



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

CANDIDATE  
NAME

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CENTRE  
NUMBER

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**COMPUTER SCIENCE**

**0478/02**

Paper 2 Problem-solving and Programming

**For Examination from 2015**

SPECIMEN PRE-RELEASE MATERIAL

No Additional Materials are required.

**This material should be given to candidates up to six months before the examination.**

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**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.

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

Candidates' preparation for the examination should include attempting the following practical **program coding** tasks.

Write and test a program to complete the **three** tasks.

### **TASK 1**

Input and store the names and marks for 30 students who have sat three computer science tests. Test 1 is out of 20 marks, Test 2 is out of 25 marks, Test 3 is out of 35 marks. You must store the names in a one-dimensional array and the marks and total score for each student in one-dimensional arrays. All the marks must be validated on entry and any invalid marks rejected. You may assume that the students' names are unique.

### **TASK 2**

Calculate and store the total score for each student and calculate the average score for the whole class. Output each student's name followed by their total score, then output the average score for the class.

### **TASK 3**

Select the student with the highest score and output their name and score.

Your program 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. Each task must be fully tested.