Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

COMPUTER SCIENCE **0478/22**

Paper 2 Problem-solving and Programming **February/March 2019**

PRE-RELEASE MATERIAL

No Additional Materials are required.

This material should be given to the relevant teachers and candidates as soon as it has been received at the centre.

READ THESE INSTRUCTIONS FIRST

Candidates should use this material in preparation for the examination. Candidates should attempt the practical programming tasks using their chosen high-level, procedural programming language.

Any businesses described in this paper are entirely fictitious.

This document consists of **2** printed pages.

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Your preparation for the examination should include attempting the following practical tasks by **writing and testing a program or programs**.

A pizza ordering service allows customers to design their own pizza. There are three sizes: small, medium and large. A pizza can have a thick or thin base. All pizzas come with tomato and cheese toppings as standard and there are six additional types of topping available:

- Pepperoni
- Chicken
- Extra cheese
- Mushrooms
- Spinach
- Olives

Pizzas always come with tomato and cheese toppings as standard, and can have up to three additional toppings. Customers need to be able to design their own pizza and then confirm or change it. Records are kept showing the number of pizzas sold for each base and size. The number of sales for each additional topping is also recorded.

Write and test a program or programs for the pizza ordering service.

- Your program or programs must include appropriate prompts for the entry of data.
- Error messages and other output need to be set out clearly and understandably.
- All variables, constants and other identifiers must have meaningful names.

You will need to complete these **three** tasks. Each task must be fully tested.

TASK 1 – Design your pizza.

The customer is given choices of size, base and additional toppings (number and type) as stated above. Only valid choices can be accepted. The customer is asked to confirm their order or alter their choices or not proceed. If the customer confirms their order they are given a unique order number.

TASK 2 – Record the choices.

Extend TASK 1 to record totals for the choices made for ordered pizzas only and calculate the total number of pizzas ordered.

TASK 3 – Find the most and least popular additional pizza toppings.

Using your results from TASK 2, display the most popular and least popular additional toppings as a percentage of the total number of additional toppings ordered.