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CAMBRIDGE
International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/04**

Paper 4 Advanced Practical **February/March 2024**

MARK SCHEME

Maximum Mark: 90

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 February/March 2024 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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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 descriptions 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.

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Task	Answer	Marks
Task 1 – Spreadsheet Candidate file **CakeSales21-23**_		
1(a) Combining	Files are combined, and Gratis entries have been removed.	1
1(b) Columns & labels	Customer_ID and Customer names have been split.	5
	Profit per order column added in the correct place and label is correct.	
	Month of order column is added in the correct place and label is correct.	
	Quarter column is added in the correct place and label is correct.	
	Days to ship column is added and label is correct.	
1(c) Columns formatted	Revenue, Cost to produce and ship, and Profit columns set to consistent currency format.	5
	Month columns is in mmmm format.	
	Quarter result is in correct numerical ordinals *(*st, *nd, *rd *th).*	
	Quarter text result is correct *('2023 No. Qtr').*	
	Days to ship value is formatted correctly *('No. days').*	
1(d) Values calculated	Month of order values are calculated correctly.	2
	Quarter Numerical values (1 to 4) are calculated correctly.	
1(e) Chart dashboard	Dashboard background is green colour and with no gridlines.	2
	Dashboard text is correct colour and size.	
1(f) Charts and titles	*Total cakes for each year* chart added to the dashboard.	4
	Total revenue for each year chart added to the dashboard.	
	Total profit for each year chart added to the dashboard.	
	All 3 Chart Titles are correct.	
1(g) Chart axes	All Chart axes are correct and show the correct values with no labels nor legends.	1
1(h) Customer order chart	Customer orders chart is added to the dashboard and all columns are displayed vertically.	4
	Years selector and correct selector label is shown.	
	Chart changes with selection.	
	Chart title is correct and is dynamic.	

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Task	Answer	Marks
1(i) Quarters chart	Quarters chart added to the dashboard.	6
	Year and Quarters selector is shown.	
	Selectors label is correct.	
	Chart changes with selection.	
	Chart titles change correctly with selection.	
	Correct horizontal axis title.	
Total marks		**30**

Task	Answer	Marks
Task 2 – Vector Graphics Candidate files **Case_ Cake_ Topping_ Cupcake_**		
2(a) Case vector	Shape is complete, symmetrical, and the aspect ratio is maintained.	4
	Front is wavy, regular, slightly concave sharp tops, and the creases are singular and match the pattern with no gaps or overhangs.	
	Rear is wavy, regular, slightly convex, and the creases are singular and match the pattern with no gaps or overhangs.	
	Front and rear of the case join seamlessly.	
2(b) Cake vector	Base is symmetrical and cake is single shaped and uniformly coloured.	3
	Crust is in the correct place and is a darker colour.	
	Cake has an appropriate colour and suitable pattern.	
2(c) Topping vector	Shape is similar to QP with smooth curves and has swirly contours.	4
	Swirl colours are 2 shades of pink.	
	Colours alternate and have no gaps.	
	Swirls have a light outline.	
2(d) Cupcake components	Cupcake components are clearly assembled into one consistent image.	4
	Order of components is correct (case rear must only be visible on sides).	
	Components are sized to fit and each roughly in proportion.	
	All images are correctly saved in .svg format.	
Total marks		**15**

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Task	Answer	Marks
Task 3 – Animation Candidate file **Bakery_**		
3(a) Workspace	Animation set to 640 pixels x 480 pixels.	1
3(b) Animation starting	Case image enters incrementally from the left inside the correct tube …	5
	… front and rear are complete and moves together	
	… moves to above chute, travels steadily on the tube baseline	
	… movement takes 1 second and is at a consistent speed	
	… ends movement correctly above the Cases chute.	
3(c) Case descending	Case image descends in straight line to baseline under the Cases chute …	3
	… movement takes 1.5 seconds to descend at a consistent speed	
	… while descending it remains within the inner boundaries of chute.	
3(d) Case moving horizontally	Case image moves horizontally on baseline and stops under chute 2 …	2
	… movement takes 1.5 seconds and is at a consistent speed.	
3(e) Cake entering	Cake image enters incrementally from the left inside the correct tube …	3
	… image is whole, fits in tube, and is on the tube baseline	
	… movement is horizontal, consistent, takes 1.5 seconds and stops above Cakes chute.	
3(f) Cake descending	Cake image descends in straight line to baseline under the Cakes chute …	4
	… while descending it remains within the inner boundaries of chute	
	… movement takes 1.5 seconds to descend at a consistent speed	
	… image is sized correctly and fits properly inside the case.	
3(g) Case and Cake moving horizontally	Case and the cake to under the nozzle and stop.	4
	Case and the cake move at a consistent speed and as a single object …	
	… movement is horizontal and takes 1.5 seconds	
	Topping appears to start flowing from inside the nozzle.	

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Task	Answer	Marks
3(h) Topping growing	Topping grows to correct size, covering partially the top of the cake.	3
	Topping is applied to centre of cake.	
	Topping animation takes 1 second to complete.	
3(i) Cupcake moving	Complete cupcake moves to the right immediately after topping is applied	3
	Cupcake elements remain as single object **…**	
	… takes 1.5 seconds to exit frame completely and sequence ends.	
3(j) Overall	Animation is smooth, without pauses or twitches and speed is consistent across all parts.	2
	Complete amination loops seamlessly after 1 second.	
Total marks		**30**

Task	Answer	Marks
Task 4 – Webpage Candidate file **Llfan**_		
4(a) Cupcake selection	Vanilla, Chocolate and Orange vectors display correctly when selected.	2
	Alert message shows with appropriate text when wrong values are input.	
4(b) Ingredient quantities	<table><tr><td>Number of cakes</td><td>6</td><td>12</td><td>18</td><td>24</td></tr><tr><td>Butter,Sugar,Flour (gms)</td><td>120</td><td>240</td><td>360</td><td>480</td></tr><tr><td>Eggs</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Extract (tsp)</td><td>0.5</td><td>1</td><td>1.5</td><td>2</td></tr></table>Ingredient quantities are correct for each entry and remain blank with error.	1
4(c) Code cupcake images	External **Cupcake.js** file is referenced correctly in html.	4
	Functions to show vanilla, chocolate, and orange cakes have been added.	
	document.getElementById(…).src code is used.	
	src=Vanilla.png, Chocolate.png, Orange.png are added correctly.	

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Task	Answer	Marks
4(d) check() Function	A valid conditional statement is used for the selection.	4
	A valid separate comparison statement is used for each quantity.	
	Valid use of document.getElementById(variable).innerHTML …	
	… with all the correct variables used.	
4(e) Quantity formulas	Syntax for multiplying the variable is correct.	2
	Variables are multiplied by NumCakes /6 .	
4(f) Alert message	A valid conditional statement is used for the selection.	2
	Alert syntax is correct, and text is appropriate.	
Total marks		**15**

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