Programming – 2020 IGCSE 0478

1. Nov/2020/Paper_21/No.1(c),(d)

(c) Write an algorithm for **Task 2**, using **either** pseudocode, programming statements **or** a flowchart. Assume that **Task 1** has been completed.

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(d) **(i)** Explain how your program completed **Task 3**. Assume that **Task 2** has been completed. Any programming statements used in your answer must be fully explained.

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(ii) The car insurance system needs updating to record the percentage of customers who bought car insurance after obtaining a price to insure a car. Describe the changes required to your program.

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2. Nov/2020/Paper_22/No.1(c),(e)

(c) Write an algorithm to show how you completed **Task 1**, using **either** pseudocode, programming statements **or** a flowchart. It is not necessary to show initialisation or setting up of arrays in your answer.

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(e) Describe how you could alter your program to allow more than one computer to be bought.

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3. Nov/2020/Paper_22/No.4

This pseudocode algorithm allows 5000 numbers to be entered and stored in an array called `Number`.

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FOR Count ← 1 TO 5000
  INPUT Number[Count]
NEXT Count
```

Extend and re-write the algorithm using pseudocode to also count and output how many of the numbers stored in the array are greater than 500, using the variable `Higher`. Only output `Higher` once with an appropriate message.

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4. Nov/2020/Paper_23/No.1(b),(c),(d)

(b) **(i)** Write an algorithm to allow a customer to choose the filling and salad items for their baguette (part of **Task 1**), using **either** pseudocode, programming statements **or** a flowchart. Your algorithm must only include this part of **Task 1**.

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(ii) Explain how your algorithm in **part (b)(i)** ensured that only valid choices were accepted for the filling.

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(c) Explain how you would need to change your program for **Task 1** if there were three sizes of baguette to choose from (15 cm, 20 cm and 30 cm).

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(d) Explain how your program completed **Task 3**. Assume that **Task 2** has been completed. Any programming statements used in your answer must be fully explained.

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5. June/2020/Paper_21/No.1(c)

(c) Write an algorithm to show how you input your choice of mobile device and SIM card (part of **Task 1**), using **either** pseudocode, programming statements **or** a flowchart. It is **not** necessary to show initialisation or setting up of arrays containing product details.

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6. June/2020/Paper_21/No.4(c)

(c) Describe how you could change your pseudocode in **part (b)** so that it prevents numbers below 100 and above 200 from being stored in the array `Values[ ]`

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7. June/2020/Paper_22/No.1(d)

(d) Write an algorithm for part of **Task 2** that simulates customer payment and calculating total payments using **either** pseudocode, programming statements **or** a flowchart. Assume that **Task 1** has been completed.

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8. June/2020/Paper_23/No.1(c)

(c) Write an algorithm for **Task 1** using **either** pseudocode, programming statements **or** a flowchart. It is **not** necessary to show initialisation or setting up of arrays.

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9. March/2020/Paper_22/No.1(d)

(d) Write an algorithm for **Task 2**, using **either** pseudocode, programming statements **or** a flowchart. Assume that **Task 1** has been completed.

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