PRM – Oct/Nov 2020 – P23

1 **(a)** All variables, constants and other identifiers must have meaningful names.

Explain how you would enable your algorithm to allow the customer to confirm their order, alter their choices or cancel their order entirely.

Two programming concepts would be used in tandem to achieve this functionality. State both concepts and explain how they would be used.

Programming concept 1 …………………………………………………………………………………………………........

Programming concept 2 …………………………………………………………………………………………………........

Explanation ……........

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[3]

(b) Name the data structure you would use to record totals for the size, types of bread and fillings sold on any particular day, for **Task 2**.

Suppose a customer orders a sandwich with seeded bread. Write the part of your algorithm which would add this choice to the total for that type of bread.

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…… [3]

(c) Suppose that at the end of a particular day, only two types fillings were ordered and the same number of times.

State and explain what problem could this cause in **Task 3**, and provide a code to recognize this and output a suitable message.

Problem ....

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Code ....

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[4]

(d) The ordering service requires that your code contains comments to increase the ability for a future modification to be made more easily.

Write an algorithm using **either** pseudocode **or** programming statements for **Task 1**. Use comments to highlight the parts of the code that:

- Asks the customer to input the type of bread
- Validates the choice of filling
- Calculates the customer's order number

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Page **3** of **7**

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(e) Write an algorithm for **Task 2** using **either** pseudocode **or** programming statements.

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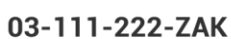
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(f) Suppose that on a particular day, the **beef** filling was ordered **3** times, **chicken** was ordered **2** times, **cheese** and **egg** were **not** ordered, **tuna** was ordered **4** times and turkey was ordered **1** time.

State what your algorithm for **Task 3** would output:

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Write your algorithm for **Task 3** using **either** pseudocode **or** programming statements.

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