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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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**Published**

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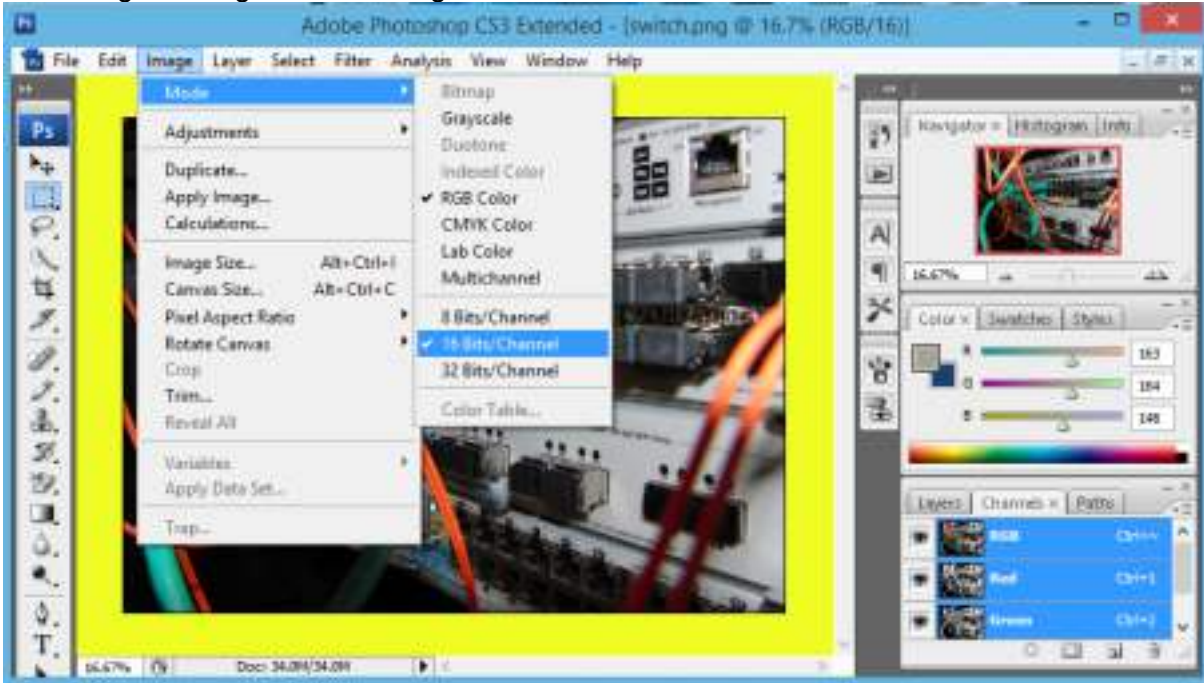
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This document consists of **11** printed pages.

# Evidence 1

Place original image before changes here:



Place image after changes here:

Colour depth changed from 16 to 8 bits 1 mark

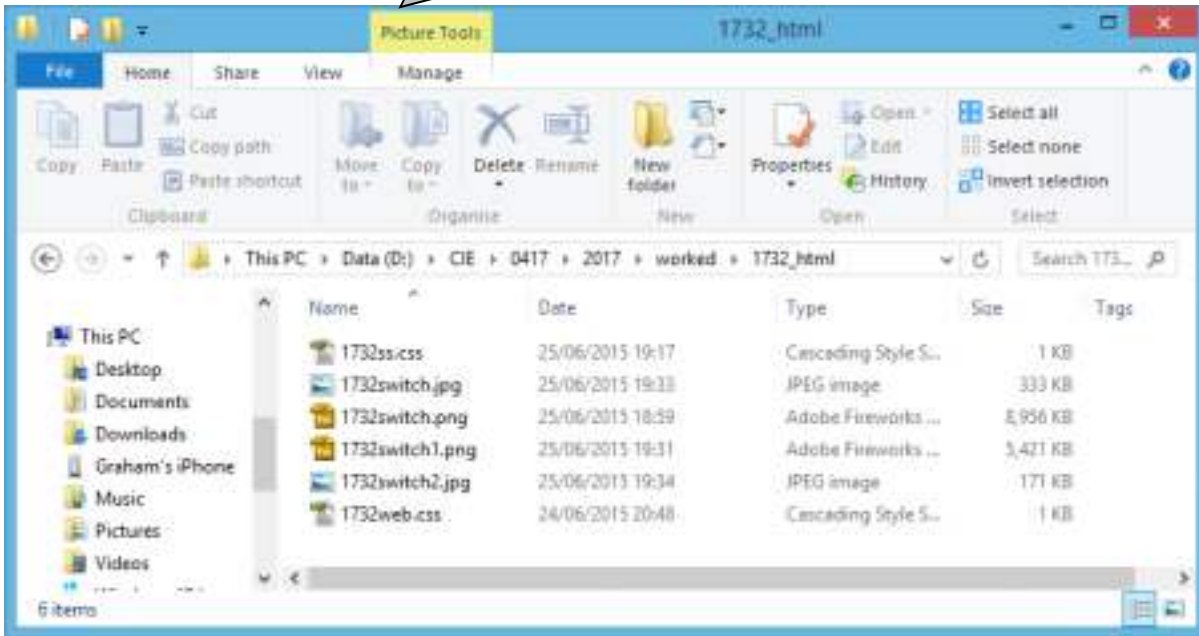


**PUBLISHED**

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 folder name, file names, extensions and sizes:



Evaluation; (4 from)	1 mark each
Changed from PNG to <u>JPG/GIF</u> 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}

```


**PUBLISHED**

Browser	In browser	1 mark
Table	3 columns & 4 rows borders visible	1 mark
1st row	<b>Uploading and publishing a website</b> as h1	1 mark
2nd row	<b>The acronym ftp stands for:</b> File Transfer Protocol	1 mark
3rd row	Correct text in left cell 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 (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**



<h1>Uploading and publishing a website</h1>		
<i>The acronym ftp stands for:</i>	<b>File Transfer Protocol</b>	
<i>Here are 3 things needed to upload and publish the content of a website using ftp:</i>	<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>	
<i>Website created by: A Candidate, ZZ999, 9999</i>		

**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
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Row 4	colspan=2	1 mark
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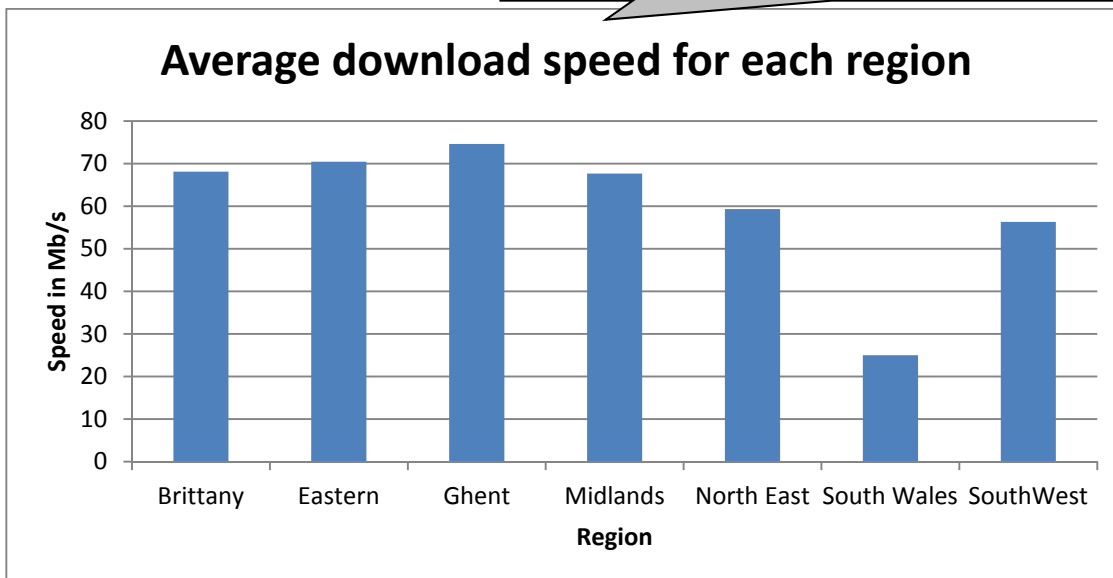
**Evidence 8**

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						
			Provider	Region	Speed (in Mb/s)	
	Code	PCode			Download	Upload
4	DN1	F	=VLOOKUP(B4,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)	Eastern	43.88	18.61
5	DN2	V	=VLOOKUP(B5,D5:C18,0417,2017,(1732Provider.csv 1732Provider!\$A\$2:\$B\$30,2,FALSE)	Eastern	67.06	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	11.88
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	11.35
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	18.07
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	18.3
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	41.90	5.89

Footer Name and numbers in centre 1 mark

A Candidate Z2999 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

## Broadbar

## 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

A Candidate, ZZ999, 9999

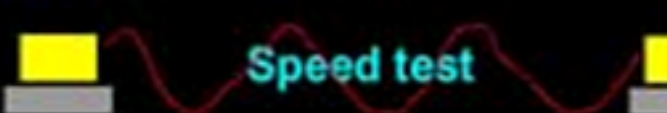
Searching	1732logo.jpg resized in correct place	1 mark
	Virgin media or 3 or Orange or Tmobile	1 mark
	Download >30	1 mark
	Sorted ascending on Provider	1 mark

**Step 20**

<b>Broadband speed test data</b>					
				<b>Speed (in Mb/s)</b>	
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**

<b>Broadband speed test data</b>					
				<b>Speed (in Mb/s)</b>	
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