 | b | <p>Any two acceptable reasons why she would not receive the call:</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>• Phone engaged (1)</li> <li>• Phone out of signal/reception range(1)</li> </ul>  | 2 | <p>Answers must refer to <b>receiving</b> the call, NOT answering the call</p> <p>DO NOT award “phone switched off/out of charge” as this does NOT fit the scenario</p>  |
| 7 | c | <p>TWO marks:</p> <p>One mark per method:</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>• Email (1)</li> <li>• Use of social media (or named example) (1)</li> <li>• Text message (1)</li> <li>• IM (1)</li> <li>• App (1)</li> </ul>   | 2 | <p>Accept trade names as examples.</p> <p>DO NOT award text or message on own - would be too vague</p> <p>DO NOT award description of data to be sent – eg, send a map. The question is about the way in which this would be sent.</p> |

|   |   |  |   |   |
|---|---|--|---|---|
| 7 | d | <p>TWO marks:</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>• Microphone (1)</li> <li>• Touchscreen (1)</li> <li>• Camera (1)</li> <li>• Keypad/buttons (1)</li> </ul>  | 2 | DO NOT accept keyboard  |
| 7 | e | <p>ONE from:</p> <ul style="list-style-type: none"> <li>• Bluetooth®</li> <li>• wireless (1)</li> </ul>  | 1 |   |
| 7 | f | <p>Up to FOUR marks available:</p> <ul style="list-style-type: none"> <li>• keep both hands on the wheel/eyes on the road (1) whilst driving (1) whilst taking the call (1). This makes their driving better/safer (1) as taking eyes off road is dangerous (1)</li> <li>• no need to stop vehicle (1) to talk on the phone (1) so make better use of/do not waste time (1) which means that more work can be done (1) during the working day (1)</li> <li>• to be able to <b>legally</b> answer calls (1) while driving (1) as using the phone without a hands free set (1) is against the law (1)</li> </ul> | 4 | Read the whole answer and mark to candidate's best advantage. |
|   |   |  |   |   |

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