
INFORMATION TECHNOLOGY

9626/04

Paper 4 Advanced Practical

March 2017

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 will not enter into discussions about these mark schemes.

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Task	Objectives	Criteria	Mark	
1(a)	Normalise a database to 3NF	WoodlandsSchema file used correctly	1	
		Determine Tables and fields	Borrower/Resident table Correct fields+ key field	1
			Apartment table correct fields & key field	1
			Loans table + correct key field	1
			Loans table includes borrower ID	1
			Loans table includes date borrowed	1
			Loans table includes returned field	1
			Books table INCLUDES correct fields & key field	1
			ISBN table created with correct fields & key field	1
			Publishers table created with correct fields & key field	1
	Determine Relationships	Borrowers related to Loans	1	
		Borrowers related to Apartment	1	
		Other relationships (Books- ISBN - Publisher)	1	
			13	
1(b)	Define and use referential integrity and explain its importance	Reference to Cascading update or equivalent	1	
		Example using Borrower – Loans table mentioned	1	
		Example used: such as – Necessary to be able to delete a user but leave the loan record	1	
		Explanation and details of example used	1	
			4	

Task	Objectives	Criteria	Mark	
1(c)	Design, create ... an appropriate data entry form ...	Form Creation	Borrower details shown (follow through from task 1a)	1
			Suitable layout used (design is fit for purpose)	1
		Use of a subform	Subform includes: Book id, + Author, Title fields as minimum	1
			Date borrowed and returned fields shown	1
			First, Last navigation buttons added	1
			Next, Previous navigation buttons added	1
	Design, create ... database reports ...	Report for printing	Data shown for at least 3 borrowers, at least 1 borrower with 2 books	1
			Borrower fields include Title, Forename, Surname	1
			Book fields include: Title, Author	1
			Book fields include: Date borrowed	1
			Book fields include: Days overdue field	1
			11	

Task	Objectives		Criteria	Mark
1(d)	Mail merge	Creation of a merge document	Date shown as a field	1
			All required applicant mergefields inserted	1
			Layout, spacing and punctuation fit for purpose	1
			Correct 1st Conditional field Syntax	1
			Correct 1st Conditional field Criteria	1
			Both 1st Conditional field text responses correct	1
			Correct 2nd Conditional field Syntax	1
			Correct 2nd Conditional field Criteria	1
			Both 2nd Conditional field text responses correct	1
			Valid non-manual selection of recipients (e.g. use of SkipIf)	1
			Merged letters	Merged for correct recipients only
	Documents proofed and fit for purpose	1		
				12

Total Task 1 **40**

Task	Objectives	Criteria	Mark	
2(a)	Create a vector image that meets the requirements of its intended application and audience	Creation of vector images	3 lobe foliage created (clearly not a single drawing)	1
			Foliage is coloured green	1
			A clear outline to foliage is shown	1
			Foliage outline is black and 1pt thick	1
			Tree trunk created and coloured brown	1
			The tree trunk is flared as shown in the question paper	1
			The tree trunk is order to appear behind the foliage	1
			Tree is duplicated to show 3 trees	1
			The order of the trees is clear and as shown in the question paper	1
			The trees are aligned as shown in the question paper	1
		Fit text to a path	The text "Woodlands" is shown	1
			The text is positioned as shown in the question paper	1
			The text (fit to) path is not shown	1
		Use of vector text	The text is coloured white	1
			The text is in a sans serif font	1
			The text has a 1pt black outline	1
			The text "Homes" is shown	1
			The text is black	1
			The text is in a sans serif font	1
			The text is the same size and in the same position as shown in the question paper	1
		Use grouping ...	The images are grouped and the proportions of the complete image are as shown in the question paper	1
		... resize	The image is saved in a vector format	1
			Evidence of the size of the image (250 x 200) is shown	1
		Save an image ... different file format	The image is saved as a Bitmap	1
			The image is saved with the correct filename	1
			25	

Task	Objectives		Criteria	Mark
2(b)	Describe ... features of vector graphics	5 properties of a rectangle	Size: Length, Width, Aspect ratio	1
			Position: X co-ordinate, Y co-ordinate, Centre of rotation	1
			Outline: Line width, Line colour, Line style	1
			Fill: Colour, Gradient, Opacity/Transparency	1
			Angle: of rotation, (percentage shear)	1
				5

Total Task 2 **30**

Task	Objectives	Criteria	Mark
3(a)	Create an animation that meets the requirements of its intended application and audience	Woodlands image is used for 1st clip	1
		The clip fades in	1
		The correct text "Woodlands" is shown	1
		The text is in the centre of the frame	1
		The text is coloured white	1
		The text is in a sans serif font	1
		The text doubles in size during the clip	1
		The Peaceful image is used for the 2nd clip (no fade)	1
		The correct text "Set in peaceful countryside" is shown	1
		The text is in the centre of the frame	1
		The text is coloured white	1
		The text is in a sans serif font	1
		The text doubles in size during the clip	1
		The Wildlife image is used for the 3rd clip (no fade in)	1
		The correct text "Lots of wildlife" is shown	1
		The text is in the centre of the frame	1
		The text is coloured white	1
		The text is in a sans serif font	1
		The text doubles in size during the clip	1
		The clip fades out	1
		The clip fades out to about 50%	1
		Each clip is 2 seconds (6 seconds overall)	1
		The animation is saved as swf or equivalent (plays in a browser)	1
The correct filename is used	1		
The size of the animation is 500 x 300	1		
		25	

Task	Objectives		Criteria	Mark
3(b)	Understand the use of tweening	Nature of a shape tween	Two from: an animation, morph, change shape, automatic production of frames, or equivalent	1
				1
		3 variable properties of a shape tween	Three from: shape, size, position, colour	1
				1
				1
				5

Total Task 3 **30**

4	Programming for the web	Demonstrate a range of object-based programming techniques add interactivity to webpages	Woodlands image inserted in correct cell	1
			Candidate details inserted in correct cell	1
			Incorrect House entry generates an error message	1
			Incorrect House entry error message text is correct	1
			Omission of Name field entry generates an error message	1
			Omission of Number field entry generates an error message	1
			Omission of Session field entry generates an error message	1
			Omission error message text is correct	1
			Final alert text is generated and is fit for purpose	1
			Final alert person/people match is correct	1
Total Task 4				10

Total Marks for paper **110**