GradeMax

Cambridge Assessment International Education

Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/21**

Paper 2 Document Production, Databases and Presentations **February/March 2023**

2 hours 15 minutes

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

INSTRUCTIONS

- Carry out **all** instructions in each step.
- Enter your name, centre number and candidate number on every printout before it is sent to the printer.
- Printouts with handwritten candidate details will **not** be marked.
- At the end of the examination, put all your printouts into the Assessment Record Folder.
- If you have produced rough copies of printouts, put a cross through each one to indicate that it is **not** the copy to be marked.
- You must **not** have access to either the internet or any email system during this examination.

INFORMATION

- The total mark for this paper is 70.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.

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You have been supplied with the following source files:

m23evidence.rtf
m23houses.csv
m23markscomp.csv
m23prizes.csv
m23scientist.jpg
m23staff.csv
m23stem.rtf
m23tests.csv
m23vision.rtf

Task 1 – Evidence Document

Open the file **m23evidence.rtf**

Make sure that your name, centre number and candidate number will appear on every page of this document.

Save this Evidence Document in your work area as **m23evidence** followed by your candidate number, for example, **m23evidence9999**

You will need to place screenshots in this document of the evidence you are instructed to produce.

Task 2 – Document

*You are going to produce a report for Tawara Education about STEM subjects. The company uses a corporate house style for all their documents. Paragraph styles must be created and applied as instructed. The body text style has already been applied to the whole document. You must **not** amend this style.*

1 Using suitable software, open the file **m23stem.rtf**

The page setup is set to A4, landscape orientation with two-centimetre margins. Do **not** make any changes to these settings.

Save the document in your work area with the file name **stemnews**

Make sure it is saved in the format of the software you are using.

Place in your Evidence Document a screenshot to show this file has been saved. Make sure there is evidence of the file type.

[1]

2 Place in the footer of the *stemnews* document:

- automated page numbers left aligned
- your name, centre number and candidate number right aligned.

Make sure that:

- all the alignments match the page margins
- no other text is included in the footer area
- the footer is displayed on all pages.

[1]

3 Create and store the following styles, basing each on the default/normal paragraph style:

House style specification							
Style name	**Font style**	**Font size (points)**	**Alignment**	**Enhancement**	**Line spacing**	**Space before (points)**	**Space after (points)**
ST-subhead	sans-serif	14	centre	all capitals, bold	single	0	9
ST-table	serif	11	left	italic	single	0	0
ST-bullet	serif	11	left	square-shaped bullets aligned to the left margin	single	0	0

Take a screenshot to show that you have defined the settings for the *ST-subhead* style. Make sure there is evidence that you have based this on the default/normal paragraph style.

Place this in your Evidence Document.

[3]

4 Display the style names created in Step 3 as a list in the style manager/organiser.

Take screenshot evidence to show that you have created, named and saved these styles.

Place this in your Evidence Document.

[1]

5 The style *ST-title* has already been created and stored.

Modify the *ST-title* style so only the following formatting is applied:

Style name	**Font style**	**Font size (points)**	**Alignment**	**Enhancement**	**Line spacing**	**Space before (points)**	**Space after (points)**
ST-title	sans-serif	36	centre	bold, underlined	single	0	0

Apply this style to the title text *Tawara Schools STEM Development*

Place in your Evidence Document a screenshot of the style settings for the *ST-title* style to show the changes you have made. [2]

6 Below the title, add a subtitle:

Innovations in Science Education [1]

7 The style *ST-subtitle* has already been created and stored.

Apply this style to the text you entered in Step 6. [1]

8 Apply the *ST-bullet* style to the text from

working in teams …

to

… *developing own solutions*.

[1]

9 Identify the 7 subheadings in the document and apply the *ST-subhead* style to each one. [1]

10 Change the page layout so that the subheading *Why is a STEM approach to learning important?* and all following text is displayed in two columns of equal width with a one-centimetre space between them.

[2]

11 Locate the table and insert a new row above *Chemistry*.

Enter the following data into this row:

Biology	**50**	**40**

[2]

12 Merge the cells and centre align the text in the first row of the table. [1]

13 Apply the *ST-table* style to rows 2 to 9 of the table.

Make sure that:

- no data is wrapped within the table
- all gridlines are displayed when printed
- all borders and data fit within the column width
- there is a 6-point space after the table.

[2]

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14 Import the image **m23scientist.jpg** and place it in the paragraph beginning *Will the gender disparity…* [1]

15 Reflect the image so that the laboratory flask is on the right. [1]

16 Format the image so that:

- it is re-sized to a height of 2 centimetres with the aspect ratio maintained
- it is aligned to the left column margin and the top of the paragraph starting *Will the gender disparity…*
- text wraps around the image.

[2]

17 Spell check and proofread the document.

Make sure that:

- the table and list are **not** split over two columns or pages
- columns align at the top
- there are no widows or orphans
- there are no blank pages
- styles are applied consistently
- spacing is consistent between all items.

Save the document using the same file name and format used in Step 1.

Print the document.

[1]

[Total: 24]

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[Turn over

Task 3 – Database

Students at the Tawara High School are placed in one of four groups which are called houses. These houses are Jupiter, Mars, Neptune and Saturn.

You are now going to prepare some reports based on school tests.

18 Using database software, import the file **m23tests.csv**

Do **not** import the *English* field.

Use these field names and data types:

Field name	Data type	Display
Registration_Code	Text	
Given_Name	Text	
Family_Name	Text	
Gender	Text	
Class_Code	Text	
House_Code	Text	
Maths	Number	0 decimal places
Computer_Science	Number	0 decimal places
Design_Technology	Number	0 decimal places
Science	Number	0 decimal places

Set *Registration_Code* as the primary key.

Save the data.

Place in your Evidence Document a screenshot showing the field names, data types and primary key used in the table.

[3]

19 Import the file **m23houses.csv** as a new table in your database. Set the *House_Code* field as the primary key.

Examine the file **m23staff.csv** to identify the most appropriate field to use as a primary key. Import this file as a new table in your database using this field as the primary key.

Place in your Evidence Document screenshot evidence showing the field names, data types and the primary key used in each table.

[3]

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20 Edit the following record in the tests table:

Registration_Code	**2016_029**
Class_Code	Change from *6B* to **6T**

Check your data entry for errors. Save the data.

[1]

21 Create one-to-many relationships between:

- the primary key field of the staff table and the *Class_Code* of the tests table
- the primary key field of the houses table and the *House_Code* field of the tests table.

Place in your Evidence Document screenshot(s) showing the one-to-many relationships between the tables.

[1]

22 Using fields from all tables, produce a tabular report that:

- selects the records where:
  - the *Gender* is **F**
  - *Science* is **80** or more
  - the *Class_Code* contains **6**
- shows only the fields *Family_Name*, *Gender*, *Teacher_Name*, *Science*, *Maths*, *Computer_Science*, *Design_Technology*, *House_Name* and *Class_Code* in this order with data and labels displayed in full. Do **not** group the data
- sorts the data into ascending order of *Teacher_Name* and descending order of *Science*
- calculates the number of students and places this at the end of the report
- has the label **New science group size** fully visible to the left of this value
- has a page orientation of landscape
- fits on a single page wide
- includes the title **STEM Science Class for 2024** displayed in a larger font size, fully visible, at the top of the report
- displays your name, centre number and candidate number in the footer so it appears in the same position on every page. Make sure no other data is displayed in the footer.

Place in your Evidence Document a screenshot showing the database formula used to calculate the number of students.

Save and print your report.

[9]

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23 Using fields from all the tables, produce a tabular report that:

- selects only the records where:
  - the *Class_Code* is **5C**
  - the *House_Name* is **Mars**
- shows only the fields *Gender*, *Family_Name*, *Given_Name*, *House_Name*, *Maths*, *Computer_Science* and *Teacher_Name* in this order with data and labels displayed in full. Do **not** group the data
- sorts the data into ascending order of *Gender* and ascending order of *Family_Name*
- has a page orientation of portrait
- fits on a single page
- calculates the average *Maths* mark in this selection and positions this number below the *Maths* column
- displays this average mark with 0 decimal places
- includes the label **Average Maths Score** fully visible, to the left of this value
- includes the title **Year Five Test Report for Mars** displayed in a larger font size, fully visible, at the top of the report
- has your name, centre number and candidate number displayed at the bottom of the report.

Place in your Evidence Document a screenshot showing the database formula used to calculate the average mark for *Maths*.

Save and print your report.

[11]

24 Export the report created at Step 23 in portable document format (pdf).

Save the exported file in your work area with the file name **YEAR 5**

Place in your Evidence Document a screenshot to show the exported file saved in your work area. Make sure there is evidence of the name and file type.

[2]

[Total: 30]

Task 4 – Printing the Evidence Document

Make sure that your name, centre number and candidate number appear on every page of your Evidence Document.

Save your Evidence Document.

Print your Evidence Document.

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Task 5 – Presentation

You are going to create a short presentation.

All slides must have a consistent layout and formatting.

25 Create a presentation of 6 slides using the file **m23vision.rtf**

Unless otherwise instructed, the slides must display a title and a bulleted list.

[1]

26 Make sure that your name, centre number and candidate number appear in the same position on all slides. [1]

27 Format the first slide so that:

- a title slide layout is applied with no bullets
- the title and subtitle text are centre aligned and in the middle of the slide. [1]

28 Change the layout of the slide with the title *Our top performing students* to a title with two placeholders side by side.

[1]

29 Using the file **m23markscomp.csv** create a vertical bar chart to compare the average marks for each subject, except English, for girls and boys. Display:

- the subject names in full on the category axis
- the chart title **Average marks compared**
- only the data values above each bar
- a legend to identify the girls and boys.

[5]

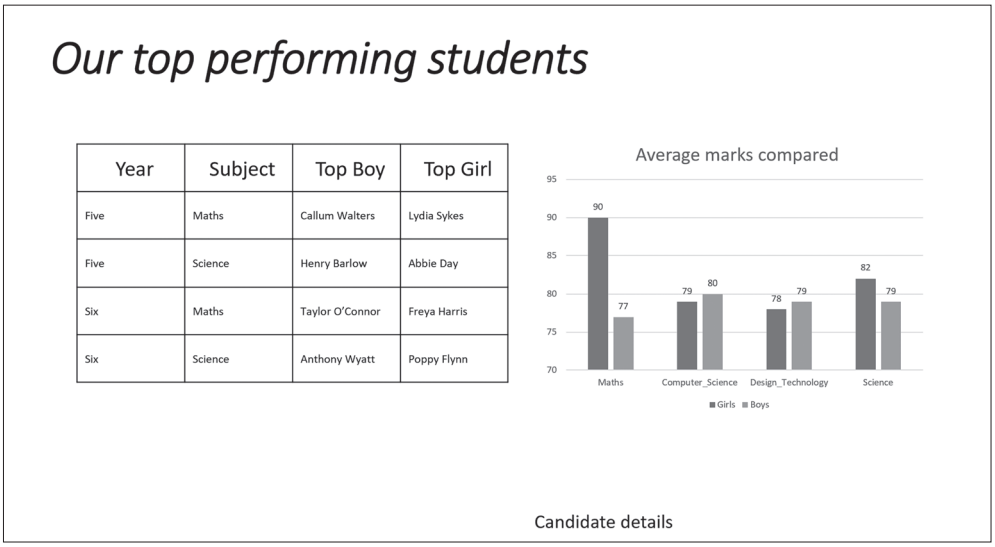
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[Turn over

30 On the slide with the title *Our top performing students* place the chart you created in Step 29 in the right placeholder.

Place the contents of the file **m23prizes.csv** in the left placeholder.

Format the table as shown:



[5]

31 Print the slide with the title *Our top performing students* as a single full-page slide.

Print all the slides as handouts with 2 slides to the page, each slide filling half the page.

[2]

[Total: 16]

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