

Paper reference 1CP2/01
Pearson Edexcel
Level 1 / Level 2 GCSE (9-1)

COMPUTER SCIENCE
UNIT 1: PRINCIPLES OF
COMPUTER SCIENCE

Data Book

**In the boxes below, write your name,
centre number and learner registration
number.**

Surname					
Other names					
Centre Number					
Candidate Number					

V67312A

INSTRUCTIONS

There may be spare copies of some diagrams incase you need them.

**THIS DATA BOOK MUST BE RETURNED
WITH THE QUESTION PAPER AT THE END
OF THE EXAMINATION.**

Contents

Page

4	Question 5 (a) Algorithm that prints colours
5	Question 5 (b) Algorithm searches a sorted array of numbers for a target value.
6	Question 5 (c) Program which checks the weight of boxes of strawberries from Laura's shop.
7	Question 5 (c) Trace table showing the execution of the program with these inputs.
8	Question 5 (c) (Spare Copy)
9	Question 5 (d) Blank space to draw a flowchart to show the algorithm.
10	Question 5 (d) (Spare copy)

Question 5 (a)
Algorithm that prints colours

```
1  # ----- Global variables -----
2  inkColours = ["Cyan", "Magenta", "Yellow", "Black"]
3
4  # ----- Subprograms -----
5  def displayAll (inList):
6      for index in range (0, len (inList)):
7          print (index, inList[index])
8
9  # ----- Main Program -----
10 userInput = input ("Would you like to see the colours? ")
11 if ((userInput == "y") or (userInput == "Y")):
12     displayAll (inkColours)
13 else:
14     print ("Thank you")
```

Question 5 (b)

**Algorithm searches a sorted array of numbers
for a target value.**

```
18  while ((index < len (theArray)) and (not found) and  
    (not passed)):  
19      if (theArray[index] == theTarget):  
20          found = True  
21          location = index  
22      elif (theArray[index] > theTarget):  
23          passed = True  
24          index = index + 1
```

**Program which checks the weight of boxes of strawberries
from Laura's shop.**

```
1 count = 0
2 weight = 0
3 accept = 0
4 reject = 0
5
6 while (count < 4):
7     count = count + 1
8     weight = int (input ("Enter weight of box: "))
9     if ((weight < 395) or (weight > 405)):
10         reject = reject + 1
11     else:
12         accept = accept + 1
13
14 print (accept, reject)
```

Question 5 (c)

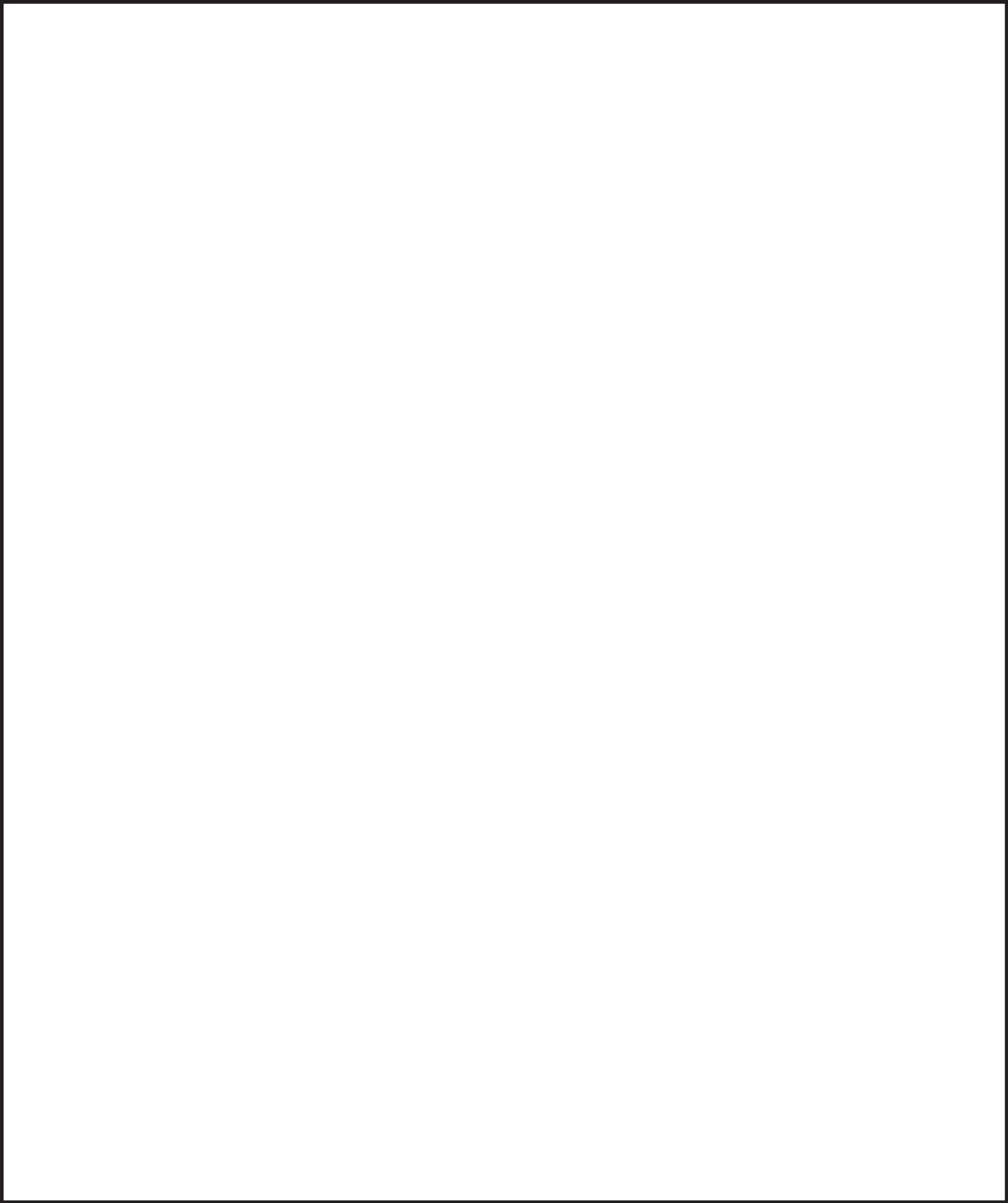
Trace table showing the execution of the program with these inputs.

[illegible]

Question 5 (c)

[illegible]

Blank space to draw a flowchart to show the algorithm.

A large, empty rectangular box with a thin black border, intended for drawing a flowchart. The box occupies the majority of the page below the text instructions.

