Cambridge International Examinations
Cambridge Ordinary Level

COMPUTER SCIENCE **2210/23**

Paper 2 Problem-solving and Programming **October/November 2018**

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.

In preparation for the examination candidates should attempt the following practical tasks by **writing and testing a program or programs**.

A holiday park has a number of log cabins that it rents by the week as shown in the table:

Name	Capacity	Peak	Off-peak
Hetty	4	$400.00	$250.00
Poppy	4	$400.00	$250.00
Blue Skies	4	$500.00	$350.00
Bay View	6	$650.00	$500.00
Happy Days	6	$695.00	$550.00
Summer Joy	6	$800.00	$600.00
Walkers' Rest	8	$950.00	$750.00
Bertie	8	$1050.00	$850.00
Green Forest Lodge	10	$1200.00	$950.00
Coppice Lodge	10	$1500.00	$1150.00

The capacity represents the maximum number of occupants for each log cabin. A program is needed to record and store bookings. Log cabins can only be booked from weeks labelled on the calendar as weeks 23 to 39, inclusive. Peak rates operate for weeks 27 to 35, inclusive, and off-peak rates apply for weeks 23 to 26 and weeks 36 to 39, inclusive.

Write and test a program or programs.
- 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 arrays, 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 – Setting up the bookings system.
Write a program, using arrays, to identify each log cabin, its capacity, cost and whether or not it has been booked for each week. Identify each week by a number ranging from week 23 to 39.

TASK 2 – Taking a booking.
Extend the program to:
- Identify and display which weeks are available for each log cabin, and its capacity.
- Input the log cabin, number of weeks and start week for the booking.
- Generate a unique booking code for the week(s) and log cabin chosen.
- Store the unique booking code in your array
  (multiple week bookings will need the booking code stored multiple times).
- Calculate and output the cost of the booking.

TASK 3 – Applying a special offer.
Amend the program to apply a 10% discount to any booking of three weeks or more. Output the original cost and the discounted cost of the booking.