Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/32**

Paper 3 Spreadsheets and Website Authoring **May/June 2023**

MARK SCHEME

Maximum Mark: 70

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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

This document consists of **10** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks

1	TAS folder S/shot: filenames, sizes, extensions, dimensions
	tiger_9999 Cropped to 500 × 1000
	           tiger_9999 in PNG format
	Tiger image rotated through 180º
	           horizontal reflection
	           with all tiger visible after left and top crops
	           foliage visible on right after right crop
	           aspect ratio maintained
		8

2	Browser view In browser with no letters vis
	Table No borders/gridlines visible
	           width=80%
	Row 1 colspan=3
	Row 2 left width: 58%
	           colspan="2"
	Row 2 right rowspan="3"
	           width:42%
	Row 3 colspan="2"
	Row 4 left 2 width:29%
		10

3	Row 2 left Video visible in correct cell
	Row 2 right Tiger image
	           Banner & 2 lower images in correct cells
	           Banner & 2 lower images aspect ratio maintained
	           Appropriate alt text for all 4 still images
	Video video <…> tag used …
	           … width="100%"
	           Source<…> tag used …
	           … src="j2332tiger.mp4"
	           type="video/mp4"
	           Appropriate error message
		11

4	Row 3 Text from source file as 2 paragraphs 3rd para Web page edited by: A Cand ZZ999 9999 In style h2	3
5	Hyperlink Anchor around elephant image href="j2332elep.htm"	2

6	Hyperlink Anchor around monkey image
	           href="mailto:
	           tas@cambridge.org
	           ?subject=
	           Support a monkey
		5

7	Browser view Address bar visible Stylesheet j2332tas.css attached	2

8	Header Spreadsheet prepared by … in centre
	          Candidate details then on
	          automated date then at
	          automated time
	          Rows 3 & 4 deleted
	B3 Contains text Income
		6

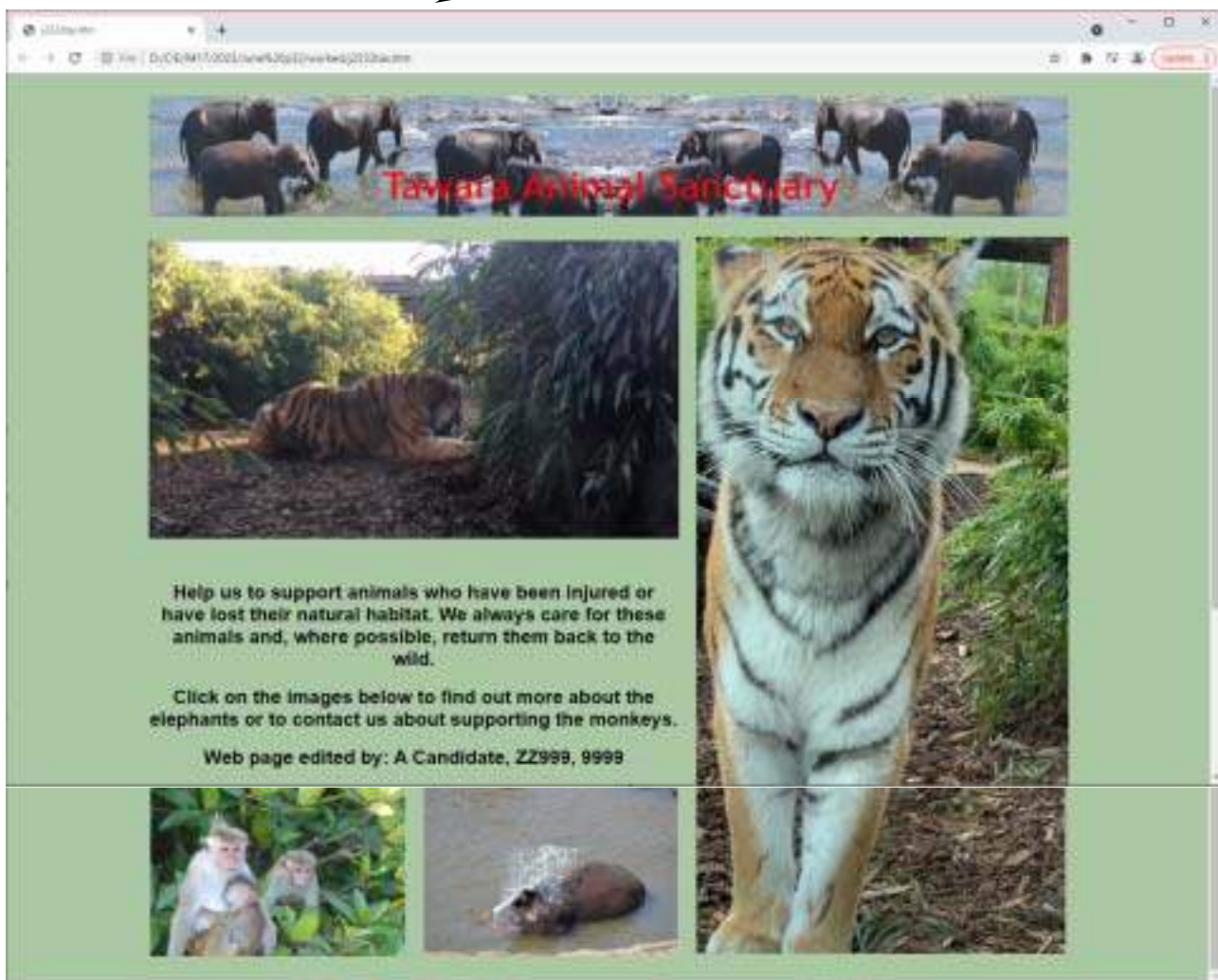| Question	Answer	Marks
9	A1:N1 Merged and centre aligned … … Large white sans-serif font black background Merged A9:A12, A13:A16 and A17:A20 Rows 7, 21 Less than 1/2 height of row 3 Grey Correct 7 cells with grey background Bold Rows 2,3,8,22 and column A Centre Row 2 and columns A and B	7
10	C12 =SUM(C9:C11) … … replicated to N12 C16 & 20 Correct formulae replicated to column N	3
11	C23 =C4-C12 C24 =C5-C16 C25 =C6-C20 C23:C25 Replication correct	4
12	Numeric data in $ with 2dp	1
13	Rules Both applied to cells C23:N25 Cell value >=0 … … dark blue text … … on light green background Cell value <0 … … red text on white background	6
14	Printout Landscape row & col heads fully visible	1
15	All Fully visible with no row & column headings	1

Evidence document

Evidence 1

TAS folder	S/shot: filenames, sizes, extensions, dimensions	1 mark
tiger_9999	Cropped to 500 × 1000	1 mark
	tiger_9999 in PNG format	1 mark

> This PC > Local Disk (D:) > CIE > 0417 > 2023 > June p32 > worked > TAS

Name ^	Date	Type	Size	Dimensions
j2332banner.jpg	11/04/2021 10:21	JPG File	77 KB	2000 x 262
j2332elep.htm	11/04/2021 10:53	Chrome HTML Do...	1 KB	
j2332eleph1.jpg	10/04/2014 18:11	JPG File	93 KB	800 x 600
j2332elephant.jpg	18/01/2020 06:11	JPG File	93 KB	1000 x 665
j2332monkey.jpg	15/01/2020 05:14	JPG File	80 KB	1000 x 665
j2332tas.css	11/04/2021 11:05	Cascading Style S...	1 KB	
j2332tas.txt	11/04/2021 11:01	Text Document	1 KB	
j2332tiger.jpg	10/04/2021 11:10	JPG File	1,189 KB	1062 x 1280
j2332tiger.mp4	11/04/2021 10:32	VLC media file (.m...	690 KB	
tiger_9999.png	10/04/2021 11:22	Adobe Fireworks ...	959 KB	500 x 1000

Evidence 2

	In browser with no letters vis	1 mark
	address bar visible	1 mark
Table	No borders/gridlines visible	1 mark
Row 2 left	Video visible in correct cell	1 mark
Tiger image	Placed in row 2 right column	1 mark
	Rotated through 180º	1 mark
	Horizontal reflection	1 mark
	With all tiger visible after left and top crops	1 mark
	Foliage visible on right of head after right crop	1 mark
	Aspect ratio maintained	1 mark
Row 3	Text from source file as 2 paragraphs	1 mark
3rd para	**Web page edited by:** A Cand ZZ999 9999	1 mark
Banner & 2 lower images		
	In correct cells	1 mark
	With aspect ratio maintained	1 mark

Evidence 3

```
<!DOCTYPE html>
<html>
 <head>
  <link rel="stylesheet" type="text/css" href="j2332tas.css">
 </head>
 <body>
   <table style="width:80%;">
    <tr>
     <td colspan="3">
        <img src="j2332banner.jpg" alt="Banner with images of elephants">
     </td>
    </tr>
    <tr>
     <td colspan= "2" style="width:58%;">



        <video width="100%" autoplay loop>
         <source src="j2332tiger.mp4" type="video/mp4">
          Your browser does not support this video file type.
        </video>


     </td>
     <td rowspan="3" style="width:42%;">
        <img src="tiger_9999.png" alt="Image of tiger"/>
     </td>
    </tr>
    <tr>
     <td colspan="2">



        <h2>Help us to support animals who have been injured or have lost
their natural habitat. We always care for these animals and, where
possible, return them back to the wild.</h2>
        <h2>Click on the images below to find out more about the elephants
or to contact us about supporting the monkeys.</h2>
        <h2>Web page edited by: A Candidate, ZZ999, 9999</h2>
     </td>
    </tr>
    <tr>
     <td style="width:29%;">




        <a href="mailto:tas@cambridge.org?subject=Support%20a%20monkey">
        <img src="j2332monkey.jpg" alt="Image of monkeys"/>
        </a>
     </td>
     <td style="width:29%;">
```

Annotation callouts:

- Stylesheet   j2332tas.css attached   1 mark
- Table   width=80%   1 mark
- Row 1   colspan=3   1 mark
- Row 2 left   colspan=2   1 mark / width: 58%   1 mark
- Row 2 left   video <…> tag used …   1 mark / … width="100%"   1 mark / source<…> tag used …   1 mark / … src="j2332tiger.mp4"   1 mark / type="video/mp4"   1 mark / Appropriate error message   1 mark
- Row 2 right   rowspan=3   1 mark / width:42%   1 mark
- Row 3   colspan=2   1 mark
- Row 3   In style h2   1 mark
- Row 4 left   width:29%   1 mark
- Hyperlink   Anchor around monkey image   1 mark / href="mailto: …   1 mark / … **tas@cambridge.org...**   1 mark / … ?subject=…   1 mark / … **Support a monkey"**   1 mark

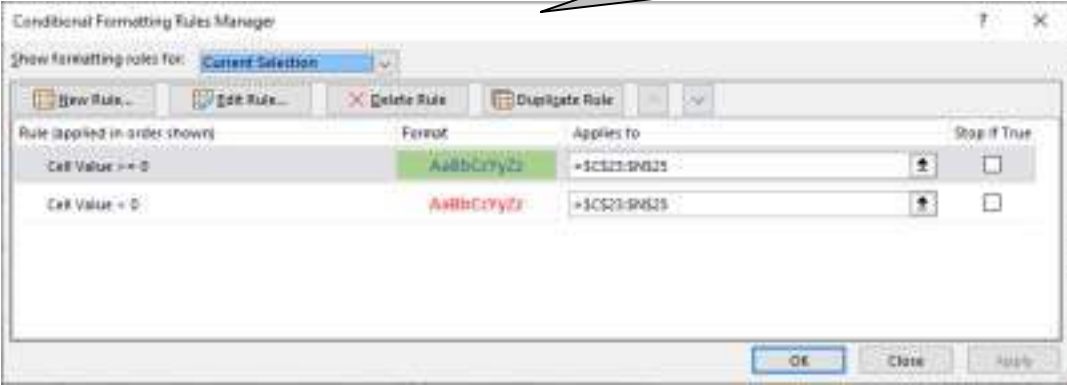```
        <img src="j2332elephant.jpg" alt="Image of
elephant taking a bath"/>
      </td
    </tr>

    </table>
  </body>
</html>
```

| Hyperlink | Anchor around elephant image | 1 mark |
| | href="j2332elep.htm" | 1 mark |
| Images | Appropriate alt text for all 4 still images | 1 mark |

**Evidence 4**

| Rules | Both applied to cells C23:N25 | 1 mark |
| | Cell value >=0 … | 1 mark |
| | … dark blue text … | 1 mark |
| | … on light green background | 1 mark |
| | Cell value <0 … | 1 mark |
| | … red text on white background | 1 mark |

**Values**



| Header | Centre aligned **Spreadsheet prepared by** [space] | 1 mark |
|---|---|---|
| | Candidate details [space] **on** [space] | 1 mark |
| | automated date [space] **at** [space] | 1 mark |
| | automated time | 1 mark |
| | Rows 3 & 4 deleted | 1 mark |
| B3 | Contains only the text **Income** | 1 mark |
| A1:N1 | Merged and centre aligned … | 1 mark |
| | … large white sans-serif font on black background | 1 mark |
| Merged | A9:A12, A13:A16 and A17:A20 | 1 mark |
| Rows 7, 21 | < 1/2 height of row 3 | 1 mark |
| Grey | Correct 7 cells with grey background | 1 mark |
| Bold | Rows 2, 3, 8, 22 and column A | 1 mark |
| Centre | Row 2 and columns A & B horizontally and | |
| | 3 merged cells vertically | 1 mark |
| All | Numeric data in $ with 2dp | 1 mark |
| | Fully visible with no row & column headings | 1 mark |

## Formulae

Spreadsheet prepared by A Candidate ZZ999 9999 on 06/09/2022 at 11:01



| | Month Income | January | February | March | April | May | June | July | August |
|---|---|---|---|---|---|---|---|---|---|
| **Project** | | | | | | | | | |
| Elephant | | 3480.38 | 2061.45 | 1893.74 | 4588.43 | 2159.94 | 6447.05 | 6541.33 | 3885.93 |
| Monkey | | 754.21 | 3421.02 | 1134.94 | 2565.61 | 3558.51 | 4056.3 | 2089.17 | 3501.97 |
| Tiger | | 2952.38 | 1968.3 | 1487.65 | 4718.99 | 5897.35 | 6820.12 | 8830.99 | 1525.76 |
| **Project** | **Expenditure** | | | | | | | | |
| Elephant | Relocation | 2716.18 | 4118.3 | 3239.28 | 2465.32 | 2973.13 | 3579.62 | 3260.53 | 33.8 |
| | Veterinary | 2190.97 | 913.81 | 1604.3 | 3595.88 | 1751.4 | 534.38 | 1856.05 | 1200.7 |
| | Food | 2045.94 | 2813.71 | 2295.06 | 2625.31 | 280.63 | 1149.43 | 2479.65 | 2007.2 |
| | Total | =SUM(C9:C11) | =SUM(D9:D11) | =SUM(E9:E11) | =SUM(F9:F11) | =SUM(G9:G11) | =SUM(H9:H11) | =SUM(I9:I11) | =SUM(J9:J11) |
| Monkey | Relocation | 542.2 | 629.35 | 357.86 | 844.56 | 681.03 | 251.3 | 485.6 | 866.48 |
| | Veterinary | 381.8 | 166.53 | 248.2 | 327.27 | 351.5 | 210.9 | 284.51 | 299.81 |
| | Food | 38.87 | 20.33 | 33.86 | 36 | 18.63 | 24.15 | 57.87 | 17.97 |
| | Total | =SUM(C13:C15) | =SUM(D13:D15) | =SUM(E13:E15) | =SUM(F13:F15) | =SUM(G13:G15) | =SUM(H13:H15) | =SUM(I13:I15) | =SUM(J13:J15) |
| Tiger | Relocation | 1322.71 | 2811.99 | 694.47 | 1050.36 | 2387.33 | 340.38 | 1893.51 | 2375.29 |
| | Veterinary | 1727.69 | 174.68 | 4026.68 | 646.21 | 1094.14 | 753.83 | 3335.82 | 26.2 |
| | Food | 4319.77 | 2678.66 | 803.92 | 2731.27 | 3085.32 | 854.12 | 1463.75 | 1310.9 |
| | Total | =SUM(C17:C19) | =SUM(D17:D19) | =SUM(E17:E19) | =SUM(F17:F19) | =SUM(G17:G19) | =SUM(H17:H19) | =SUM(I17:I19) | =SUM(J17:J19) |
| **Project** | **Balance** | | | | | | | | |
| Elephant | | =C4-C12 | =D4-D12 | =E4-E12 | =F4-F12 | =G4-G12 | =H4-H12 | =I4-I12 | =J4-J12 |
| Monkey | | =C5-C16 | =D5-D16 | =E5-E16 | =F5-F16 | =G5-G16 | =H5-H16 | =I5-I16 | =J5-J16 |
| Tiger | | =C6-C20 | =D6-D20 | =E6-E20 | =F6-F20 | =G6-G20 | =H6-H20 | =I6-I20 | =J6-J20 |

| | | |
|---|---|---|
| C12 | =SUM(C9:C11) | 1 mark |
| | Replicated to N12 | 1 mark |
| C16 & 20 | Correct formulae replicated to column N | 1 mark |
| C23 | =C4-C12 | 1 mark |
| C24 | =C5-C16 | 1 mark |
| C25 | =C6-C20 | 1 mark |
| C23:C25 | Replication correct to column N | 1 mark |
| Printout | Landscape row & col heads fully visible | 1 mark |

Spreadsheet prepared by A Candidate ZZ999 9999 on 06/09/2022 at 11:02



| | September | October | November | December |
|---|---|---|---|---|
| **diture** | | | | |
| | 8281.2 | 8264.78 | 8249.47 | 8514.5 |
| | 1018.73 | 3604.78 | 455.33 | 3126.84 |
| | 8812.25 | 472.59 | 6400.24 | 4808.71 |
| | | | | |
| | 2719.38 | 2096.41 | 831.69 | 421.84 |
| | 3052.32 | 2874.79 | 1306.57 | 1675.18 |
| | 4420.34 | 542.01 | 365.41 | 2438.73 |
| | =SUM(K9:K11) | =SUM(L9:L11) | =SUM(M9:M11) | =SUM(N9:N11) |
| | 323.59 | 698.75 | 685.38 | 534.26 |
| | 188.59 | 309.2 | 123.29 | 283.5 |
| | 21.86 | 35.45 | 7.67 | 34.32 |
| | =SUM(K13:K15) | =SUM(L13:L15) | =SUM(M13:M15) | =SUM(N13:N15) |
| | 2984.81 | 3778.31 | 2764.51 | 4239.04 |
| | 1051.52 | 3373.79 | 139.1 | 2872.11 |
| | 1850.41 | 1611.76 | 1603.44 | 1308.39 |
| | =SUM(K17:K19) | =SUM(L17:L19) | =SUM(M17:M19) | =SUM(N17:N19) |
| | | | | |
| | =K4-K12 | =L4-L12 | =M4-M12 | =N4-N12 |
| | =K5-K16 | =L5-L16 | =M5-M16 | =N5-N16 |
| | =K6-K20 | =L6-L20 | =M6-M20 | =N6-N20 |