

6-A-Day – Computer Science GCSE (7)

Q1	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 10%;">Form</th> <th style="width: 10%;">Query</th> <th style="width: 10%;">Report</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">This can be used to print out all the appointments that the dentist has booked.</td> <td></td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td style="padding: 5px;">This can be used to enter a patient's details when the patient registers with the dentist.</td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">This can be used to find out all the appointments that a certain patient has made.</td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> </tbody> </table> <p>1 mark per row</p>		Form	Query	Report	This can be used to print out all the appointments that the dentist has booked.			✓	This can be used to enter a patient's details when the patient registers with the dentist.	✓			This can be used to find out all the appointments that a certain patient has made.		✓		[3]
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Q2	<p>When a patient makes an appointment, the start time of the appointment needs to be validated.</p> <p>State <u>two</u> validation checks which can be carried out on the start time of the appointment.</p> <p>Two from:</p> <ul style="list-style-type: none"> • The time is in the correct format / hh:mm • The time is within the dentist's working day • The hours are in the range 1 – 12 / 0 – 24 • The minutes are in the range 0 – 59 <p>Accept other correct validation checks.</p>	[2]																
Q3	<p>Justify the use of separate entities to store the patient and appointment data.</p> <ul style="list-style-type: none"> • The patient's data does not have to be repeated for each appointment... • ... as the patient ID can be stored with the appointment to link the two entities • Allows the patient (and appointment data) to be manipulated independently e.g. if the name of the patient changes. • Avoids the possibility of the patient data becoming inconsistent due to being stored multiple times <p>(1 mark for each bullet. Max 3 marks)</p>	[3]																

<p>Q4</p>	<p>A display board can show a flashing message of up to 20 characters.</p> <p>A program allows users to input the message to be displayed and the number of times it should flash.</p> <p>State the data type of each item of the input data.</p> <ul style="list-style-type: none"> • Message: String • Number of flashes: Integer 	<p>[1]</p> <p>[1]</p>						
<p>Q5</p>	<p>EXAMPLE</p> <pre> Begin Input Message Input NumberOfFlashes If length(Message) > 20 Then Output "This message is too long" Else For i = 1 to NumberOfFlashes Display Message Wait Clear Message Wait Next End If End </pre> <p>Award marks for an algorithm which:</p> <ul style="list-style-type: none"> • Inputs message and number of flashes • If length of message > 20, output error message and stop • Otherwise <u>run a loop</u> which will • ... flash the message • ... for the correct number of times <p>Max 5.</p>	<p>[5]</p>						
<p>Q6</p>	<table border="1"> <thead> <tr> <th data-bbox="233 1697 924 1727">Expected Answer</th> <th data-bbox="924 1697 1038 1727">Mark</th> <th data-bbox="1038 1697 1490 1727">Additional Guidance</th> </tr> </thead> <tbody> <tr> <td data-bbox="233 1727 924 1805"> <ul style="list-style-type: none"> • To carry out the processing on the computer/To (fetch and) execute instructions' </td> <td data-bbox="924 1727 1038 1805"> <p>[1]</p> </td> <td data-bbox="1038 1727 1490 1805"> <p>"control" the computer is too vague</p> </td> </tr> </tbody> </table>	Expected Answer	Mark	Additional Guidance	<ul style="list-style-type: none"> • To carry out the processing on the computer/To (fetch and) execute instructions' 	<p>[1]</p>	<p>"control" the computer is too vague</p>	
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