



Cambridge International AS & A Level

INFORMATION TECHNOLOGY

9626/02

Paper 2 Practical

For examination from 2022

SPECIMEN PAPER

2 hours 30 minutes

You will need: Candidate source files (listed on page 2)

INSTRUCTIONS

- Carry out every instruction in each task.
- Save your work using the file names given in the task as and when instructed.
- You must **not** have access to either the internet or any email system during this examination.
- You must save your work in the correct file format as stated in the tasks. If work is saved in an incorrect file format, you will **not** receive marks for that task.

INFORMATION

- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets.

This document has **6** pages. Blank pages are indicated.



You have been supplied with the following files:

s2bus.csv
s2bus_trips.csv
s2pipe.mp4
s2voice.mp3
s2waste.jpg

You will create a short video for the charity Planet Saviours. The original video clip was recorded by GBRvideo in Alinao, in the Philippines and the audio was recorded by KMBaudio.

All video and audio clips produced must be of a professional standard.

1 Open and examine the file **s2waste.jpg**

Remove all white space and some of the sky so the image becomes 1648 pixels wide by 927 pixels high. The image must be edited without distortion and will be used in your video.

Save the new image with the filename **waste_** followed by your centre number and candidate number, for example: waste_ZZ999_9999 [2]

2 Open and examine the file **s2pipe.mp4**

Identify the image ratio of this clip. Remove the soundtrack from the clip. Split the clip into two parts at one second. Save the first part of the clip as **pipe2** and the second as **pipe4** in an appropriate file format. [4]

3 Extract the first frame from **pipe2** and save this with the filename **pipe1** in a format suitable for importing into your video editing software.

Extract the last frame from **pipe2** and save this with the filename **pipe3** in a format suitable for importing into your video editing software. [3]

4 Use the files saved in steps 1 to 3 to create a video clip to match this storyboard.

All text must be displayed in a consistent sans-serif font.

Do **not** use transitions unless instructed to do so.

Time 0 seconds:

Background image **pipe1** displayed

The text **Save the planet!** placed as a title, with an appropriate transition, in the top right corner

Time 7 seconds:

The title text and background remain, with the text ... **from mankind** added below the title

Time 10 seconds:

No text displayed

Video clip **pipe2** starts

Audio clip **s2voice.mp3** starts

Time 11 seconds:

Background image **pipe3** displayed

Time 15 seconds:

Video clip **pipe4** starts

Time 23 seconds:

2 second animation effect to introduce the image **waste**

Time 28 seconds:

Set a black background. Display appropriate credits to scroll up the left half of the screen. Include the text **Edited by:** and your name, centre number, candidate number in the credits.

Export your video in **mp4 format** as **myvideo_** followed by your centre number and candidate number, for example: **myvideo_ZZ999_9999** [30]

Tawara Transport have asked Planet Saviours to help them reduce their carbon emissions from their buses travelling on a number of routes. They need to identify buses that emit more CO₂ than expected. For their calculations they will assume that all seats on all buses are occupied by a passenger. All time values must be set in hh:mm:ss format.

You must use the most efficient method to solve each task. All documents produced must be of a professional standard and suit the business context.

Open and examine the files **s2bus.csv** and **s2bus_trips.csv** in a spreadsheet.

Save the **s2bus_trips** file as a spreadsheet with the filename **bus_trips_** followed by your centre number and candidate number, for example: **bus_trips_ZZ999_9999**

5 In your **bus_trips** spreadsheet, insert appropriate formulae in:

- row 17 to calculate the total trip time for each bus
- row 18 to lookup the number of seats on each bus
- row 19 to calculate the CO₂ emissions for each passenger/minute
- row 20 to calculate the total kilogrammes of CO₂ emissions for this trip. Use only the hour and minutes from the *total trip time*, rounding the number of seconds to the nearest minute.

Buses are grouped by the number of seats. Insert formulae in:

- row 24 to calculate the number of buses in each group
- row 25 to lookup the number of buses in each group that meet the expected CO₂ levels
- cell B26 to calculate the percentage of buses meeting the expected CO₂ levels

Apply appropriate formatting to your spreadsheet. This must include all CO₂ emissions displayed to 4 decimal places and the *Kilograms of CO₂* displayed as integers.

In row 19, for each trip, use conditional formatting to display the contents of the cell as:

- red text on a yellow background if the CO₂ emissions/passenger/minute is greater than expected CO₂ level/passenger/minute
- white text on a dark green background if this was not the case.

Save your spreadsheet as **CO2_** followed by your centre number_candidate number e.g. **CO2_ZZ999_9999** [45]

6 Set the spreadsheet so that when it is scrolled column A and rows 1–3 remain on the screen.

Save your spreadsheet. [1]

7 Protect all cells in:

- columns A and C
- rows 17 to 20

so that they cannot be edited when the worksheet is locked. Leave all other cells unprotected. Protect the worksheet but **not** the workbook, using the password **C4mbr1@g3**

Save your spreadsheet as **protect_** followed by your centre number_candidate number e.g. **protect_ZZ999_9999** [4]

- 8 The expected CO₂ level/passenger/minute has been changed by the government to **0.07**. Use your spreadsheet to model this change for these bus trips.

Save your spreadsheet as **model_** followed by your centre number_candidate number e.g. model_ZZ999_9999 [1]

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