

Cambridge International AS & A Level

INFORMATION TECHNOLOGY

Paper 4 Advanced Practical MARK SCHEME Maximum Mark: 90 9626/04 For examination from 2025

Specimen

This document has 16 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 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 descriptions for the question
- the specific skills defined in the mark scheme or in the generic level descriptions 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 descriptions.

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 descriptions in mind.

Question	Answer	Marks
See below	for example of task 1(a).	l
1(a)	Bookings table	
	The correct fields are created – BookingID, CustomerID, VillaID, StartDate, NumberDays – allow other valid field names	1
	The data types are correct	1
	Customers table	
	All fields are included and four records are entered	1
	CustomerID is set as the Primary key	1
	Villas table	
	The correct fields are used – Name, Region, Sleeps, Pool = y/n	1
	An ID is used as the Primary key (there are repeated names in different regions)	1
	The records are unique – duplicates have been removed – 350 records shown	1
	Surcharges table	
	The Region field is used as the Primary key	1
	The correct data types are used	1
	Relationships	
	The database is normalised to 3NF	1
	All data types are correct, all naming conventions are followed	1
See below	for example of task 1(b).	
1(b)	StartDate is restricted by use of Weekday() function	1
	Weekday([StartDate])=3 is used for Tuesday	1
	A validation rule is set on the NumberDays field	1
	The NumberDays is validated to multiples of 7	1
	The NumberDays is set to a maximum of 28	1
	There are suitable validation messages	1

Question	Answer	Marks
See below	for example of task 1(c).	
1(c)	Bookings form	
	The logo is used, the title is correct, the header colour is correct, the NewBookingButton.png image is used	1
	All customer details fields are complete, the CustomerID field drop-down shows four fields	1
	All villa details fields are complete, the VillaID drop-down field shows five fields	1
	The CostPerDay calculation is correct (([Sleeps]*100)+(IIf([Pool]=-1,100,0)))*(1+[Surcharge])	1
	The StartDate field is shown, the NumberDays field is shown	1
	The EndDate field is shown, the EndDate calculation is correct [StartDate]+[NumberDays]	1
	The TotalCost field is shown The TotalCost calculation is correct [CostPerDay]*[NumberDays]	1
	All costs are shown as currency	1
	Formatting is as shown, ID labels are bold, bounding boxes are as shown in the question paper	1
	Users cannot edit or select ID fields or villa fields	1
	Users can select dates and enter the number of days	1
	Users cannot select or edit cost fields	1
	New customer data shows in the Customers table, CustomerID and villa data shows in the Bookings table	1

Question	Answer	Marks
See below	for example of task 2.	1
2	The image is circular	1
	The sea and the sky are in the correct proportions	1
	The sea is a single colour and the sky has a gradient fill	1
	The waves are the correct size and lighter than the sea and form the boundary between the sea and the island	1
	The island matches the position, is lighter than the sky and is the shape shown in the question paper	1
	The shape of all clouds match those shown in the question paper	1
	The size and position of all clouds match those shown in the question paper	1
	The position, shape and size of the tree on the right matches the tree shown in the question paper	1
	The position, shape and size of the tree on the left matches the tree shown in the question paper	1
	All palm leaves are identical in shape	1
	The shape of the palm leaf matches the shape shown in the question paper. The palm leaf has a curved back with three spikes	1
	The left tree has seven leaves in a variety of sizes	1
	The right tree has eight leaves in a variety of sizes	1
	The left tree leaves are darker than the leaves on the right tree as shown in the question paper	1
	The left tree is behind the right tree	1
	The position and overlap of the trees match the image in the question paper	1
	The background is transparent	1
	The clouds are opaque	1
	The image is the correct size (15 cm width and height)	1
	Tree_1, Tree_2 and Island Scene are saved in scalable vector graphic (.svg) format	1

Cambridge International AS & A Level – Mark Scheme SPECIMEN

Question	Answer	Marks
See below	for example of task 3.	1
3	The Bird_1 image is created	1
	The shape of the Bird_1 image matches the shape shown in the question paper	1
	The Bird_2 image is created	1
	The shape of the Bird_2 image matches the shape shown in the question paper	1
	The bird enters from the left sea line as Bird_1	1
	Bird_2 is shown at position 2	1
	Bird_1 was tweened into Bird_2	1
	Bird_1 is shown at position 3, Bird_1 is smaller	1
	Bird_2 was tweened into Bird_1	1
	Bird_2 is shown at position 4	1
	Bird_1 was tweened into Bird_2	1
	Bird_1 is shown at position 5	1
	Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
	The bird passes behind the trees	1
	Bird_2 is shown at position 6	1
	Bird_1 was tweened into Bird_2	1
	Bird_1 is shown at position 7	1
	Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
	The bird exits the frame	1
	All tweenings are smooth and equal in length – the animation is saved as an animated .gif	1

Question	Answer	Marks
See below	for example of task 4.	
4(a)	The first click of the button empties the answer cell	1
	The AnswerPlaceHolder is referenced in the code	1
	The AnswerPlaceHolder.value is used	1
	The AnswerPlaceHolder.value ="" (Null) is used	1
4(b)	A new question is displayed after each click	1
	Five questions are displayed	1
	A new page is displayed after five questions, the correct message is displayed	1
	The message is displayed on two lines	1
	An if () statement – if (QuestionNumber is used	1
	if (QuestionNumber >5 is used	1
	A Document.write statement is used	1
4(c)	The 'Click to restart the quiz' button resets the quiz and resets the page to the original state	1
	The 'Click to restart the quiz' button resets the quiz at any point the button is clicked	1
	document.getElementById("QuizButton").style.display statement is used	1
	style.display="none" is used	1
4(d)	The 'Start the quiz' button is the only button displayed at the start	1
	The 'Start the quiz' button is hidden after the first click	1
	The 'Next Question' button replaces the first button – the buttons are static	1
	document.getElementById("NextButton").style.display is used	1
	style.display=inline is used	1

Task 1(a)

Bookings Table

The correct fields are created – BookingID, CustomerID, VillaID, StartDate, NumberDays – allow other valid field names	1
The data types are correct	1

	Bookings ×		🔲 Bookings 🔀		
N 2	Field Name	Data Type	Z Field Name	2	Data Type
1 🖁	BookingID	AutoNumber	BookingID		AutoNumber
	CustomerID	Large Number	CustomerID		Large Number
	VillaID	Large Number	VillaID		Large Number
	StartDate	Date/Time 🗸	StartDate		Date/Time
	NumberDays	Number	NumberDays		Number 🗸
		Field Prop			Field Prop
	General Lookup		General Lookup		
	Format Short Date		Field Size L	ong Intege	r
	Input Mask		Format		
	Condition		0 1 1 01		

Customers table

All fields are included and four records are entered	1
CustomerID is set as the Primary key	1

Villas table

The correct fields are used – Name, Region, Sleeps, Pool = y/n	1
An ID is used as the Primary key (there are repeated names in different regions)	1
The records are unique – duplicates have been removed – 350 records shown	1

	Villas \times			I Villas $ imes$		·
	Field Name	Data Type		Field Na	me	Data Type
1			Ť.	VillaID		AutoNumber
UE	VillaID	AutoNumber		VillaName		Short Text
	VillaName	Short Text		Region		Short Text
	Region	Short Text		Sleeps		Number
	Sleeps	Number		Pool		Yes/No
	Pool	Yes/No				F
				General Lookup		
				Field Size	Double	
6	Seneral Lookup			Format	General Nur	mber
	Display Control Check Box			Decimal Places	0	

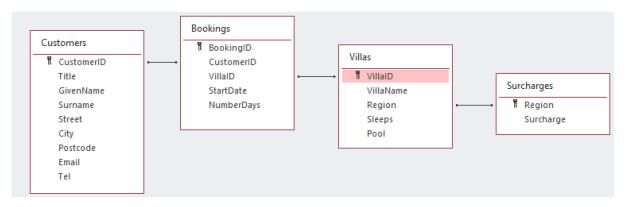
Surcharges table

The Region field is used as the Primary key	1	
The correct data types are used	1	

	Surcharges $ imes$			
	Field N	ame	Data Type	
Ĩ.	Region		Short Text	
	Surcharge		Number	\sim
				Field
C	eneral Lookup			
10	сокир			
	ield Size	Double		
F		Double 0%		
F	ield Size			

Relationships

The database is normalised to 3NF	1	
All data types are correct, all naming conventions are followed	1	



Task 1(b)

StartDate is restricted by use of Weekday() function	1
Weekday([StartDate])=3 is used for Tuesday	1
A validation rule is set on the NumberDays field	1
The NumberDays is validated to multiples of 7	1
The NumberDays is set to a maximum of 28	1
There are suitable validation messages	1

Bookings ×				Bookings ×				1	BookingID		AutoNumber		
Field Na	me	Data Type	4	Field N	ame	Data Type			CustomerID		Large Number		
BookingID		AutoNumber		lookingID		AutoNumber			VillaID		Large Number		
CustomerID		Large Number		ustomerID		Large Number			StartDate		Date/Time		
				/illaID		Large Number			NumberDays		Number	\sim	
VillaID		Large Number	S	tartDate		Date/Time							
StartDate		Date/Time 🗸	N	lumberDays		Number v							
NumberDays		Number				Field Pr	operties						Field Properties
		Field Prop	Ger	neral Lookup				G	Seneral Lookup				
			Fie	Id Size	Long Intege	r			ield Size	Long Integ	er		
General Lookup				mat					Format Decimal Places				
Format	Short Date			cimal Places	0				nput Mask	0			
Input Mask				ut Mask				C	Caption				
Caption				ption fault Value	0				Default Value	0			
Default Value				idation Rule		s] Mod 7=0 And [NumberDays]	< 20		/alidation Rule /alidation Text	[NumberDa	ys]=7 Or [NumberDays]=	14 Or [Nu	mberDays]=21 Or [NumberDays]=2 and a maximum of 4 weeks
Validation Rule	Weekday([9	itartDate])=3		idation Text		in only be made for a whole nu			Required	No	an only be made for who	ie weeks i	and a maximum of 4 weeks
Validation Text	All booking	is must begin on Tuesday	Re	quired	No			li li	ndexed	Yes (Duplica	ites OK)		
Required	No							T	fext Align	General			
Indexed	No												
IME Mode	No Control												
IME Sentence Mode	None												
Text Align	General												
Show Date Picker	For dates												

Task 1(c)

Bookings form

Sunshir VIII		oking	s F	orm	
BookingID	24			VillalD	
CustomerID	1 ~			Villa name	DAREIA
Title	Dr.			Region	Sikinos
Given name	David			Sleeps	7
Surname	Allen			Pool	
				Cost per day	£856
Street	61 Great North Road			Start date	08/10/2024
City	ANCASTER			Number of days End date	7 15/10/2024
Postcode	NG32 8GR	\$		Total cost	£5,992
Email	davidallen@armyspy	y.com			
Telephone	077 4877 3882			New	Booking

The logo is used, the title is correct, the header colour is correct, the NewBookingButton.png image is used	1
All customer details fields are complete, the CustomerID field drop-down shows four fields	1
All villa details fields are complete, the VillaID drop-down field shows five fields	1

Field: CostPerDay: (([Sleeps]*100)+(IIf([Pool]=-1,100,0)))*(1+[Surcharge])

The CostPerDay calculation is correct (([Sleeps]*100)+(IIf([Pool]=-1,100,0)))*(1+[Surcharge])	1
The StartDate field is shown, the NumberDays field is shown	1

EndDate: [StartDate]+[NumberDays]

The EndDate field is shown, the EndDate calculation is correct [StartDate]+[NumberDays] 1

1

1

1

1

1

TotalCost: [CostPerDay]*[NumberDays]

The TotalCost field is shown The TotalCost calculation is correct [CostPerDay]*[NumberDays]	1	
--	---	--

All costs are shown as currency

Formatting is as shown, ID labels are bold, bounding boxes are as shown in the question paper

Users cannot edit or select ID fields or villa fields	
Users can select dates and enter the number of days	
Users cannot select or edit cost fields	

New customer data shows in the Customers table, CustomerID and villa data shows in the	1
Bookings table	

Task 2



The image is circular	1
The sea and the sky are in the correct proportions	1
The sea is a single colour and the sky has a gradient fill	1
The waves are the correct size and lighter than the sea and form the boundary between the sea and the island	1
The island matches the position, is lighter than the sky and is the shape shown in the question paper	1
The shape of all clouds match those shown in the question paper	1
The size and position of all clouds match those shown in the question paper	1

Cambridge International AS & A Level – Mark Scheme **SPECIMEN**



The position, shape and size of the tree on the right matches the tree shown in the question paper	1
The position, shape and size of the tree on the left matches the tree shown in the question paper	1
All palm leaves are identical in shape	1
The shape of the palm leaf matches the shape shown in the question paper. The palm leaf has a curved back with three spikes	1
The left tree has seven leaves in a variety of sizes	1
The right tree has eight leaves in a variety of sizes	1
The left tree leaves are darker than the leaves on the right tree as shown in the question paper	1
The left tree is behind the right tree	1
The position and overlap of the trees match the image in the question paper	1

The background is transparent	1
The clouds are opaque	1
The image is the correct size (15cm width and height)	1
Tree_1, Tree_2 and Island Scene are saved in scalable vector graphic (.svg) format	1

Cambridge International AS & A Level – Mark Scheme SPECIMEN

Task 3



The Bird_1 image is created	1
The shape of the Bird_1 image matches the shape shown in the question paper	1
The Bird_2 image is created	1
The shape of the Bird_2 image matches the shape shown in the question paper	1

The bird enters from the left sea line as Bird_1	1
Bird_2 is shown at position 2	
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 3, Bird_1 is smaller	1
Bird_2 was tweened into Bird_1	1
Bird_2 is shown at position 4	1
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 5	1
Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
The bird passes behind the trees	
Bird_2 is shown at position 6	1
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 7	1

Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
The bird exits the frame	1
All tweenings are smooth and equal in length – the animation is saved as an animated .gif	1

Task 4

4(a)	The first click of the button empties the answer cell	1
	The AnswerPlaceHolder is referenced in the code	1
	The AnswerPlaceHolder.value is used	1
	The AnswerPlaceHolder.value ="" (Null) is used	1
4(b)	A new question is displayed after each click	1
	Five questions are displayed	1
	A new page is displayed after five questions, the correct message is displayed	1
	The message is displayed on two lines	1
	An if () statement – if (QuestionNumber is used	1
	if (QuestionNumber >5 is used	1
	A Document.write statement is used	1
4(c)	The 'Click to restart the quiz' button resets the quiz and resets the page to the original state	1
	The 'Click to restart the quiz' button resets the quiz at any point the button is clicked	1
	document.getElementById("QuizButton").style.display statement is used	1
	style.display="none" is used	1
4(d)	The 'Start the quiz' button is the only button displayed at the start	1
	The 'Start the quiz' button is hidden after the first click	1
	The 'Next Question' button replaces the first button – the buttons are static	1
	document.getElementById("NextButton").style.display is used	1
	style.display=inline is used	1

Example solution

```
<script>
//function to display the correct button - Start the quiz or Next Question
function Buttons ()
{
     document.getElementById("QuizButton").style.display ="inline";
     //displays the Start the quiz button
     document.getElementById("NextQButton").style.display="none";
     //hides the Next Question button
     document.getElementById("refresh").style.display="none";
     //hides the Restart the quiz button
}
Buttons(); //Invokes the Buttons function automatically
//Array of Questions 1 to 5
Questions=["What does 'RAM' stand for?", "What does 'ROM' stand for?", "What
does 'MICR' stand for?", "What does 'DBMS' stand for?", "What does 'QR' stand
for?"]
var OuestionNumber=0
//Question number counter
function changeContent(id, row, cell, content)
// Function to alter the contents of cells in the table
     AnswerPlaceHolder.value="";
     //Empties the cell for answers
     var x = document.getElementById(id).rows[row].cells;
     QuestionNumber++;
     //Question number counter is incremented
     if (QuestionNumber>5) {document.write("<b><div
     align=center><br><h1>Quiz 1 complete.<br>Close your
     browser</h1></div></b>") };
     // Finishes the quiz after 5 questions
     x[cell].innerHTML = QuestionNumber;
     // inserts the question number into the 1st cell in row 2
     x[cell+1].innerHTML = Questions[QuestionNumber-1];
     //Inserts the matching question in the 2nd cell of row 2
     document.getElementById("QuizButton").style.display ="none";
     //hides the Start the Quiz button
     document.getElementById("NextQButton").style.display="inline";
     //displays the Next Question button
     document.getElementById("refresh").style.display="inline";
     //displays the Restart the Quiz button
}
function refresh ()
//function to restart the quiz
{
     AnswerPlaceHolder.value="Type your answer here";
     location.reload();
}
</script>
```