Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/02**

Paper 2 Practical **May/June 2020**

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 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 you save work in an incorrect file format, you will **not** receive marks for that task.

INFORMATION
● The total mark for this paper is 110.
● The number of marks for each task or part task is shown in brackets [ ].

This document has **8** pages. Blank pages are indicated.

[Turn over

You have been supplied with the following source files:

206-Motherboard.csv
206-Processor.csv
206-TGC1.mp4
206-VoiceA.mp3
206-VoiceB.mp3

You work for Tawara Gaming Computers who are creating a number of instructional video clips showing the components in their computers.

You will create one of these short video clips. The original video clip was recorded by GBRvideo and the audio was recorded by KMBaudio.

All video and audio clips produced must be of a professional standard and suit the business context.

You are required to provide evidence of your work, including screen shots at various stages. Create an Evidence Document named:

J20_centre number_candidate number.rtf

e.g. J20_ZZ999_9999.rtf

Place your name, centre number and candidate number in the header of your Evidence Document.

1 Open the file **206-VoiceA.mp3** in a suitable audio editing package. Convert the clip from stereo to mono and trim the clip to remove the bells. Add a quiet section to the end so that the clip becomes 6 seconds long. Amplify the sound to the maximum volume without clipping. Mix the file **206-VoiceB.mp3** to add it to the end of the first clip so that the clip is a single monophonic track.

Save your audio clip in **.mp3 format** as **Voice_** followed by your centre number_candidate number

e.g. Voice_ZZ999_9999 [9]

> **EVIDENCE 1**
>
> Your audio clip.

2 Open the file **206-TGC1.mp4** in your video editing software. Set the aspect ratio to 16:9. Remove all sound from the clip.

Save your video clip in **.mp4 format** with a resolution of 854 x 480 and the filename **206-TGC2_** followed by your centre number_candidate number

e.g. 206-TGC2_ZZ999_9999 [4]

> **EVIDENCE 2**
>
> Your video clip.

3 Take a still image from the first frame of this clip.

Save it with the filename **206-TGC3** in a format suitable for importing into your video editing software. [2]

> **EVIDENCE 3**
>
> Your still image.

4 Use the files saved in steps 2 and 3 to create a video clip to match the following storyboard.

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

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

Time 0 seconds:

> Background image **206-TGC3**
> Name of the company placed as a title in the top right corner.

Time 2 seconds:

> The title text and background remain, with the text **Water cooling systems** added as a subtitle below the title.

Time 4 seconds:

> All elements added so far remain, with the subtitle text **for overclocked processors** added to the existing text.

Time 6 seconds:

> All elements added so far remain.
>
> Audio clip saved at step 1 starts.

Time 10 seconds:

> Smooth two-second transition (between 10 and 12 seconds) into the video file saved at step 2.
>
> No text displayed.

Time 19.8 seconds:

> Take a still image from the last frame of the video file and display this as a background until the end of your video.
>
> Display appropriate credits to scroll up the screen. Include the text **Edited by:** and your name, centre number and candidate number in the credits. [29]

5 Export your video clip as **206-TGC4_** followed by your centre number_candidate number in **.mp4 format**

  e.g. 206-TGC4_ZZ999_9999   [1]

EVIDENCE 4

Your video clip.

You will create part of a database to store details of computer components. Each computer processor fits into a special socket on the motherboard. Different motherboards have different processor sockets; some sockets fit processors from more than one manufacturer.

A processor can be fitted to many different types of motherboard. Some motherboards can be fitted with different types of processor. Data about processors and motherboards used by the company, but not held in stock will still be stored in the database.

As prices of components can change daily, these will only be stored in the database if an item is in stock.

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.

6 Examine the data in the files:

  206-Motherboard.csv
  206-Processor.csv

  Analyse the contents of the motherboard file, which contains details of motherboards made by each manufacturer. The company have decided to only use motherboards with a memory type of *DDR3* or *DDR4*. Remove any items that have a different type of memory.

  Save the edited file as a **spreadsheet** with the filename **Motherboard_** followed by your centre number_candidate number

  e.g. Motherboard_ZZ999_9999   [2]

EVIDENCE 5

Your spreadsheet.

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7 Each individual motherboard will be stored in a location in the factory with a unique number. These locations are called L1, L2, L3, etc.

You will plan and create a relational database, normalised to third normal form (3NF), to store the data for the:

- processors
- motherboards
- locations.

Create a data dictionary in your Evidence Document. Include details of the tables, records, fields, data types and any other relevant information. Field names must contain no spaces and be consistent in style. [35]

EVIDENCE 6

Your data dictionary.

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8 Use your data dictionary, the contents of *206-Processor.csv* and the file saved at step 6 to create a database named **206-TGC_** followed by your centre number_candidate number

e.g. 206-TGC_ZZ999_9999 [28]

EVIDENCE 7

Save your database.

Save your Evidence Document.

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