

6-A-Day – Computer Science GCSE (26)

Q1

Explain how the clock speed and the cache size of a CPU affect its performance.

Clock speed

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Cache size

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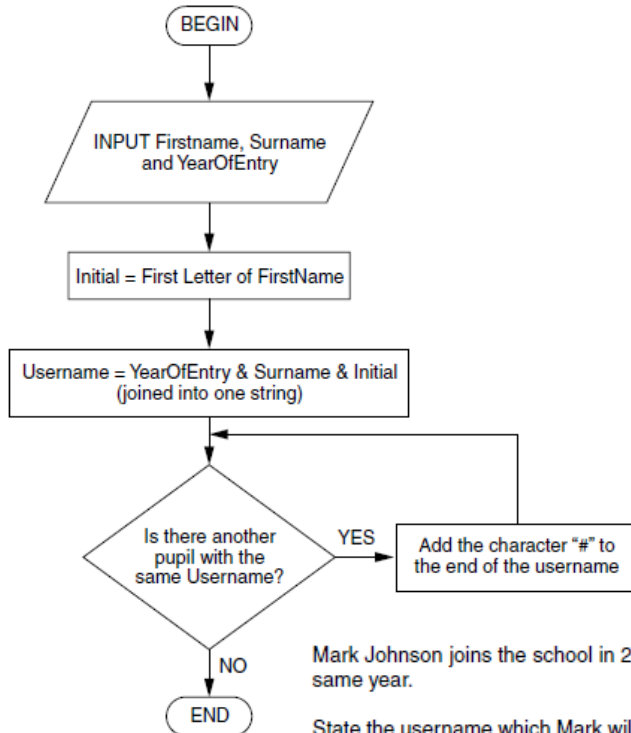
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[4]

Q2

A school uses a computer program to give every new pupil a username for logging onto computers.

The algorithm used to choose the username is shown below.



Mark Johnson joins the school in 2012. No other pupil called Johnson joins the school in the same year.

State the username which Mark will be given and explain how you obtained your answer from the flow diagram.

Username

Explanation

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[3]

Q3	<p>A pupil has the username 2010alim###.</p> <p>State four facts that we can work out from this username.</p> <p>1</p> <p>.....</p> <p>2</p> <p>.....</p> <p>3</p> <p>.....</p> <p>4</p> <p>..... [4]</p>
Q4	<p>One type of translator which can be used is an interpreter.</p> <p>(i) Describe how an interpreter translates the high-level code to machine code.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>..... [2]</p>
Q5	<p>The cost of a day-time journey is £3 for the first kilometre and £2 for every kilometre after that. If there are five or more passengers in the taxi, an extra 50% is added to the charge.</p> <p>Write an algorithm to calculate the cost of a day-time journey.</p> <p>Your algorithm should:</p> <ul style="list-style-type: none">• allow the number of passengers and the distance of the journey to be input as whole numbers,• calculate the cost of the journey,• output the cost that has been calculated. <p>[7]</p>
Q6	<p>State what is meant by a Boolean Data Type.</p> <p>[2]</p>