Cambridge International AS & A Level

Cambridge Assessment International Education
Cambridge International Advanced Subsidiary and Advanced Level

INFORMATION TECHNOLOGY **9626/04**

Paper 4 Advanced Practical **October/November 2018**

MARK SCHEME

Maximum Mark: 110

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 October/November 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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[Turn over

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.

Evidence Document

Task 1(i)
Place your screenshot of the PlateViews image below here.
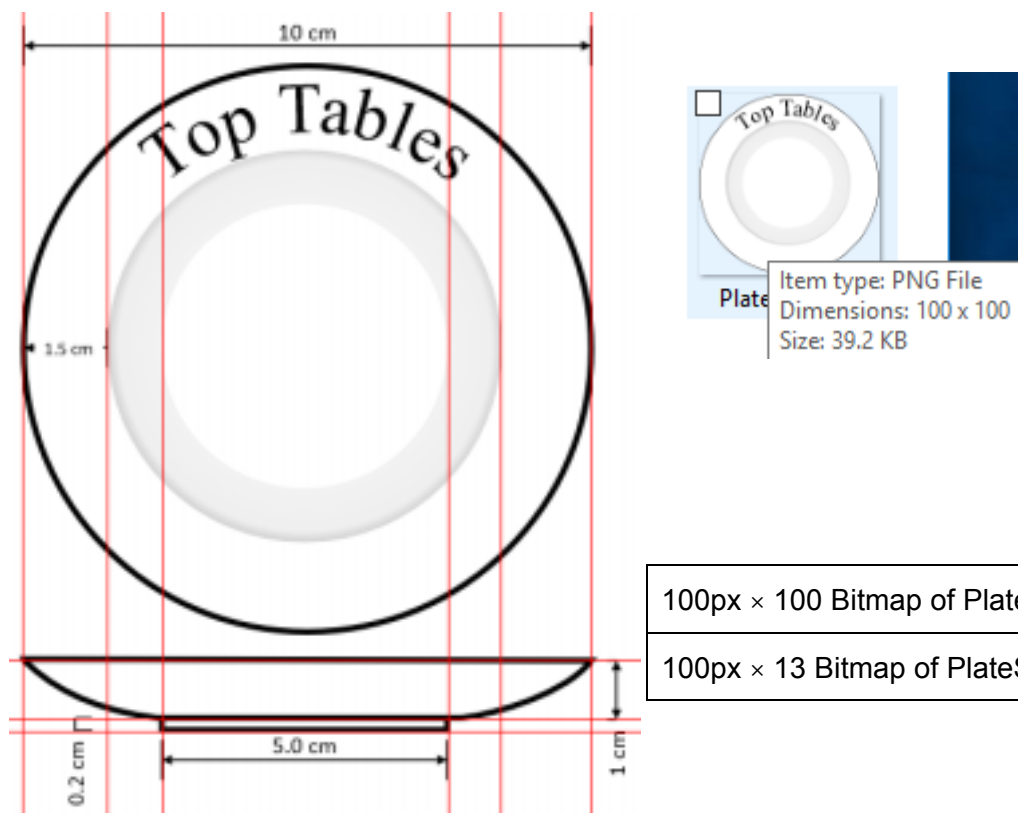
100px × 100 Bitmap of PlateFace saved	1
100px × 13 Bitmap of PlateSide saved	1

Screenshot of 2 views	1
Guidelines shown in screenshot	1
Complete view saved as .svg	1
Large white circle created	1
3 pt outline used	1
Outline is black	1
Smaller inner circle created	1
Circles are concentric	1
Circles are in the correct proportions	1
Gradient fill to inner circle	1
White/grey shading as per QP	1
Effect as per QP – less than 1/4	1

No additional inner boundary to shading	1
Correct text in correct position – top, evenly spaced in rim	1
Serif font used	1
Correct proportions (11–1 O'clock)	1
Plateside view is white with 3pt black outline	1
Image is symmetric	1
Distinct base shown	1
Body and base are in proportion	1
Images are aligned as per QP	1

Total [23]

Evidence document

Task 1
Examine the images below.

The images contain both vector and bitmap elements.

Describe and explain a simple way for determining the type of element.

Enlarge the image and **look for pixilation**	Describes valid method e.g. Enlarge image	1
	Describes valid method e.g. Look for Pixilation	1

Name the type of each element and name the image type.

	Element type		**Type of graphic image**	
Image A	Bowls: **Vector** Letter A: **Vector**	1	Vector	1
Image B	Bowls: **Vector** Letter B: **Bitmap**	1	Hybrid, Meta	1
Image C	Bowls: **Bitmap** Letter C: **Vector**	1	Hybrid, Meta	1
Image D	Bowls: **Bitmap** Letter D: **Bitmap**	1	Bitmap	1

Total [10]

Evidence document

Task 1

Describe and explain how to reduce the size of the shaded section of the plate by a half.

The radius of the inner circle is 40 px – to reduce the width of the shaded section we need to increase the radius of the inner circle.

The radius of the shaded section is 100 px – so the width of the shaded section is 100 – 40 = 60 px

Half of 60 px is 30 px so we need to increase the radius of the inner circle by 30px.

We increase the radius to 40 + 30 = 70 px

```
<circle cx="250" cy="250" r="140" stroke="black" stroke-width="4" fill="white" />
        <circle cx="250" cy="250" r="100" stroke="none" stroke-width="0" fill="url(#grad1)" />
        <circle cx="250" cy="250" r="70" stroke="none" stroke-width="0" fill="white" />
```

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explain: alter elements – radius of smaller circle	1
determine that r= radius = 40	1
Increase radius to reduce shaded area	1
Show calculation	1
Correct Calculation (100–40)/2 (=30)	1
Add for new radius (40+30) 70	1
Image saved as .svg with shaded area reduces	1
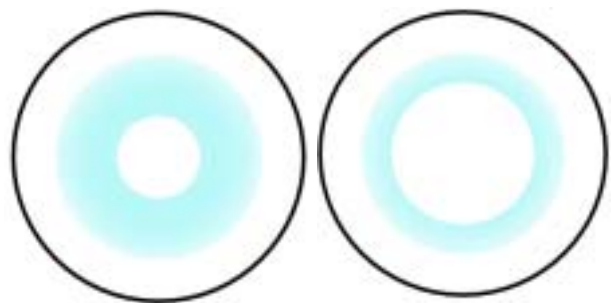
PlateTemplate   NewPlate

Total [7]

Task 2(i)

Animation is 200px × 200px	1
PlateFace image used	1
Initial image is 100px × 100px	1
Image spins	1
Image spins clockwise	1
Image grows	1
Image grows to 200px – fills frame	1
Growth takes 2 seconds	1
Image shrinks	1
Shrink takes 2 seconds	1
Animation is smooth	1
Animation is continuous – loops	1
Animation saved as .gif	1
Total	**13**
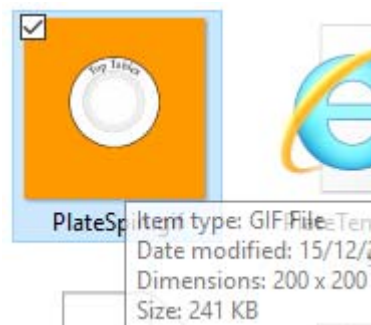
Task 2(ii)

Animation is 200px × 200px	1
PlateSide image used	1
Initial image is 100px wide - half of frame	1
Initial image is centred	1
Animation of drop takes 2 seconds	1
A stack of 4 plates is created	1
Each drop is approx. 2 seconds, top dishes may be less	1
Stack has evenly space dishes – bases behind first image	1
Stack is centred	1
The text Top Tables appears after fourth dish	1
Text is red	1
Text is 36 pt – proportions shown as per QP	1
Text is in a serif font	1
Text remains for 2 seconds	1
Animation is smooth	1
Animation is continuous – loops	1
Animation saved as .gif	1
Total	**17**

Task 3

Order_Id   Delivery_date   Delivery_time   Collection_date   Collection_time

Field Name	Data Type	
Order_Id	Short Text	
Delivery_date	Date/Time	
Delivery_time	Date/Time	
Collection_date	Date/Time	
Collection_time	Date/Time	
Duration	Calculated	
Surcharge	Calculated	

Field Properties

General | Lookup

Expression	([Collection_date]+[Collection_time])-([Delivery_date]+[Delivery_time]))*24
Result Type	Double
Format	
Decimal Places	Auto
Caption	
Text Align	General

Correct fields as given in csv file	1
Field named Duration added …	1
… as a calculated field	1
Collection component of calculation (Date+Time)	1
Delivery component of calculation (Date+Time)	1
Components are subtracted	1
Multiplication *24 included	1
( ) *24 correct use of brackets for calculation	1
Duration is set as an integer	1

Duration	Calculated
Surcharge	Calculated ⌄

General | Lookup

Expression	IIf([Duration]>72,50,IIf([Duration]>=48,20,Null))
Result Type	Long Integer
Format	£ #,##0.00
Decimal Places	Auto

Field named Surcharge added	1
Surcharge as currency £/GBP	1
IIf(Duration) test applied	1
IIf functions are nested	1
Correct logic <=48 =0 >48 =20 >72=50	1

Total [14]

Task 3

Delivery_time ▾	Collection_date ▾	Collection_time ▾	Duration ▾	Surcharge ▾	C
08:00	01/12/2018	07:00	47		

Tests produce correct results for <48 hours	1

Delivery_time ▾	Collection_date ▾	Collection_time ▾	Duration ▾	Surcharge ▾	
08:00	01/12/2018	08:00	48	20	

Tests produce correct results for =48 hours	1

Delivery_time ▾	Collection_date ▾	Collection_time ▾	Duration ▾	Surcharge ▾	C
08:00	02/12/2018	08:00	72	20	

Tests produce correct results for >48 hours	1

Delivery_time ▾	Collection_date ▾	Collection_time ▾	Duration ▾	Surcharge ▾	
08:00	02/12/2018	09:00	73	50	

Tests produce correct results for >72 hours	1

Total [4]

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Task 3

Correct title	1
Dates are shown as dd/mm/yyyy	1
Delivery dates as Asc. Order	1
Duration (hours label) added to form	1
Surcharge shown in £/GBP	1

Delivery time highlighted if before 9am	1
Formatting is white on red	1

Total [7]

Task 4

Page remains intact throughout testing – input boxes central	1
Submit produces "Password is too short" result with no input	1
Submit produces both results with unmatched short entries	1
Length check works with short entries <5 chrs	1
Length check works with short entries 5+ chrs	1
"Password is too short" message accurate and placement	1
"Please re-enter your password" text accurate for non-matched entries	1
"Please re-enter your password" text accurate for too short entries	1
"Password Stored" text accurate and only for both correct	1
Annotations included (3 separate)	1
Annotation noting mistake shown	1
.value omission corrected	1
Mistake clearly explained in comment	1
Length check set to pword1.(*value*).length >=5 (or <5)	1
All text displayed in correct place	1
Total	**15**