Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

Cambridge International AS & A Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER				

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY   **9713/02**

Paper 2 Practical Test   **May/June 2017**

2 hours 30 minutes

Additional Materials: Candidate Source Files

                         J17evidence.rtf
                         j17bus.csv
                         j17destination.csv
                         j17seats.csv

READ THESE INSTRUCTIONS FIRST

Make sure that your **Centre number**, **candidate number** and **name** are written at the top of this page and are clearly visible on every printout, before it is sent to the printer. Printouts with handwritten candidate information will **not** be marked.

DO **NOT** WRITE IN ANY BARCODES.

Carry out **every** instruction in each task.

At the end of the exam put this **Question Paper** and **all** your printouts into the Assessment Record Folder.

The number of marks is given in brackets [ ] at the end of each question or part question.

Any businesses described in this paper are entirely fictitious.

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[Turn over

You work for the Cansaulim Beach Hotel. You are going to analyse the details of the hotel's mini-bus service.

Each bus route is used by a single bus. The buses vary in size and each can transport a different number of people. Each bus route has a different destination. If a bus is 4 or more minutes late the hotel considers this to be a long delay.

You must use the most efficient method to solve each task. All spreadsheets must be of a professional standard and fit the context of this business.

1 You will provide evidence of your work, including screen shots at various stages. Make sure that these screen shots can be easily read. Open the document **J17evidence.rtf**

   Place your name, Centre number and candidate number in the header.

   Save this Evidence Document with the filename:
   Evidence_CentreNumber_CandidateNumber
   e.g. Evidence_ZZ999_9999   [1]

2 Open the following files and examine the data:

   • j17bus.csv
   • j17destination.csv
   • j17seats.csv

   Open the file **j17bus.csv** and save this as a spreadsheet. Insert new rows and labels at the top of this spreadsheet and format it so that it looks like this:

   Place screen shot evidence showing only cells A1 to H6 in your Evidence Document.   [10]

3 In the *Late* column, enter a formula to calculate the number of minutes the first bus was late. This must be displayed in a hh:mm time format. If the bus was early this should return 00:00   [4]

4 Enter a function in the *Minutes* column to calculate and display as an integer, the number of minutes that the first bus was late.   [2]

5 Enter a formula in the *Bus Route* column to extract the route number from the *Bus Code*. The route number is the 9th character of the *Bus Code*.   [4]

6 Enter a function in the *Capacity* column to display the number of seats available on the first bus. You must use the original external data file within this function. [6]

7 Enter a function in the *Destination* column to display the destination for this journey. The destination code is the fifth character of the *Bus Code*. You must use the original external data file for this function. [6]

8 Replicate the formulae entered in steps 3 to 7 for every *Bus Code*. [1]

9 In the appropriate cells, enter formulae to calculate:

- the average delay, which must **not** include buses that were on time or early
- the longest delay
- the number of journeys that had a delay
- the number of journeys that were 4 or more minutes late.

Each calculation should return an integer value rounded to the nearest whole number. [10]

10 Centre align all cells in row 4 and apply appropriate formatting to all other cells. [2]

11 Create a header which says **Formulae printed by:** followed by your name, Centre number and candidate number. [1]

12 Print the contents of cells A1 to I20 in landscape orientation, showing the formulae used.

Ensure that all row and column headings, formulae and labels are fully visible. [4]

13 Sort the data into ascending order of *Bus Route* and then into descending order of *Minutes*. [1]

14 Select only those buses with a *Due* time of between 12:00 and 12:30 inclusive. [2]

15 Change the wording of the header to **Lunchtime journeys – printed by:** followed by your name, Centre number and candidate number. [1]

16 Save and print all details of this extract, adjusting the page layout if necessary so that the whole table fits on a single page with all cells fully visible. [2]

17 In a new sheet, calculate for each route, from all the data, the number of buses that had long delays. Do **not** edit the original data source and do **not** use additional cells. Display your results like this:

Number of buses with a long delay								
Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7	Route 8	Route 9
9	9	9	9	9	9	9	9	9

Note that the numbers shown are examples, they are **not** correct. [14]

18 Create a header which says **Long delays by route – printed by:** followed by your name, Centre number and candidate number. [1]

19 Save and print all details of this extract so that it fits on a single page. Make sure that the contents of all cells are fully visible. [1]

20 Print this spreadsheet in landscape orientation, showing the formulae used.

Ensure that all formulae and labels are fully visible. Show row and column headings. [2]

Your manager wants a graph or chart comparing the number of journeys on each route and the average number of minutes late for those journeys.

21 Select only the routes where the average delay is greater than 4 minutes and for these destinations create a graph or chart comparing the average delay (in hours and minutes) and the number of journeys made to that destination.

Apply appropriate labelling and formatting to your graph or chart.

Copy your completed graph or chart and paste it into your Evidence Document. [19]

Buses that are late cost the hotel money. Your manager wants an analysis of the cost of the late mini-buses to each destination.

The cost for each minute that a bus is late is currently 0.0213 rupees for each seat on the bus (as larger buses use more fuel). Buses that are early save money. The cost of fuel changes every day so a single cell to enter the cost per minute will be required.

Each cost will be shown as a negative value if it costs the hotel money or a positive value if it saves them money.

All currency values are to be in rupees to 2 decimal places.

22 Open a new spreadsheet and create a model that the manager can use to analyse the costs of the late mini-buses to each destination. [16]

23 Print the top 25 rows of this spreadsheet showing the formulae used. Ensure that your name, Centre number, candidate number, all formulae and labels are fully visible. Show row and column headings. [1]

24 Save and print this spreadsheet showing the values, adjusting the page layout if necessary so that it fits on a single page wide. Make sure that the contents of all cells are fully visible. Do **not** show row and column headings. [2]

25 Restrict the data entry for the cell holding the cost per seat per minute (0.0213) to between 0.005 and 0.05.

Offer the user appropriate advice.

Show screen shot evidence of your method in your Evidence Document. [7]

26 Save and print your Evidence Document.

Write today's date in the box below

Date

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8

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