Computer Science A Level – Preparatory

Task 4 – Algorithms

An algorithm sets out a sequence of steps, that, when executed, will carry out a specific task.

Please complete the following algorithms questions, which are examples of GCSE examination questions.

Note: We are not trying to see if you can gain full marks, but rather how you approach and whether you enjoy this style of questions. Hopefully, it will help you to confirm that this is the right course for you!

1. A programmer has written an algorithm to output a series of numbers. The algorithm is shown below:

```
01 for k = 1 to 3
02 for p = 1 to 5
03 print (k + p)
04 next p
05 next k
06 m = 7
07 print m * m
```

(a) Give the first three numbers that will be printed by this algorithm.

………..[1]

(b) State how many times line 03 will be executed if the algorithm runs through once.

………..[1]

2. During the implementation of an algorithm, a programmer attempts to swap over the value of two variables. The code used is shown below:

```
x = input("enter first number : ")
y = input("enter second number : ")
//swap values over
x = y
y = x
```

(a) The values 12

Task 5 - Operating Systems

Answer the following question:

In your opinion, which is the best brand of operating system and why?

Please write no more than 100 words!

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