



# Cambridge International AS & A Level

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**INFORMATION TECHNOLOGY**

**9626/02**

Paper 2 Practical

**May/June 2023**

**MARK SCHEME**

Maximum Mark: 90

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

| Task | Answer                                                               | Marks |
|------|----------------------------------------------------------------------|-------|
| 1    | <b>Tables</b><br>Database contains cars table                        | 1     |
|      | Database contains model table                                        | 1     |
|      | Database contains paint table                                        | 1     |
|      | Database contains drive table                                        | 1     |
|      | Database contains extras table                                       | 1     |
|      | No ID fields                                                         | 1     |
|      | All tables have no repeated fields / duplicate data                  | 1     |
|      | All tables have short meaningful field names                         | 1     |
|      | <b>Relationships</b><br>Relationship model.Name to cars.Model ...    | 1     |
|      | ...1 to many                                                         | 1     |
|      | ... with referential integrity set                                   | 1     |
|      | Relationship paint.P_code to cars.Colour ...                         | 1     |
|      | ...1 to many                                                         | 1     |
|      | ... with referential integrity set                                   | 1     |
|      | Relationship drive.D_code to cars.Drive...                           | 1     |
|      | ...1 to many                                                         | 1     |
|      | ... with referential integrity set                                   | 1     |
|      | Relationship extras.E_code to cars.Extras                            | 1     |
|      | ...1 to many                                                         | 1     |
|      | <b>Cars table</b><br>Appropriate table name e.g. Car, Cars, Vehicles | 1     |
|      | Appropriate fieldnames                                               | 1     |
|      | Reg_No as primary key                                                | 1     |
|      | Reg_No – 7 characters long                                           | 1     |
|      | Model field alphanumeric/text                                        | 1     |
|      | Model field 12 characters long                                       | 1     |
|      | Colour data type set to integer                                      | 1     |

| Task | Answer                                                       | Marks |
|------|--------------------------------------------------------------|-------|
| 1    | Drive field alphanumeric/text                                | 1     |
|      | Drive field 1 character                                      | 1     |
|      | Extras field alphanumeric/text                               | 1     |
|      | Extras field 3 characters                                    | 1     |
|      | Year data type restricted to integer                         | 1     |
|      | At least 1 appropriate validation routine                    | 1     |
|      | <b>Drive table</b><br>Table name – appropriate e.g. Engine   | 1     |
|      | Appropriate fieldnames                                       | 1     |
|      | D_Code as primary key & alphanumeric                         | 1     |
|      | Drive field as alphanumeric/text                             | 1     |
|      | Cost field as numeric/currency to 2dp                        | 1     |
|      | One correct field length                                     | 1     |
|      | <b>Extras table</b><br>Table name – appropriate e.g. Extras  | 1     |
|      | Appropriate fieldnames                                       | 1     |
|      | E_Code as primary key & alphanumeric                         | 1     |
|      | Extras field as alphanumeric/text                            | 1     |
|      | Cost field as numeric/currency to 2dp                        | 1     |
|      | One correct field length                                     | 1     |
|      | <b>Model table</b><br>Appropriate Table name e.g. Model      | 1     |
|      | Appropriate fieldnames                                       | 1     |
|      | Name/Model as primary key and alphanumeric                   | 1     |
|      | Body Style field as alphanumeric/text                        | 1     |
|      | Cost field as numeric/currency to 2dp                        | 1     |
|      | One correct field length                                     | 1     |
|      | <b>Paint table</b><br>Table name – appropriate e.g. Colour/s | 1     |
|      | Appropriate fieldnames                                       | 1     |

| Task | Answer                                                                      | Marks |
|------|-----------------------------------------------------------------------------|-------|
| 1    | P_Code as primary key                                                       | 1     |
|      | P_Code as integer                                                           | 1     |
|      | Colour field as alphanumeric/text                                           | 1     |
|      | Colour field length = 13                                                    | 1     |
|      | Factor field as decimal                                                     | 1     |
|      | <b>Calculated fields</b><br>Calculated fields created called Cost and Price | 1     |
|      | Cost field = Model + Drive + Extras ...                                     | 1     |
|      | ...+ (200 ...                                                               | 1     |
|      | ... * Paint.factor)                                                         | 1     |
|      | Cost field – All table and field names in square brackets                   | 1     |
|      | Price field = 1.8 *                                                         | 1     |
|      | ...[Cost] + 1000...                                                         | 1     |
|      | ...in brackets                                                              | 1     |

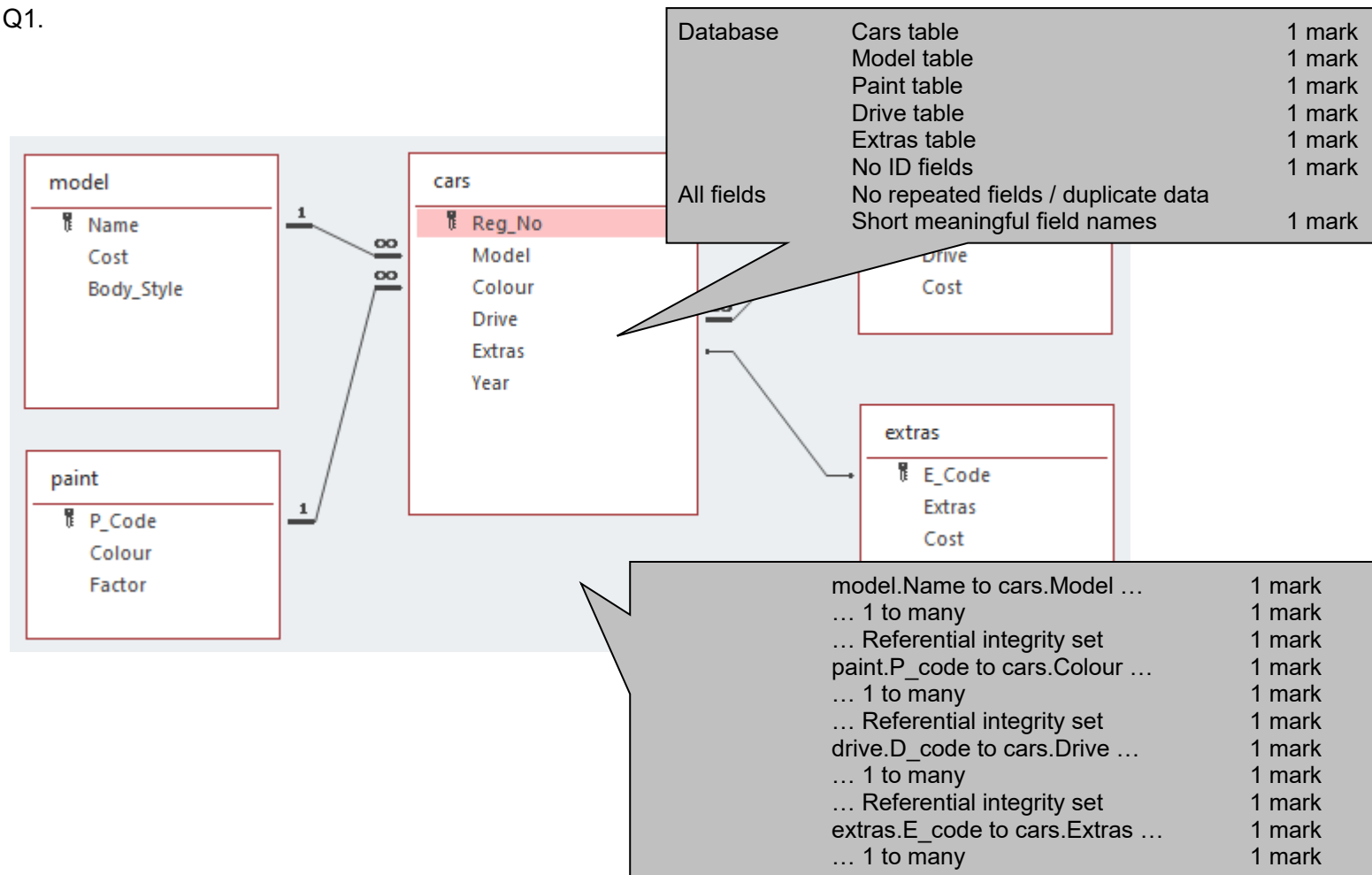
| Task | Answer                                                    | Marks |
|------|-----------------------------------------------------------|-------|
| 2    | <b>Query</b><br>Made in 2019                              | 1     |
|      | Wildcard search on LED lighting                           | 1     |
|      | Wildcard search for black, grey or blue                   | 1     |
|      | <b>Report</b><br>Appropriate title with candidate details | 1     |
|      | White text on a black background for title                | 1     |
|      | Grouped by colour and model                               | 1     |
|      | Only 9 title text boxes and controls visible...           | 1     |
|      | ... aligned as shown                                      | 1     |
|      | ... containing the vehicle details only                   | 1     |
|      | <b>PDF</b><br>Exported pdf – Correct 11 records located   | 1     |
|      | Exported as step_2_ZZ999_9999.pdf file                    | 1     |

| <b>Task</b> | <b>Answer</b>                           | <b>Marks</b> |
|-------------|-----------------------------------------|--------------|
| <b>3</b>    | 23clip1 – Reverb added to the clip      | <b>1</b>     |
|             | 23clip1 – Sound amplified to maximum... | <b>1</b>     |
|             | ... without clipping                    | <b>1</b>     |
|             | 23clip1 – Noise reduction applied       | <b>1</b>     |
|             | Exported as clip1_zz999_9999.mp3        | <b>1</b>     |

| <b>Task</b> | <b>Answer</b>                                     | <b>Marks</b> |
|-------------|---------------------------------------------------|--------------|
| <b>4</b>    | Clip 2 split with start of clip unchanged...      | <b>1</b>     |
|             | ... added silence until 8.25 seconds              | <b>1</b>     |
|             | Better for the planet' moved to 8.25 seconds      | <b>1</b>     |
|             | Both tracks mixed down to mono                    | <b>1</b>     |
|             | Two mono tracks mixed down to stereo track...     | <b>1</b>     |
|             | ... Male voiceover left channel                   | <b>1</b>     |
|             | ... Female voiceover right channel                | <b>1</b>     |
|             | ... no loss of voice track/s or distortion        | <b>1</b>     |
|             | Exported in mp3 format as j23sound_ZZ999_9999.mp3 | <b>1</b>     |

**PUBLISHED****9626/02 June 2023**

Q1.



**PUBLISHED**

Table/Query: model Related Table/Query: cars

Name Model

☒ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Table/Query: paint Related Table/Query: cars

P\_Code Colour

☒ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Table/Query: drive Related Table/Query: cars

D\_Code Drive

☒ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Table/Query: extras Related Table/Query: cars

E\_Code Extras

☐ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

| Field Name | Data Type  |
|------------|------------|
| Reg_No     | Short Text |
| Model      | Short Text |
| Colour     | Number     |
| Drive      | Short Text |
| Extras     | Short Text |
| Year       | Number     |

Cars table

|                                                   |        |
|---------------------------------------------------|--------|
| Table name – appropriate e.g. Car, Cars, Vehicles | 1 mark |
| Appropriate fieldnames                            | 1 mark |
| Reg_No as primary key                             | 1 mark |
| Reg_No – 7 characters long                        | 1 mark |
| Model field alphanumeric/text                     | 1 mark |
| Model field 12 characters long                    | 1 mark |
| Colour data type set to integer                   | 1 mark |
| Drive field alphanumeric/text                     | 1 mark |
| Drive field 1 character                           | 1 mark |
| Extras field alphanumeric/text                    | 1 mark |
| Extras field 3 characters                         | 1 mark |
| Year data type set to integer                     | 1 mark |
| At least 1 appropriate validation routine         | 1 mark |

| drive X    |            | <div> <div>Drive table</div> <div> Table name – appropriate e.g. Engine<br/> Appropriate fieldnames<br/> D_Code as primary key &amp; alphanumeric<br/> Drive field as alphanumeric/text<br/> Cost field as numeric/currency to <b>2dp</b><br/> One correct field length </div> <div> 1 mark<br/> 1 mark<br/> 1 mark<br/> 1 mark<br/> 1 mark </div> </div> |  |
|------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Field Name | Data Type  |                                                                                                                                                                                                                                                                                                                                                           |  |
| D_Code     | Short Text |                                                                                                                                                                                                                                                                                                                                                           |  |
| Drive      | Short Text |                                                                                                                                                                                                                                                                                                                                                           |  |
| Cost       | Currency   |                                                                                                                                                                                                                                                                                                                                                           |  |

**PUBLISHED**

| extras     |            |
|------------|------------|
| Field Name | Data Type  |
| E_Code     | Short Text |
| Extras     | Short Text |
| Cost       | Currency   |

|              |                                              |        |
|--------------|----------------------------------------------|--------|
| Extras table | Table name – appropriate e.g. Extras         | 1 mark |
|              | Appropriate fieldnames                       | 1 mark |
|              | E_Code as primary key & alphanumeric         | 1 mark |
|              | Extras field as alphanumeric/text            | 1 mark |
|              | Cost field as numeric/currency to <b>2dp</b> | 1 mark |
|              | One correct field length                     | 1 mark |

| model      |            |
|------------|------------|
| Field Name | Data Type  |
| Name       | Short Text |
| Cost       | Currency   |
| Body_Style | Short Text |

|             |                                              |        |
|-------------|----------------------------------------------|--------|
| Model table | Table name – appropriate e.g. Model          | 1 mark |
|             | Appropriate fieldnames                       | 1 mark |
|             | Name/Model as primary key & alphanumeric     | 1 mark |
|             | Body Style field as alphanumeric/text        | 1 mark |
|             | Cost field as numeric/currency to <b>2dp</b> | 1 mark |
|             | One correct field length                     | 1 mark |

| paint      |            |
|------------|------------|
| Field Name | Data Type  |
| P_Code     | Number     |
| Colour     | Short Text |
| Factor     | Number     |

|             |                                                |        |
|-------------|------------------------------------------------|--------|
| Paint table | Table name – appropriate e.g. Colour(s), Paint | 1 mark |
|             | Appropriate fieldnames                         | 1 mark |
|             | Relationship to Cars table as primary key      | 1 mark |
|             | P_Code as integer                              | 1 mark |
|             | Colour field as alphanumeric/text              | 1 mark |
|             | Colour field length = 13                       | 1 mark |
|             | Factor field as decimal                        | 1 mark |

Query finance

|           |                                                                                                                                                                                                                                                                                                                                                 |                          |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Field:    | Cost: [model].[cost]+[drive].[cost]+[extras].[cost]+[paint].[factor]*200                                                                                                                                                                                                                                                                        | Price: ([Cost]+1000)*1.8 |
| Table:    |                                                                                                                                                                                                                                                                                                                                                 |                          |
| Sort:     |                                                                                                                                                                                                                                                                                                                                                 |                          |
| Show:     | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                             |                          |
| Criteria: | <div> <p>Calculated fields created for Cost and Price 1 mark</p> <p>Cost: Field name: Model + Drive + Extras 1 mark</p> <p>+ (200 1 mark</p> <p>* Paint.factor) 1 mark</p> <p>All table and field names in square brackets 1 mark</p> <p>Price: Field name: 1.8 * 1 mark</p> <p>[Cost] + 1000... 1 mark</p> <p>...in brackets 1 mark</p> </div> |                          |

**Black, grey or blue models from 2019 by A Candidate ZZ9999 9999**

| Colour               | Model        | Reg number | Year | Drive type       | Extras                                             | Body style | Cost      | Price      |
|----------------------|--------------|------------|------|------------------|----------------------------------------------------|------------|-----------|------------|
| <b>Black</b>         |              |            |      |                  |                                                    |            |           |            |
|                      | Alphadrive   |            |      |                  |                                                    |            |           |            |
|                      |              | AS515PH    | 2019 | Electric Cell    | LED lighting, Satellite navigation                 | Coupe      | £5,820.00 | £12,276.00 |
|                      | Comfortdrive |            |      |                  |                                                    |            |           |            |
|                      |              | BU939JN    | 2019 | Hydrodrive       | LED lighting                                       | Hatchback  | £6,340.00 | £13,212.00 |
|                      | Ecodrive     |            |      |                  |                                                    |            |           |            |
|                      |              | DG075NE    | 2019 | Electric Cell    | LED lighting, Satellite navigation                 | Saloon     | £6,250.00 | £13,050.00 |
|                      | Finesse      |            |      |                  |                                                    |            |           |            |
|                      |              | BE511RC    | 2019 | Residual Battery | Cruise control, LED lighting, Satellite navigation | Sports     | £9,190.00 | £18,342.00 |
|                      |              | CB293UG    | 2019 | Residual Battery | LED lighting                                       | Sports     | £8,120.00 | £16,416.00 |
| <b>Metallic Grey</b> |              |            |      |                  |                                                    |            |           |            |
|                      | Alphadrive   |            |      |                  |                                                    |            |           |            |
|                      |              | BH460AF    | 2019 | Dynamic Electric | Cruise control, LED lighting                       |            |           |            |
|                      |              | CK817VE    | 2019 | Electric Cell    | Cruise control, LED lighting                       |            |           |            |
|                      | Comfortdrive |            |      |                  |                                                    |            |           |            |
|                      |              | EF705WA    | 2019 | Hydrodrive       | LED lighting, Satellite navigation                 |            |           |            |
| <b>Midnight Blue</b> |              |            |      |                  |                                                    |            |           |            |

|            |                                                    |        |
|------------|----------------------------------------------------|--------|
| Query      | Made in 2019                                       | 1 mark |
|            | Wildcard search on LED lighting                    | 1 mark |
|            | Wildcard search for black, grey or blue            | 1 mark |
| Report     | Appropriate title with candidate details           | 1 mark |
|            | White text on a black background for title         | 1 mark |
|            | Grouped by colour and model                        | 1 mark |
|            | Only 9 title text boxes & controls visible...      | 1 mark |
|            | ... Body_Style & Cost right aligned, fully visible | 1 mark |
|            | ... other fields aligned as shown, fully visible   | 1 mark |
|            | Correct 11 records located                         | 1 mark |
| Step_2 pdf | Exported as step_2_ZZ999_9999.pdf file             | 1 mark |

| Colour     | Model   | Reg_No | Year                                               | Drive type<br>Extras | Body_Style<br>Cost | Price      |
|------------|---------|--------|----------------------------------------------------|----------------------|--------------------|------------|
| Bettadrive |         |        |                                                    |                      |                    |            |
|            | CH498BA | 2019   | Quantumdrive                                       |                      | Hatchback          |            |
|            |         |        | LED lighting                                       |                      | £6,665.00          | £13,797.00 |
| Duradrive  |         |        |                                                    |                      |                    |            |
|            | AV419BV | 2019   | Dynamic Electric                                   |                      | Estate             |            |
|            |         |        | Cruise control, LED lighting                       |                      | £5,910.00          | £12,438.00 |
| Finesse    |         |        |                                                    |                      |                    |            |
|            | EN756XH | 2019   | Residual Battery                                   |                      | Sports             |            |
|            |         |        | Cruise control, LED lighting, Satellite navigation |                      | £9,230.00          | £18,414.00 |

## Audio



Clip1

Reverb added to the clip

1 mark

All sound amplified to maximum...

1 mark

...without clipping

1 mark

Noise reduction applied

1 mark

Exported as **23clip1\_zz999\_9999.mp3**

1 mark



|                                                          |                                                |        |
|----------------------------------------------------------|------------------------------------------------|--------|
| Clip 2                                                   | Split with start of clip unchanged...          | 1 mark |
|                                                          | ... added silence until 8.25 seconds           | 1 mark |
|                                                          | Better for the planet' moved to 8.25 seconds   | 1 mark |
| Mixing                                                   | Correct tracks mixed down to mono              | 1 mark |
|                                                          | Two mono tracks mixed down to stereo track ... | 1 mark |
|                                                          | ... Male voiceover only in left channel        | 1 mark |
|                                                          | ... Female voiceover only in right channel     | 1 mark |
|                                                          | ... no loss of voice track(s) or distortion    | 1 mark |
| Exported in mp3 format as <b>j23sound_ZZ999_9999.mp3</b> |                                                | 1 mark |