

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

**MARK SCHEME for the March 2016 series**

**0417 INFORMATION AND COMMUNICATION  
TECHNOLOGY**

**0417/31**

Paper 3 (Practical Test B), 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.

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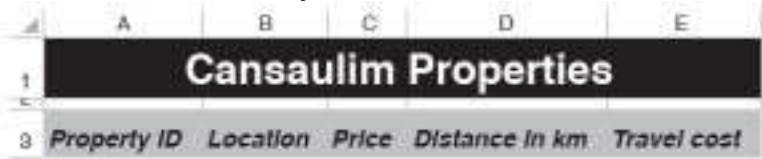
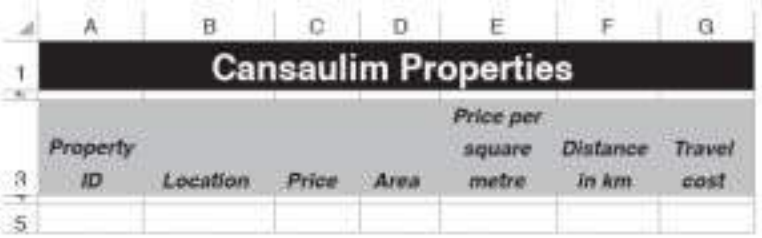
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|    |  |   |     |
|----|--|---|-----|
| 4  | <p>Using the most appropriate image from m16img1.jpg to m16img8.jpg place in cell:</p> <ul style="list-style-type: none"> <li>• C the image of a plot of land for sale</li> <li>• D the image of a builder making a wall</li> <li>• G the image of a beach front café</li> <li>• H the image of a Portuguese style house</li> </ul> <p>4 correct insertions of image<br/>3 correct insertions of image<br/>0, 1 or 2 correct insertions of image</p> | <p>2 marks<br/>1 mark<br/>0 marks</p>                     | [2] |
| 5  | <p><b>Make sure appropriate text is displayed, if an image is not available.</b></p> <p>Appropriate text set for alt text attribute for all 5 images</p>   | 1 mark  | [1] |
| 6  | <p><b>In cell:</b></p> <ul style="list-style-type: none"> <li>• E enter the text Prime location building plots for sale</li> <li>• F enter the text Local construction workers</li> <li>• I enter the text Arossim beach front café for sale</li> <li>• J enter the text Portuguese colonial style house for sale</li> </ul> <p><b>Set all this text as style h2.</b></p> <p>All 4 elements of text 100% correct<br/>All text set into style h2</p>  | <p>1 mark<br/>1 mark</p>                                  | [2] |
| 7  | <p><b>In cell K enter the text: Web Design by Hothouse Design: Page last edited by: followed by your name, Centre number and candidate number.</b></p> <p><b>Set this text as style h3.</b></p> <p>Text 100% correct plus candidate details<br/>Text set into style h3</p>   | <p>1 mark<br/>1 mark</p>                                  | [2] |
| 8  | <p><b>Centre align the table in the browser.</b></p> <p><b>Save the web page.</b></p> <p>Table centre aligned within browser window</p>  | 1 mark  | [1] |
| 9  | <p><b>Make the text Hothouse Design a hyperlink to send an email message to hothouse-design@cie.org.uk with a subject line Make me a website!</b></p> <p>Anchor from text Hothouse-Design<br/>Href="mailto:<br/>hothouse-design@cie.org.uk<br/>?subject=<br/>Make me a website!"</p>   | <p>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>1 mark</p> | [5] |
| 10 | <p><b>Attach the stylesheet m16ss.css to the web page.</b></p> <p><b>Save the webpage.</b></p> <p>Stylesheet m16ss.css attached to webpage</p>   | 1 mark  | [1] |

|        |                              |          |       |
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|    |  |     |
|----|--|-----|
| 11 | <p><b>The stylesheet has been created but needs to be improved using the most efficient syntax. Make sure your stylesheet contains no html.</b></p> <p>Open and examine the stylesheet m16ss.css in a suitable software package.</p> <p>Add the following to this stylesheet:</p> <div data-bbox="268 421 1134 577" style="border: 1px solid black; padding: 5px;"> <pre>h1, h2 and h3      Trebuchet                   If this is not available then Trebuchet MS                   If neither of these fonts are available, the browser's default                   sans-serif font. h3                a 24 point font.</pre> </div> <p>Add your name, Centre number and candidate number as a comment to your stylesheet.<br/>Save this stylesheet in your m16_html folder.</p> <p><b>h1, h2 and h3</b><br/>Trebuchet <span style="float: right;">1 mark</span><br/>,"Trebuchet MS" <span style="float: right;">1 mark</span><br/>,sans-serif <span style="float: right;">1 mark</span></p> <p><b>h3</b><br/>{font-size:24pt} <span style="float: right;">1 mark</span></p> <p><b>table and td</b><br/>{border:0} <span style="float: right;">1 mark</span></p> <p>Use of table,td and h1,h2,h3 for efficient syntax for border-style <span style="float: right;">1 mark</span><br/>Comment added with /* name */ <span style="float: right;">1 mark</span></p> | [7] |
| 12 | <p><b>A website is tested before it is uploaded to the Internet. Describe how you would develop a test plan to test the hyperlinks, as part of a test strategy.</b></p> <p>Identify each element to be tested <span style="float: right;">1 mark</span><br/>For each test identify Expected output <span style="float: right;">1 mark</span><br/>Test plan contains Actual output <span style="float: right;">1 mark</span><br/>Test plan contains remedial action <span style="float: right;">1 mark</span></p>   | [4] |
| 13 | <p><b>Evaluate the webpage you have just created.</b></p> <p>Bright colours within the page attract attention <span style="float: right;">1 mark</span><br/>Magenta mask on background image makes reading text difficult <span style="float: right;">1 mark</span><br/>Text under image/Alt text identifies the image <span style="float: right;">1 mark</span><br/>Colour schemes do not look like professional company site <span style="float: right;">1 mark</span><br/>Logo does not blend with background/has poor contrast between background and text <span style="float: right;">1 mark</span><br/>Image of beach front café is taken from too far away <span style="float: right;">1 mark</span></p> <p style="text-align: right;">(Max 4 marks)</p>  | [4] |

|        |                              |          |       |
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|    |   |     |
|----|---|-----|
| 14 | <p><b>Create and format a spreadsheet that looks like this:</b></p>  <p><b>Save this spreadsheet with the file name m16_ and your Centre number and candidate number, e.g. m16_ZZ999_9999</b><br/> <b>Place an automated filename which includes the file path, on the left in the header.</b></p> <p><b>Row 1</b><br/> A1 to E1 merged <span style="float: right;">1 mark</span><br/> Sans-serif centre aligned font <span style="float: right;">1 mark</span><br/> White text, largest font <span style="float: right;">1 mark</span><br/> Black background <span style="float: right;">1 mark</span></p> <p><b>Row 2</b><br/> Row height less than half row 3 <span style="float: right;">1 mark</span></p> <p><b>Row 3</b><br/> Sans-serif left aligned font <span style="float: right;">1 mark</span><br/> Black, italic text <span style="float: right;">1 mark</span><br/> Light grey background <span style="float: right;">1 mark</span></p> <p><b>Sheet</b><br/> All column widths fully visible <span style="float: right;">1 mark</span><br/> Row and column headings visible (this and next printout) <span style="float: right;">1 mark</span><br/> Automated filename with file path placed on left in header <span style="float: right;">1 mark</span></p> <p style="text-align: right;">[11]</p> |     |
| 15 | <p><b>Insert 2 new columns between columns C and D.</b></p> <p>Columns inserted as specified <span style="float: right;">1 mark</span></p>  | [1] |
| 16 | <p><b>Edit the spreadsheet so it looks like this:</b></p>  <p><b>Row 3</b><br/> Alignment changed from left to centre <span style="float: right;">1 mark</span><br/> Column widths narrowed <span style="float: right;">1 mark</span><br/> Text wrapped, 100% accurate, fully visible <span style="float: right;">1 mark</span></p>   | [3] |
| 17 | <p><b>In cell E5 enter a formula to calculate the price per square metre which is the price divided by the area. Use a function to round this value to 0 decimal places.</b></p> <p>=ROUND()<br/> C5/D5<br/> ,0 <span style="float: right;">1 mark</span><br/> <span style="float: right;">1 mark</span><br/> <span style="float: right;">1 mark</span></p>   | [3] |

|        |                              |          |       |
|--------|------------------------------|----------|-------|
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| 18          | <p>In cell G5 enter a formula to calculate the travel cost to this property. This is 10 rupees plus:</p> <ul style="list-style-type: none"> <li>7.5 if the distance is less than 6</li> <li>The distance multiplied by 1.5 if the distance is not less than 6</li> </ul> <p>Round the travel cost up to the next whole rupee.</p> <p>=ROUNDUP()<br/>10+<br/>IF()<br/>F5&lt;6<br/>,7.5<br/>,F5*1.5<br/>,0</p>  | <p>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>1 mark</p>   | [7]      |                |      |                |        |                    |          |     |      |        |     |
|-------------|---|---|----------|----------------|------|----------------|--------|--------------------|----------|-----|------|--------|-----|
| 19          | <p>Complete the unfinished Test Plan in your Evidence Document:</p> <ul style="list-style-type: none"> <li>Replace the letters A and B with suitable headings</li> <li>Choose 3 pieces of test data to test the formula used in step 18</li> <li>Complete the test table as you carry out the tests</li> <li>Take screenshots from your tests and place these in the Test Plan.</li> </ul> <p>Make sure that the test data and results are clearly visible.</p> <p>Cell reference and formula tested correct<br/>Headings Expected and Actual Outcome<br/>Test data selected 6, one above and one below<br/>Test data chosen is easy to calculate manually<br/>Reasons for choice of test data appropriate<br/>Expected output calculated correctly<br/>Screen shots of actual output shown</p> | <p>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>1 mark<br/>3 marks<br/>1 marks</p> | [9]      |                |      |                |        |                    |          |     |      |        |     |
| 20          | <p>Apply appropriate formatting to row 5 of the spreadsheet</p> <p>Columns C, E and G only formatted to 2dp in rupees</p>   | 1 mark  | [1]      |                |      |                |        |                    |          |     |      |        |     |
| 21          | <p>Save and print the spreadsheet showing the formulae. Make sure:</p> <ul style="list-style-type: none"> <li>it fits on a single landscape page</li> <li>the contents of all cells are fully visible.</li> </ul> <p>Single landscape page and contents of all cells fully visible</p>  | 1 mark  | [1]      |                |      |                |        |                    |          |     |      |        |     |
| 22          | <p>Add the following property to your spreadsheet:</p> <table border="1"> <thead> <tr> <th>Property ID</th> <th>Location</th> <th>Price</th> <th>Area</th> <th>Distance in km</th> </tr> </thead> <tbody> <tr> <td>CP1007</td> <td>Dona Paula, Panjim</td> <td>22000000</td> <td>171</td> <td>28.1</td> </tr> </tbody> </table> <p>Print the spreadsheet showing the values. Make sure:</p> <ul style="list-style-type: none"> <li>the printout fits on a single page</li> <li>the contents of all cells are fully visible.</li> </ul> <p>Printout fits on single page and contents of all cells are fully visible</p>  | Property ID   | Location | Price          | Area | Distance in km | CP1007 | Dona Paula, Panjim | 22000000 | 171 | 28.1 | 1 mark | [1] |
| Property ID | Location  | Price   | Area     | Distance in km |      |                |        |                    |          |     |      |        |     |
| CP1007      | Dona Paula, Panjim  | 22000000  | 171      | 28.1           |      |                |        |                    |          |     |      |        |     |

|               |                                     |                 |              |
|---------------|-------------------------------------|-----------------|--------------|
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**Question 11 – Evidence 1**

|          |  |   |
|----------|--|---|
| h1,h2,h3 | Trebuchet  | 1 |
|          | , "Trebuchet MS"   | 1 |
|          | , sans-serif   | 1 |
| h3       | font-size:24pt   | 1 |
| table,td | {border:0}   | 1 |
|          | Use of table,td and h1,h2,h3 for efficient syntax for border-style | 1 |
|          | Correct comment added with /* format */                            | 1 |

```

m16ss.css - Notepad
File Edit Format View Help
body {background-image:url('m16bg.jpg');
background-color:#7c7d76}

h1 {font-weight:bold;
font-size:42px;
text-align:center}

h2 {font-size:30px;
text-align:center;
text-wrap:normal;
word-wrap:break-word;}

h3 {font-size:24pt}

h1,h2,h3 {font-family:Trebuchet,"Trebuchet MS", sans-serif}

table,td {border:0}

/* A Candidate, XX999 9999 */

```

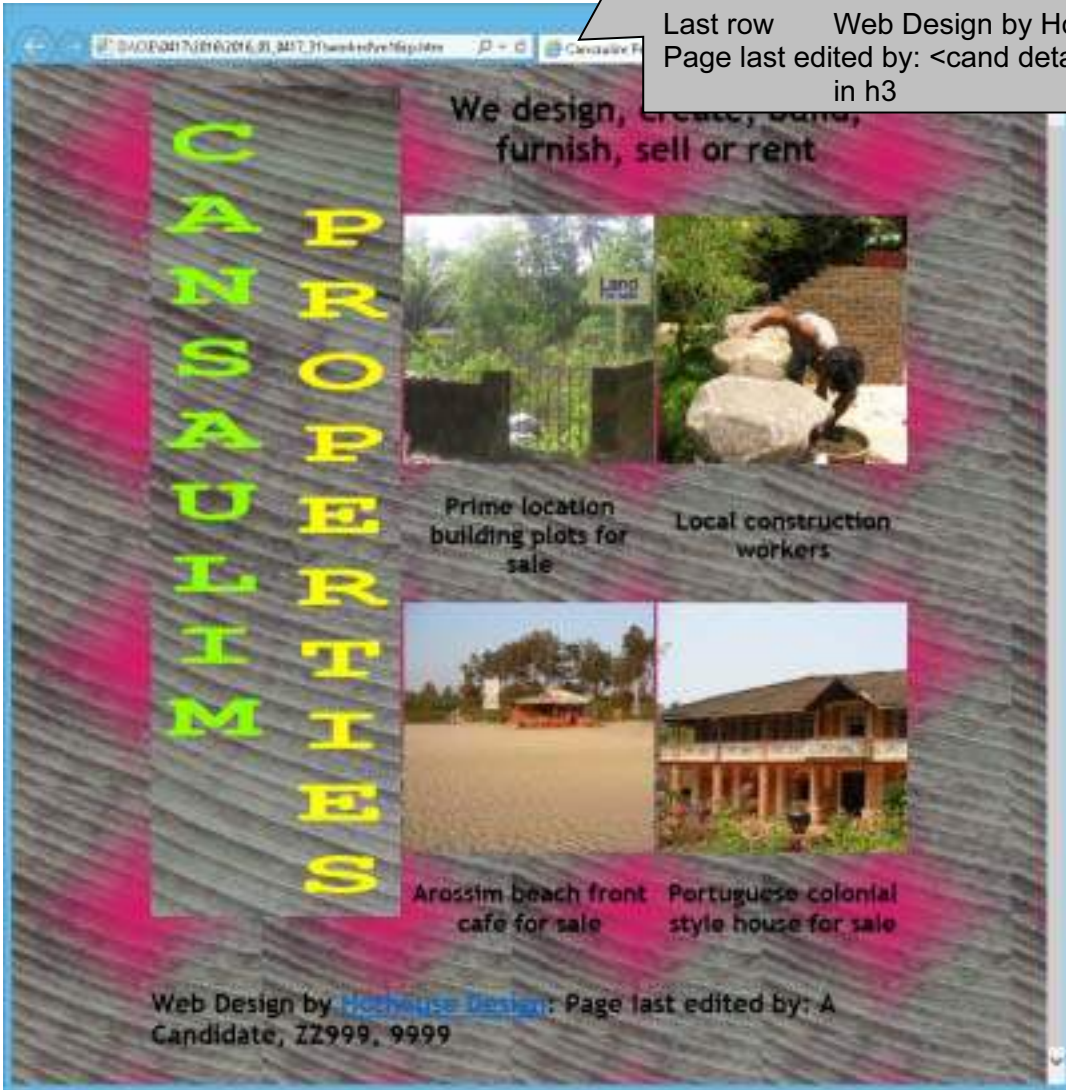
**Question 12 – Evidence 2**

- Identify each hyperlink to be tested 1 mark
- For each test identify Expected output 1 mark
- Test plan contains Actual output 1 mark
- Test plan contains remedial action/retest 1 mark

|        |                              |          |       |
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Question 12 – Evidence 3

|                                |                                     |   |
|--------------------------------|-------------------------------------|---|
| Browser view                   |                                     |   |
| In browser with no letters vis |                                     | 1 |
| Table                          | borders not visible                 | 1 |
| Left cell                      | Cansaulim Properties logo           | 1 |
| Top row                        | Text 100% correct                   | 1 |
|                                | in h1                               | 1 |
|                                | Images as shown                     |   |
|                                | 4 correct for 2 marks, 3 for 1      |   |
|                                | All 4 elements of text 100% correct | 1 |
|                                | in h2                               | 1 |
| Last row                       | Web Design by Hothouse Design:      |   |
|                                | Page last edited by: <cand details> | 1 |
|                                | in h3                               | 1 |





**Question 12 – Evidence 4**

```

<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" type="text/css" href="m16ss.css">
    <title>Cansaulim Properties </title>
  </head>
  <body>

    <table style="margin-left:auto; margin-right:auto; width:900px;">

      <tr style="height:200px;">
        <td rowspan=5 style="width:300px;">
        </td>
        <td colspan=2 ><h1>We design, create, build, furnish, sell or
rent</h1>
        </td>
      </tr>
      <tr style="height:300px;">
        <td style="width:300px;">
          
        </td>
        <td style="width:300px;">
          
        </td>
      </tr>
      <tr style="height:100px;">
        <td>
          <h2>Prime location building plots for sale</h2>
        </td>
        <td>
          <h2>Local construction workers</h2>
        </td>
      </tr>
      <tr style="height:300px;">
        <td>
          
        </td>
        <td>
          
        </td>
      </tr>
      <tr style="height:100px;">
        <td>
          <h2>Arossim beach front café for sale</h2>
        </td>
        <td>
          <h2>Portuguese style colonial house for sale</h2>
        </td>
      </tr>

```

Stylesheet m16ss.css attached 1

Table centre aligned in the window Width:900px 1

Top row height:200px 1

Left cell rowspan=5 1

Top right colspan=2 1

Rows 2 and 4 height:300px 1

<td> 3 equal (300 pixels or 33%) cell widths

Rows 3 and 5 height:100px 1

Alt attribute appropriate alt text for all 5 images 1

|                |                                     |                 |              |
|----------------|-------------------------------------|-----------------|--------------|
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|       |                          |        |
|-------|--------------------------|--------|
| Row 6 | height:80px<br>colspan=3 | 1<br>1 |
|-------|--------------------------|--------|

```

<tr style="height:80px;">
  <td colspan=3><h3>Web Design by <a href="mailto:hothouse-
design@cie.org.uk?subject=Make%20me%20a%20website!">Hothouse Design</a>:
Page last edited by: A Candidate, ZZ999, 9999</h3></td>
</tr>
</table>
</body>
</html>

```

|           |                                  |   |
|-----------|----------------------------------|---|
| Hyperlink | From <b>Hothouse Design</b> only | 1 |
|           | href="mailto:                    | 1 |
|           | hothouse-design@cie.org.uk       | 1 |
|           | ?subject=                        | 1 |
|           | Make me a website!"              | 1 |

**Question 13 – Evidence 5**  
4 from:

- Bright colours within the page attract attention
- Magenta mask on background image makes reading text difficult
- Text under image/Alt text identifies the image
- Colour schemes do not look like professional company site
- Logo does not blend with background/has poor contrast between background and text
- Image of beach front café is taken from too far away

Max 4 marks

**Question 14 – Evidence 6**

| Property ID | Location | Price | Distance in km | Travel cost |
|-------------|----------|-------|----------------|-------------|
|-------------|----------|-------|----------------|-------------|

|       |                                 |   |
|-------|---------------------------------|---|
| Row 1 | A1 to E1 merged                 | 1 |
|       | Sans-serif centre aligned font  | 1 |
|       | White text, largest font        | 1 |
|       | Black background                | 1 |
| Row 2 | Row height less than half row 3 | 1 |
| Row 3 | Sans-serif left aligned font    | 1 |
|       | Black, italic text              | 1 |
|       | Light grey background           | 1 |
| Sheet | All column widths fully visible | 1 |

**Question 16 – Evidence 7**

| Property ID | Location | Price | Area | Price per square metre | Distance in km | Travel cost |
|-------------|----------|-------|------|------------------------|----------------|-------------|
|-------------|----------|-------|------|------------------------|----------------|-------------|

|         |   |   |
|---------|---|---|
| Columns | 2 new columns inserted after C            | 1 |
| Row 3   | Alignment changed from left to centre     | 1 |
|         | Column widths narrowed                    | 1 |
|         | Text wrapped, 100% accurate fully visible | 1 |

Both screen shots Row and column headings visible 1

**Question 19 – Test Plan**

| Cell reference | G5                                  |                  |   |                          |                 |    |         |   |     |
|----------------|-------------------------------------|------------------|---|--------------------------|-----------------|----|---------|---|-----|
| Formula tested | =ROUNDUP(10+IF(F5<6,7.5,FF5+1.5),0) |                  |   |                          |                 |    |         |   |     |
| Test data      | Why chosen                          | Expected outcome | Actual Outcome  | Tested formula works Y/N | Remedial action |    |         |   |     |
| 5              | Value below 6                       | 18               | <table border="1"> <thead> <tr> <th>Distance in km</th> <th>Travel cost</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>₹ 18.00</td> </tr> </tbody> </table>  | Distance in km           | Travel cost     | 5  | ₹ 18.00 | Y | n/a |
| Distance in km | Travel cost                         |                  |   |                          |                 |    |         |   |     |
| 5              | ₹ 18.00                             |                  |   |                          |                 |    |         |   |     |
| 6              | Value of test =6                    | 19               | <table border="1"> <thead> <tr> <th>Distance in km</th> <th>Travel cost</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>₹ 19.00</td> </tr> </tbody> </table>  | Distance in km           | Travel cost     | 6  | ₹ 19.00 | Y | n/a |
| Distance in km | Travel cost                         |                  |   |                          |                 |    |         |   |     |
| 6              | ₹ 19.00                             |                  |   |                          |                 |    |         |   |     |
| 10             | Value above 6 & easy to calculate   | 25               | <table border="1"> <thead> <tr> <th>Distance in km</th> <th>Travel cost</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>₹ 25.00</td> </tr> </tbody> </table> | Distance in km           | Travel cost     | 10 | ₹ 25.00 | Y | n/a |
| Distance in km | Travel cost                         |                  |   |                          |                 |    |         |   |     |
| 10             | ₹ 25.00                             |                  |   |                          |                 |    |         |   |     |

|   |   |
|---|---|
| Cell reference & formula tested correct | 1 |
| Headings Expected and Actual Outcome    | 1 |

|               |                                     |   |
|---------------|-------------------------------------|---|
| Test data     | selected 6, above and below         | 1 |
| Test data     | easy to calculate manually          | 1 |
| Reasons       | for choice of test data appropriate | 1 |
| Calcs correct | Expected output                     | 3 |
| Screen shots  | of actual output shown              | 1 |

|         |                              |          |       |
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|        |                                |   |
|--------|--------------------------------|---|
| Header | Auto filename and path on left | 1 |
|--------|--------------------------------|---|

| Cansaulim Properties |                    |          |      |                        |                |                                    |
|----------------------|--------------------|----------|------|------------------------|----------------|------------------------------------|
| Property ID          | Location           | Price    | Area | Price per square metre | Distance in km | Travel cost                        |
| CP1007               | Dona Paula, Panjim | 22000000 | 171  | =ROUND(C5/D5,0)        | 28.1           | =ROUNDUP(10+IF(F5<6,7.5,F5*1.5),0) |

|                               |  |   |
|-------------------------------|--|---|
| <b>Price per square metre</b> |  |   |
| =ROUND()                      |  | 1 |
| C5/D5                         |  | 1 |
| ,0                            |  | 1 |

|                    |  |   |
|--------------------|--|---|
| <b>Travel cost</b> |  |   |
| =ROUNDUP()         |  | 1 |
| 10+                |  | 1 |
| IF()               |  | 1 |
| F5<6               |  | 1 |
| ,7.5               |  | 1 |
| ,F5*1.5            |  | 1 |
| ,0                 |  | 1 |

|          |  |   |
|----------|--|---|
| Printout | single landscape page and formulae fully visible | 1 |
|----------|--|---|

| Cansaulim Properties |                    |                 |      |                        |                |             |
|----------------------|--------------------|-----------------|------|------------------------|----------------|-------------|
| Property ID          | Location           | Price           | Area | Price per square metre | Distance in km | Travel cost |
| CP1007               | Dona Paula, Panjim | ₹ 22,000,000.00 | 171  | ₹ 128,655.00           | 28.1           | ₹ 53.00     |

|          |                                     |   |
|----------|-------------------------------------|---|
| Format   | Columns C,E,G only in rupees to 2dp | 1 |
| Printout | single page and fully visible       | 1 |