6-A-Day – Computer Science GCSE (17)

Q1	A dog that is 5 years old is equivalent to a 42 year old human. Ashok is writing a program which converts the age of a dog to the equivalent age for a human.
	
	The program uses the following method:
	
	    • The user inputs age of the dog in years
	    • If the age is 2 or less, the human equivalent is 12 times the age
	    • If the age is more than 2, the human equivalent is 24 for the first 2 years, plus 6 for every additional year.
	
	Write an algorithm to calculate and output the human equivalent of the age of a dog using the method described.
	
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Q2	Bytes, Kilobytes and Megabytes are units used for the amount of data stored in a computer. **(a)** State which of these units is most appropriate for the following items of data. A one page text document: .... A ten minute movie clip: .... A person's surname: .... **[3]**
Q3	Tick **one** box in each row to show whether each statement is true or false. <table><tr><th></th><th>TRUE</th><th>FALSE</th></tr><tr><td>The internet is the same as the World Wide Web</td><td></td><td></td></tr><tr><td>The internet is a Local Area Network</td><td></td><td></td></tr><tr><td>The internet is a network between many networks</td><td></td><td></td></tr></table> **[3]**

| Q4 | A large company with 200 employees uses a local area network (LAN) which includes all the computers in its head office.

Describe the security measures and network policies which can be used to safeguard the security and privacy of the company's data on the network.

The quality of written communication will be assessed in your answer to this question.

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.... [6] |

| Q5 | Peter takes a picture of himself and his friends to put on a social networking site. The picture is converted into pixels and stored as a bitmap file.

(a) Tick **one** box in each row to show whether or not each of the following items **must** be included in the bitmap file. |

	Must be included	Need **not** be included
The names of the people in the picture		
The width of the picture in pixels		
The number of bits used for each pixel		
The number of people in the picture		
The colour of each pixel		

[5]

| Q6 | What is meant by the resolution of the picture?

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.... [1] |