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**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

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**INFORMATION AND COMMUNICATION TECHNOLOGY**

**0417/32**

Paper 3 Practical Test B

**May/June 2017**

**MARK SCHEME**

Maximum Mark: 80

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|                  |
|------------------|
| <b>Published</b> |
|------------------|

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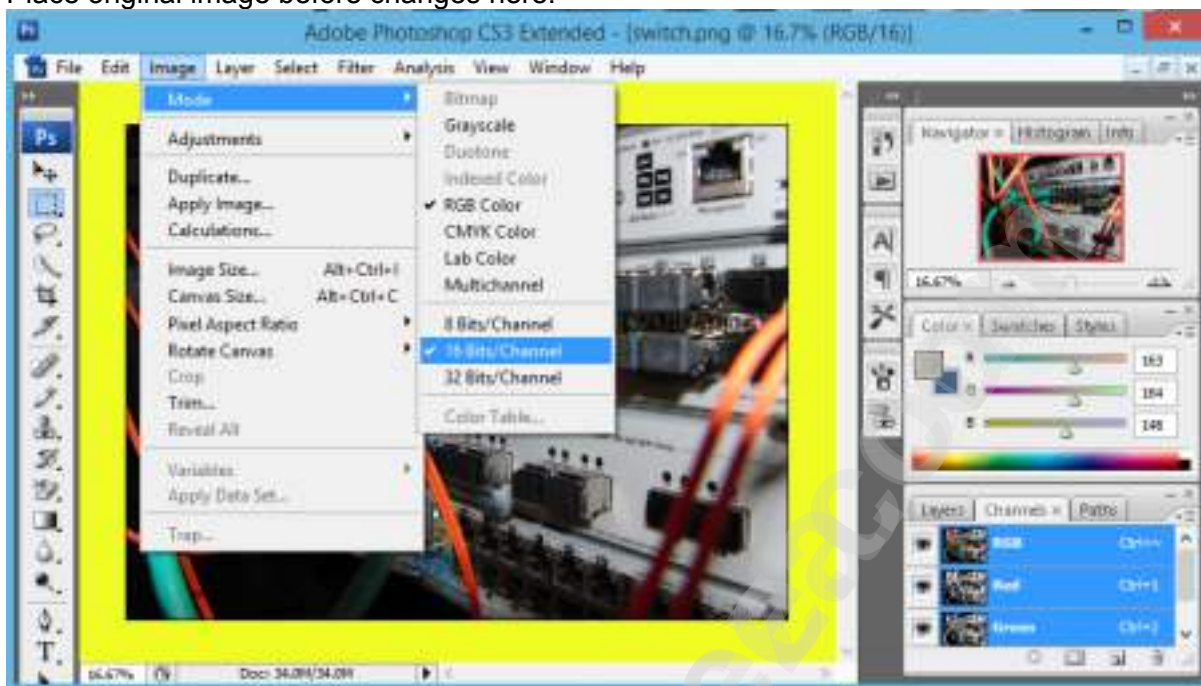
This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

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This document consists of **11** printed pages.

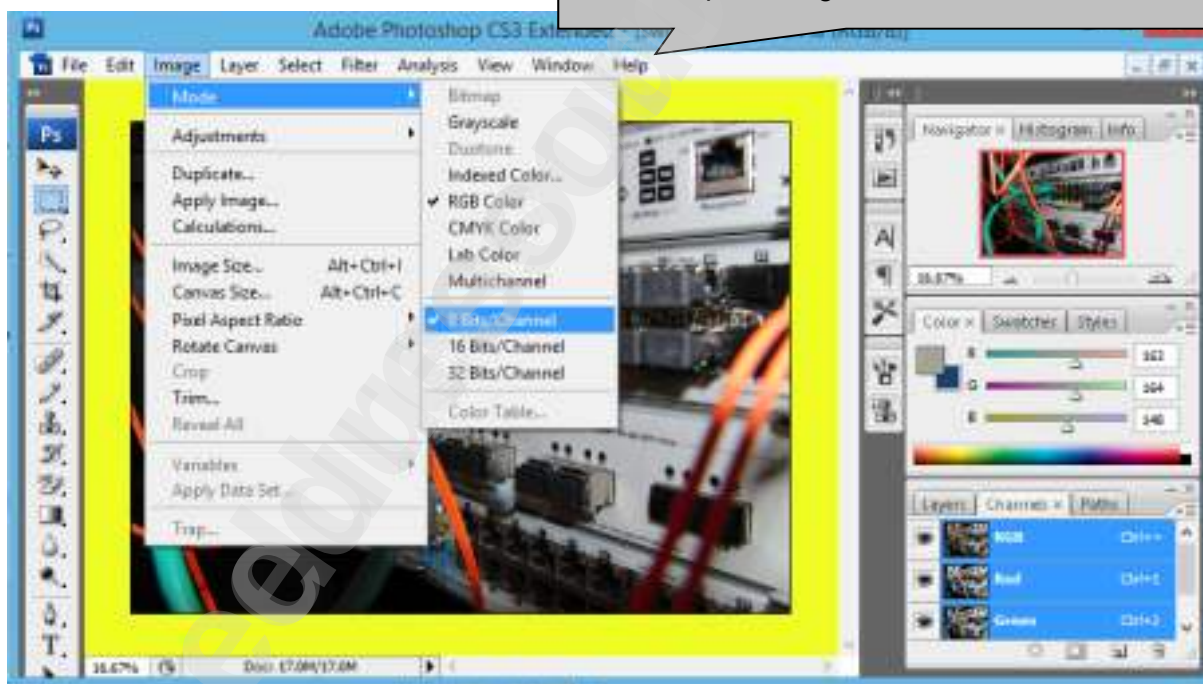
## Evidence 1

Place original image before changes here:



Place image after changes here:

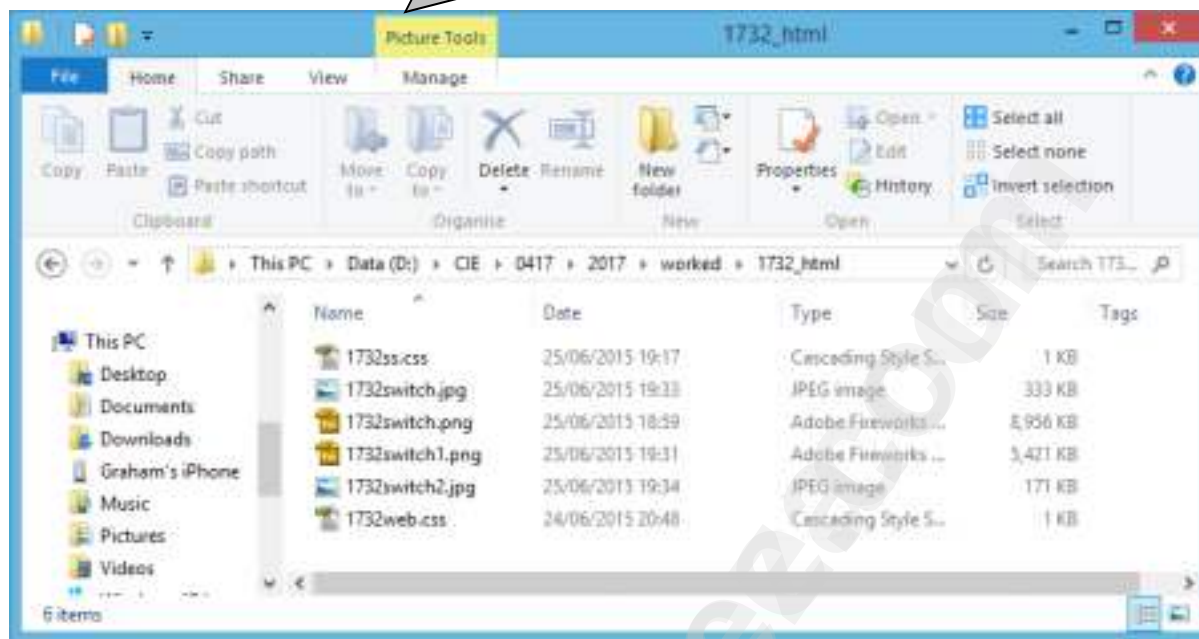
Colour depth changed from 16 to 8 bits 1 mark



1732\_html 1732web.css, 1732ss.css, 1732switch.png  
 Visible with file sizes 1 mark  
 jpg/gif/png saved with reduced file size 1 mark

## Evidence 2

Place image of folder showing for all file names, extensions and sizes:



Evaluation; (4 from) 1 mark each  
 Changed from PNG to JPG/GIF format  
 Changed to 8 bits/channel  
 To reduce storage space/file size  
 To reduce image transmission/upload/download time  
 8 bits per channel reduces transmission time by about ½.  
 Reduced image quality may not be suitable for web page

## Evidence 3

Place your evaluation here:

File has been changed from PNG file settings of 16 bits/channel to a JPG/GIF file of 8 bits per channel. This reduces storage space and image transmission time by about ½.

**Evidence 4**

Place screenshot of the cropped image here:

Cropped to show middle 1/3 only 1 mark



|             |                                  |        |
|-------------|----------------------------------|--------|
| Comments    | /* Candidate details */          | 1 mark |
| table       | width:600px                      | 1 mark |
|             | margin-left:auto                 | 1 mark |
|             | margin-right:auto                | 1 mark |
| h1          | color: #000080                   | 1 mark |
|             | font-family: Chalkduster         | 1 mark |
|             | ,Verdana                         | 1 mark |
|             | ,sans-serif                      | 1 mark |
|             | font-size:30pt                   | 1 mark |
|             | text-align:center                | 1 mark |
| h2,h3,li    | font-family:Arial,sans-serif     | 1 mark |
| font-family | one style set for all 3 styles   | 1 mark |
| h2,li       | font-size:16pt                   | 1 mark |
| font-size   | one style set for these 2 styles | 1 mark |
| h3          | font-size:14pt                   | 1 mark |
|             | font-style:italic                | 1 mark |
| CSS syntax  | Including ; between properties   | 1 mark |

**Evidence 5**

1732ss9999.css - Notepad

File Edit Format View Help

/\*A Candidate,ZZ999,9999\*/

```

table      {width:600px;
            margin-left:auto;
            margin-right:auto}
h1         {color:#000080;
            font-family:Chalkduster,Verdana,sans-serif;
            font-size:30pt;
            text-align:center}
h2,h3,li   {font-family:Arial,sans-serif}
h2,li      {font-size:16pt}
h3         {font-size:14pt;
            font-style:italic}

```

|             |                                           |             |
|-------------|-------------------------------------------|-------------|
| Browser     | In browser                                | 1 mark      |
| Table       | 3 columns & 4 rows                        | 1 mark      |
|             | borders visible                           | 1 mark      |
| 1st row     | <b>Uploading and publishing a website</b> | 1 mark      |
|             | as h1                                     | 1 mark      |
| 2nd row     | <b>The acronym ftp stands for:</b>        | 1 mark      |
|             | File Transfer Protocol                    | 1 mark      |
|             | image 1732img.jpg                         | 1 mark      |
| 3rd row     | Correct text in left cell                 | 1 mark      |
|             | 3+ answers as numbered list               | 1 mark      |
| 4th row     | Website created by: & name & numbers      | 1 mark      |
| Left column | Rows 2-4 set as style h3                  | 1 mark      |
| 2nd column  | Row 2 set as style h2                     | 1 mark      |
| (3 from):   |                                           | 1 mark each |

FTP client software  
All files in one folder  
Host Name/URL/IP address for ftp  
Host port to be used for upload  
Username and password

## Evidence 6

C:\Users\Graham\Desktop X +

← → ↻ file:///C:/Users/Graham/...

# Uploading and publishing a website

|                                                                                           |                                                                                                                                                                                                                            |                                                                                      |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>The acronym ftp stands for:</b>                                                        | <b>File Transfer Protocol</b>                                                                                                                                                                                              |  |
| <b>Here are 3 things needed to upload and publish the content of a website using ftp:</b> | <ol style="list-style-type: none"> <li>1. FTP client software</li> <li>2. All files in one folder</li> <li>3. Host Name for FTP</li> <li>4. Host port to be used for upload</li> <li>5. Username &amp; password</li> </ol> |                                                                                      |
| <b>Website created by: A Candidate, ZZ999, 9999</b>                                       |                                                                                                                                                                                                                            |                                                                                      |

**Evidence 7**`<!DOCTYPE html>``<html>``<head>``<link rel="stylesheet" href="1732web.css">``<link rel="stylesheet" href="1732ss9999.css">``</head>``<body>``<table border="1">``<tr>``<td colspan=3><h1>Uploading and publishing a website</h1>``</td>``</tr>``<tr>``<td><h3>The acronym ftp stands for:</h3>``</td>``<td><h2>File Transfer Protocol</h2>``</td>``<td rowspan=3>````</td>``</tr>``<tr>``<td><h3>Here are 3 things needed to upload and publish the content of a website using ftp:</h3>``</td>``<td>``<ol>``<li>FTP client software</li>``<li>All files in one folder</li>``<li>Host Name for FTP</li>``<li>Host port to be used for upload</li>``<li>Username & password</li>``</ol>``</td>``</tr>``<tr>``<td colspan=2>``<h3>Website created by: A Candidate, ZZ999, 9999</h3>``</td>``</tr>``</table>``</body>``</html>`

|            |                                        |        |
|------------|----------------------------------------|--------|
| Stylesheet | 1732web.css attached                   | 1 mark |
|            | 1732ss?????.css attached below web.css | 1 mark |
|            | head and body syntax correct           | 1 mark |

|           |        |
|-----------|--------|
| colspan=3 | 1 mark |
|-----------|--------|

|         |                    |        |
|---------|--------------------|--------|
| 2nd row | 3rd <td> rowspan=3 | 1 mark |
|---------|--------------------|--------|

|       |                                 |        |
|-------|---------------------------------|--------|
| Image | Resized to 200px wide           | 1 mark |
| Image | Appropriate alt text attributes | 1 mark |

|                                  |        |
|----------------------------------|--------|
| Numbered list visible (set <ol>) | 1 mark |
|----------------------------------|--------|

|       |           |        |
|-------|-----------|--------|
| Row 4 | colspan=2 | 1 mark |
|-------|-----------|--------|

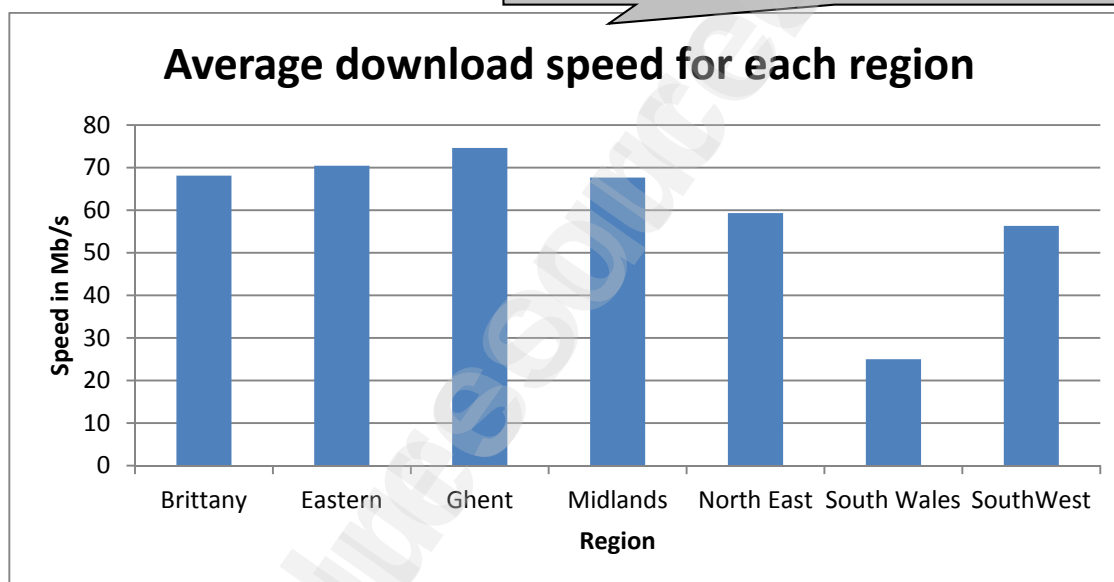
**Evidence 8**

|          |                                   |        |
|----------|-----------------------------------|--------|
| Function | =AVERAGEIF() or equivalent        | 1 mark |
|          | Correct ranges and cell reference | 1 mark |
|          | Replicated for all regions        | 1 mark |

|      |                                              |
|------|----------------------------------------------|
| =D4  | =AVERAGEIF(\$D\$4:\$D\$64,G3,\$E\$4:\$E\$64) |
| =D8  | =AVERAGEIF(\$D\$4:\$D\$64,G4,\$E\$4:\$E\$64) |
| =D22 | =AVERAGEIF(\$D\$4:\$D\$64,G5,\$E\$4:\$E\$64) |
| =D35 | =AVERAGEIF(\$D\$4:\$D\$64,G6,\$E\$4:\$E\$64) |
| =D43 | =AVERAGEIF(\$D\$4:\$D\$64,G7,\$E\$4:\$E\$64) |
| =D54 | =AVERAGEIF(\$D\$4:\$D\$64,G8,\$E\$4:\$E\$64) |
| =D60 | =AVERAGEIF(\$D\$4:\$D\$64,G9,\$E\$4:\$E\$64) |

**Evidence 9**

|            |                                |        |
|------------|--------------------------------|--------|
| Chart type | Bar chart with correct data    | 1 mark |
|            | Titled and axes fully labelled | 1 mark |



|             |                                        |        |
|-------------|----------------------------------------|--------|
| Provider    | VLOOKUP () used                        | 1 mark |
|             | Correct relative lookup reference – B4 | 1 mark |
|             | Contents of file '1732Provider.csv'    | 1 mark |
|             | Range !\$A\$2:\$B\$30 with abs ref     | 1 mark |
|             | Correct return column 2                | 1 mark |
|             | ,False for correct only / sorted data  | 1 mark |
| Printout    | Landscape, fully visible, A1-F18 only  | 1 mark |
|             | Row and column headings displayed      | 1 mark |
| Replication | Formula replicated correctly           | 1 mark |

## Step 17

| Broadband speed test data |      |        |                                                                                      |            |                    |
|---------------------------|------|--------|--------------------------------------------------------------------------------------|------------|--------------------|
|                           | Code | PCCode | Provider                                                                             | Region     | Speed (in Mb/s)    |
|                           |      |        |                                                                                      |            | Download    Upload |
| 4                         | DN1  | F      | =VLOOKUP(B4,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | Eastam     | 43.88    16.61     |
| 5                         | DN2  | V      | =VLOOKUP(B5,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | Eastam     | 67.96    8.51      |
| 6                         | DN3  | B      | =VLOOKUP(B6,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | North East | 49.3    7.98       |
| 7                         | DN4  | S      | =VLOOKUP(B7,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | North East | 61.7    11.98      |
| 8                         | DN5  | X      | =VLOOKUP(B8,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | North East | 60.3    9.58       |
| 9                         | DN6  | V      | =VLOOKUP(B9,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)  | North East | 161.79    14.35    |
| 10                        | DN7  | K      | =VLOOKUP(B10,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 57.35    9.51      |
| 11                        | DN8  | P      | =VLOOKUP(B11,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 82.85    16.97     |
| 12                        | DN9  | AB     | =VLOOKUP(B12,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 39.2    5.84       |
| 13                        | EN10 | E      | =VLOOKUP(B13,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 50.55    8.11      |
| 14                        | EN11 | A      | =VLOOKUP(B14,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 61.5    10.3       |
| 15                        | FN12 | T      | =VLOOKUP(B15,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 90.2    4.54       |
| 16                        | EN13 | D      | =VLOOKUP(B16,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 69    11.3         |
| 17                        | EN14 | C      | =VLOOKUP(B17,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 43.8    6.29       |
| 18                        | EN15 | Q      | =VLOOKUP(B18,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE) | North East | 41.95    5.89      |

Footer      Name and numbers in centre      1 mark

A Candidate Z7999 9999

## Step 18

|               |                                                                              |        |
|---------------|------------------------------------------------------------------------------|--------|
| Inserted      | 2 new rows at top of page                                                    | 1 mark |
| Top row       | Merge cells A1 to F1, centre aligned                                         | 1 mark |
|               | White 24 point                                                               | 1 mark |
|               | Serif font                                                                   | 1 mark |
|               | Black background                                                             | 1 mark |
| Cells A1 & E2 | Broadband speed test data                                                    |        |
|               | Speed (in Mb/s) 100% correct                                                 | 1 mark |
|               | Merged cell E2:F2 right aligned                                              | 1 mark |
|               | Cell E2 formatted as subtitle                                                | 1 mark |
|               | Fits single portrait page wide, fully visible with no row or column headings | 1 mark |

## Broadband

## Speed (in Mb/s)

| Code | PCode | Provider     | Region      | Download | Upload |
|------|-------|--------------|-------------|----------|--------|
| EN1  | F     | ECC          | Eastern     | 43.88    | 16.61  |
| EN2  | V     | Virgin media | Eastern     | 97.06    | 8.51   |
| EN3  | B     | BT           | North East  | 49.9     | 7.98   |
| EN4  | S     | Sky          | North East  | 61.7     | 11.84  |
| EN5  | X     | TalkTalk     | North East  | 60.3     | 9.56   |
| EN6  | V     | Virgin media | North East  | 161.75   | 22.35  |
| EN7  | K     | Kcom         | North East  | 57.55    | 9.51   |
| EN8  | P     | Plusnet      | North East  | 82.85    | 16.07  |
| EN9  | AB    | Tiscali      | North East  | 39.2     | 5.84   |
| EN10 | E     | EE           | North East  | 50.55    | 8.11   |
| EN11 | A     | BE           | North East  | 61.5     | 10.3   |
| EN12 | T     | 3            | North East  | 30.2     | 4.54   |
| EN13 | O     | Orange       | North East  | 69       | 13.3   |
| EN14 | C     | Connexin     | North East  | 43.8     | 6.26   |
| EN15 | Q     | Quickline    | North East  | 41.95    | 5.89   |
| EN16 | L     | Vodafone     | North East  | 56.3     | 8.76   |
| EN17 | U     | Tmobile      | North East  | 23.7     | 4.74   |
| EN18 | B     | BT           | Midlands    | 45.8     | 9.16   |
| EN19 | S     | Sky          | Midlands    | 56.7     | 10.84  |
| EN20 | X     | TalkTalk     | Midlands    | 50.4     | 9.58   |
| EN21 | V     | Virgin media | Midlands    | 143.15   | 18.63  |
| EN22 | P     | Plusnet      | Midlands    | 59.75    | 9.45   |
| EN23 | AB    | Tiscali      | Midlands    | 33       | 4.1    |
| EN24 | E     | EE           | Midlands    | 57.2     | 9.94   |
| EN25 | A     | BE           | Midlands    | 66.7     | 12.84  |
| EN26 | T     | 3            | Midlands    | 72.7     | 12.04  |
| EN27 | O     | Orange       | Midlands    | 81.2     | 14.24  |
| EN28 | U     | Tmobile      | Midlands    | 63.05    | 11.11  |
| EN29 | Z     | Zen          | Midlands    | 82.3     | 15.46  |
| EN30 | B     | BT           | SouthWest   | 56.25    | 9.75   |
| EN31 | S     | Sky          | SouthWest   | 57.05    | 8.91   |
| EN32 | X     | TalkTalk     | SouthWest   | 61.8     | 11.36  |
| EN33 | V     | Virgin media | SouthWest   | 149.95   | 19.99  |
| EN34 | P     | Plusnet      | SouthWest   | 39       | 7.8    |
| EN35 | AB    | Tiscali      | SouthWest   | 32.95    | 6.09   |
| EN36 | E     | EE           | SouthWest   | 56.55    | 8.81   |
| EN37 | A     | BE           | SouthWest   | 35.15    | 5.03   |
| EN38 | T     | 3            | SouthWest   | 35.35    | 5.57   |
| EN39 | G     | Eclipse      | SouthWest   | 39.1     | 5.82   |
| WA1  | B     | BT           | South Wales | 33.1     | 5.62   |
| WA3  | X     | TalkTalk     | South Wales | 21.3     | 2.26   |
| WA4  | V     | Virgin media | South Wales | 51.7     | 8.34   |
| WA6  | P     | Plusnet      | South Wales | 11.5     | 1.3    |
| WA7  | AB    | Tiscali      | South Wales | 29.45    | 4.89   |
| WA8  | E     | EE           | South Wales | 27.25    | 3.45   |
| WA9  | A     | BE           | South Wales | 16.8     | 1.86   |

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|      |    |             |             |        |       |
|------|----|-------------|-------------|--------|-------|
| WA10 | T  | 3           | South Wales | 24.35  | 3.87  |
| WA11 | O  | Orange      | South Wales | 33.25  | 5.15  |
| WA16 | Z  | Zen         | South Wales | 1.45   | -0.21 |
| FR1  | O  | Orange      | Brittany    | 48.55  | 9.21  |
| FR2  | M  | SAS         | Brittany    | 83.35  | 15.17 |
| FR3  | Y  | SFR         | Brittany    | 43     | 6.6   |
| FR4  | N  | Numericable | Brittany    | 97.65  | 18.03 |
| FR5  | W  | Wifirst     | Brittany    | 68.1   | 11.12 |
| BE1  | AA | Telenet     | Ghent       | 77     | 13.9  |
| BE2  | H  | Belgacom    | Ghent       | 82.55  | 15.01 |
| BE3  | R  | Scarlet     | Ghent       | 45.8   | 8.66  |
| BE4  | AC | Surf        | Ghent       | 41.25  | 5.75  |
| BE5  | J  | UPC Austria | Ghent       | 138.65 | 17.73 |
| BE6  | I  | Belnet      | Ghent       | 69.75  | 11.95 |
| BE7  | D  | Destiny     | Ghent       | 67.4   | 10.98 |

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|           |                                        |        |
|-----------|----------------------------------------|--------|
|           | 1732logo.jpg resized in correct place  | 1 mark |
| Searching | Virgin media or 3 or Orange or Tmobile | 1 mark |
|           | Download >30                           | 1 mark |
|           | Sorted ascending on Provider           | 1 mark |

## Step 20

| Broadband speed test data |       |              |             |                 |        |
|---------------------------|-------|--------------|-------------|-----------------|--------|
|                           |       |              |             | Speed (in Mb/s) |        |
| Code                      | PCode | Provider     | Region      | Download        | Upload |
| EN12                      | T     | 3            | North East  | 30.2            | 4.54   |
| EN26                      | T     | 3            | Midlands    | 72.7            | 12.04  |
| EN38                      | T     | 3            | SouthWest   | 35.35           | 5.57   |
| EN13                      | O     | Orange       | North East  | 69              | 13.3   |
| EN27                      | O     | Orange       | Midlands    | 81.2            | 14.24  |
| WA11                      | O     | Orange       | South Wales | 33.25           | 5.15   |
| FR1                       | O     | Orange       | Brittany    | 48.55           | 9.21   |
| EN28                      | U     | Tmobile      | Midlands    | 63.05           | 11.11  |
| EN2                       | V     | Virgin media | Eastern     | 97.06           | 8.51   |
| EN6                       | V     | Virgin media | North East  | 161.75          | 22.35  |
| EN21                      | V     | Virgin media | Midlands    | 143.15          | 18.63  |
| EN33                      | V     | Virgin media | SouthWest   | 149.95          | 19.99  |
| WA4                       | V     | Virgin media | South Wales | 51.7            | 8.34   |

|             |                                           |        |
|-------------|-------------------------------------------|--------|
| 2nd extract | Also upload speed >10                     | 1 mark |
|             | Sorted descending on region then download | 1 mark |

## Step 21

| Broadband speed test data |       |              |            |                 |        |
|---------------------------|-------|--------------|------------|-----------------|--------|
|                           |       |              |            | Speed (in Mb/s) |        |
| Code                      | PCode | Provider     | Region     | Download        | Upload |
| EN33                      | V     | Virgin media | SouthWest  | 149.95          | 19.99  |
| EN6                       | V     | Virgin media | North East | 161.75          | 22.35  |
| EN13                      | O     | Orange       | North East | 69              | 13.3   |
| EN21                      | V     | Virgin media | Midlands   | 143.15          | 18.63  |
| EN27                      | O     | Orange       | Midlands   | 81.2            | 14.24  |
| EN26                      | T     | 3            | Midlands   | 72.7            | 12.04  |
| EN28                      | U     | Tmobile      | Midlands   | 63.05           | 11.11  |