1. A teacher has asked you to use a word processor to create a table of some Indian cities together with their populations. The required layout is shown below

| Populations of Indian cities | | | |
|---|---|---|---|
| *City* | *Population* | *City* | *Population* |
| Mumbai | | New Delhi | |
| Bangalore | | Ahmedabad | |
| Kolkata | | Chennai | |

a. Describe how you would create this table in a word processor.

.....

.....

.....

.....

.....

.....

.....

b. When you have completed the table the teacher asks you to add some extra cities. You will need to expand the table to add the extra cities. Describe how you can do this.

.....

.....

.....

.....

.....

2. Hot House Design require a new multimedia presentation for training sessions to be held in Hyderabad.
   (a) The trainers will need to show the presentation and produce handouts for participants. Name three output devices they would need.

1.....

2.....

3. .....

3. A teacher wants to record the results of tests for each student in a spreadsheet. He sets test papers for both the theory (T) and practical (P) aspects of the ICT course. Part of the spreadsheet is shown below.

| | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | | | | | | | | | | |
| 3 | Student | T | P | P | T | T | P | P | Average mark | Grade | Total theory mark |
| 4 | Rajesh Patel | 23 | 45 | 44 | 78 | 34 | 129 | 124 | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | Max marks | 50 | 90 | 90 | 90 | 100 | 140 | 130 | | | |

a. Write down a formula you would use in cell K4 which makes use of the labels in row 3, where appropriate, to add up the marks for the theory tests only.

.....

.....

b. Write down a formula that you would enter in cell I4 to calculate the average of Rajesh's results.

.....

.....

c. Describe how the teacher could format the average mark to 2 decimal places.

.....

.....

.....

.....

| | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|
| 2 | | | | | | | | | |
| 3 | P | P | Average mark | Grade | Total theory mark | | | | |
| 4 | 129 | 124 | 68.14 | | | | | 0 | U |
| 5 | | | | | | | | 20 | G |
| 6 | | | | | | | | 30 | F |
| 7 | | | | | | | | 40 | E |
| 8 | | | | | | | | 50 | D |
| 9 | | | | | | | | 60 | C |
| 10 | | | | | | | | 70 | B |
| 11 | 140 | 130 | | | | | | 80 | A |

d. The teacher wants the spreadsheet to calculate a student's grade automatically. He needs to calculate this from the average mark of all the results for the student.
Write down below a formula which should be entered into cell J4. It should use the calculated average mark. It will search for Rajesh's average mark in column N and return the corresponding grade. It should be easily replicated for other students.

.....

.....

.....

.....

.....

.....

4. The Tawara Tea Company supplies tea to its customers. The company has created a spreadsheet to help its sales team to keep track of its orders. The spreadsheet has two worksheets, named Products and Orders. Part of the spreadsheet is shown below. All prices and costs are displayed in Indian Rupee ₹.

Worksheet: Products

| | A | B | C |
|---|---|---|---|
| 1 | **Tea code** | **Product name** | **Price per unit** |
| 2 | 272 | Singbulli Champagne Oolong | ₹16.00 |
| 3 | 347 | Phuguri Supreme | ₹16.00 |
| 4 | 348 | Tumsong Supreme | ₹16.00 |
| 5 | 349 | Pussimbing Supreme | ₹16.00 |
| 6 | 3 | Phuguri | ₹8.50 |
| 7 | 5 | Goomtee | ₹8.00 |
| 8 | 6 | Risheehat | ₹6.40 |
| 9 | 7 | Makaibari Organic | ₹4.90 |
| 10 | 8 | Bannockburn | ₹5.00 |
| 11 | 9 | Chamong Organic | ₹4.00 |

Worksheet: Orders

| | A | B | C | D |
|---|---|---|---|---|
| 1 | **Order ID** | **Tea code** | **Quantity ordered** | **Cost** |
| 2 | 124 | 272 | 24 | |
| 3 | 124 | 348 | 25 | |
| 4 | 124 | 6 | 105 | |
| 5 | 124 | 9 | 120 | |
| 6 | 124 | 349 | 30 | |
| 7 | 125 | 3 | 225 | |
| 8 | 125 | 5 | 220 | |
| 9 | 125 | 6 | 200 | |

a. A salesman needs to create a formula to be placed in cell D2, in the Orders worksheet that finds the Price per unit of the tea, multiplies it by the Quantity ordered and then displays the result. (a) Write a formula that needs to be entered in cell D2. This formula will be replicated down to cell D9.

.....

.....

.....

.....

The salesman has created a new worksheet called Receipt which automatically produces a receipt for each order.

Worksheet: Receipt

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Order ID** | **Tea code** | **Product name** | **Quantity ordered** | **Cost** |
| 2 | 124 | 272 | Singbulli Champagne Oolong | 24 | ₹384 |
| 3 | | 348 | Tumsong Supreme | 25 | ₹400 |
| 4 | | 6 | Risheehat | 105 | ₹672 |
| 5 | | 9 | Chamong Organic | 120 | ₹480 |
| 6 | | 349 | Pussimbing Supreme | 30 | ₹480 |
| 7 | | | | **Total** | ₹2416 |

b. Explain how he could format the Cost column (column E) to display the values in Indian Rupees as shown.

.....

.....

.....

.....

.....

.....

.....

5. Aadhya and her family are planning a visit to the Gir National Park and she is creating a web page about the destination. She has started writing some of the HTML but has made some mistakes.

```
<html>
<!-- Visit to Gir National Park -->
<head>
</head>
<title>The Gir National Park</title>
<body>
<table style= "width:100%">
<tbody style="background-color: #9acd32>
<tr>
<td rowspan="2"><img src="GIRNP.JPG" width="50" alt="image of an elephant">
</td>
<td><h1>The Gir National Park</h1>
<h3>A National Park of Gujarat</h3>
</td>
<td ><img scr="GIR-LOGO.JPG" alt="Logo for Gir National Park">
</td>
</tr>
<tr>
<td colspan="2" >This webpage is under construction.
</td>
</tr>
</tbody>
<table>
</body>
</html>
```

Write down four mistakes which would prevent this markup from working properly. Your answers must be different in each case.

1 .....

.....

2.....

.....

3 .....

.....

4.....

.....

.....

6.

Maria is the principal of the International Municipal school. She has employed Paulo, a systems analyst, to create a new database system to store records of her final year IGCSE students.

Examples of the details of the students which will be stored are:

Velia Grimaldi, A3058, Female, 161, Leaving

Giuseppe Campo, A3072 , Male, 177, Staying on to 6th form

Nicola Donati, B3085, Female, 173, Staying on to 6th form

Giovanni Agnelli, C3102, Male, 172, Leaving

**(a)** Complete the following table by entering the field names and **most appropriate** data type for each field.

For any numeric field, specify the type of number.

| Field name | Data type |
|---|---|
| Name | |
| | |
| | Boolean |
| Height | |
| | |

[7]

**(b)** Paulo wishes to save storage space. He does not change the Name field, but decides that two other fields could have their data shortened.

Apart from the Name field, identify the two other fields and describe how the contents will be shortened.

Field 1.....

Shortened form 1.....

Field 2.....

Shortened form 2.....

[4]

**(c)** There is no key field set. Maria's secretary typed in the data to the database in this order:

Giuseppe Campo, A3072, Male, 177, Staying on to 6th form

Giovanni Agnelli, C3102, Male, 172, Leaving

Nicola Donati, B3085, Female, 173, Staying on to 6th form

Velia Grimaldi, A3058, Female, 161, Leaving

Maria can get the database back in to the original order by sorting the data using one field.

Write down the name of this field and the order in which it will need to be sorted.

Field.....

Order.....

[2]

7. Below is a spreadsheet showing contributions to a charity from different regions

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | The Manta Conservation Project | | | | | | | | |
| 2 | Regional analysis | | | | | | | | |
| 3 | Region | RCode | | Currency | Regional income | | Date | Rcode | Amount |
| 4 | Africa | AF | | Rand | ZAR 65.00 | | 20/01/2016 | AF | 15.00 |
| 5 | Asia | AS | | Yuan | ¥3,752.50 | | 20/01/2016 | AS | 150.00 |
| 6 | Australasia | AU | | Dollar | $142.50 | | 20/01/2016 | NA | 2000.00 |
| 7 | Europe | EU | | Euro | €1,076.00 | | 20/01/2016 | EU | 25.00 |
| 8 | North America | NA | | Dollar | $2,240.50 | | 21/01/2016 | NA | 120.50 |
| 9 | South America | SA | | Real | R$75.75 | | 21/01/2016 | SA | 50.00 |
| 10 | | | | | | | 21/01/2016 | AF | 50.00 |
| 11 | | | | | | | 21/01/2016 | AS | 25.00 |
| 12 | | | | | | | 21/01/2016 | EU | 15.00 |
| 13 | | | | | | | 22/01/2016 | AU | 140.00 |
| 14 | | | | | | | 22/01/2016 | EU | 1000.00 |
| 15 | | | | | | | 22/01/2016 | NA | 20.00 |
| 16 | | | | | | | 23/01/2016 | SA | 25.75 |
| 17 | | | | | | | 23/01/2016 | EU | 16.00 |
| 18 | | | | | | | 23/01/2016 | NA | 100.00 |
| 19 | | | | | | | 23/01/2016 | AS | 55.00 |
| 20 | | | | | | | 24/01/2016 | AS | 12.50 |
| 21 | | | | | | | 25/01/2016 | AS | 10.00 |
| 22 | | | | | | | 25/01/2016 | AU | 2.50 |
| 23 | | | | | | | 26/01/2016 | EU | 20.00 |
| 24 | | | | | | | 26/01/2016 | AS | 3500.00 |
| 25 | | | | | | | | | |
| 26 | | | | | | | Number of donations | | 21 |

**(a)** Cell E4 contains the formula =SUMIF($H$4:$H$24,B4,$I$4:$I$24)

Using cell references explain what this formula does.

.....

.....

.....

.....

.....

..... [3]

**(b)** What formula would you expect to see in cell E8?

..... [3]

**(c)** The formula in I26 only refers to the values in column I. Write down the formula you would expect to see in cell I26

..... [2]

8.

The following is an external stylesheet which contains a number of mistakes.

```
h1 {
        colour: #000040;
        font-family: Arial, sans serif;
        font-size: 18 px;
        text-align: center;
}

h2 {
        color: 000000;
        font-family: Times New Roman, serif;
        font-size: 15px;
        text-align: centre;
}

body {
        background-image: url('j12backgd2.jpg');
        background-color: #025fb4;
}

table {
        border-collapse: collapse;
        border-width: 4px;
        border-style: solid;
        border-color: #000000;
}

td {
        border-width: 2px;
        border-style: solid;
        border-color: #000000;
}
```

Write down **five** mistakes which would prevent this stylesheet from working properly and, for each, give the correction.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

5 .....

.....

9.

Enrique has developed a new database system for a supermarket. Below is one record from the database. He needs to test the validation checks that he has developed for the system.

| Barcode | Supplier_code | Contents | Price | Reorder_level | Weight(kg) |
|---|---|---|---|---|---|
| 5012427141308 | EZ123 | Lobster Bisque | £2.72 | 100 | 0.4 |

**(a)** He designed a length check for the **Barcode** field. However, when he entered the code 5012472141308 by mistake, the system still accepted it.

Describe the check he could have used to prevent this error.

.....

.....

.....

..... [2]

**(b)** The **Reorder_level** for each item is never more than 100. He developed a validation check to make sure this is the case.

However, when he entered the number 100 it was rejected.

Name and describe the validation check he should use and explain why the number could have been rejected.

.....

.....

.....

.....

.....

..... [3]

**(c)** He also designed a length check for the **Supplier_code** field. However, when he entered EZQ23 by mistake, the system still accepted it.

Describe how he could have prevented this error.

.....

.....

.....

..... [2]

**(d)** For each field write down the **most appropriate** data type. For any numeric field specify the type of number.

Barcode.....

.....

Supplier_code.....

.....

Contents.....

.....

Price.....

.....

Reorder_level.....

.....

Weight(kg).....

.....

[6]

10.

Here is a spreadsheet showing the countries which have been selected to host the Commonwealth Games.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | 1930 | Canada | | | |
| 3 | 1934 | England | | | |
| 4 | 1938 | Australia | | | |
| 5 | 1950 | New Zealand | | Canada | 4 |
| 6 | 1954 | Canada | | England | 2 |
| 7 | 1958 | Wales | | Australia | 5 |
| 8 | 1962 | Australia | | New Zealand | 3 |
| 9 | 1966 | Jamaica | | Wales | 1 |
| 10 | 1970 | Scotland | | Jamaica | 1 |
| 11 | 1974 | New Zealand | | Scotland | 3 |
| 12 | 1978 | Canada | | Malaysia | 1 |
| 13 | 1982 | Australia | | India | 1 |
| 14 | 1986 | Scotland | | South Africa | 1 |
| 15 | 1990 | New Zealand | | | |
| 16 | 1994 | Canada | | | |
| 17 | 1998 | Malaysia | | | |
| 18 | 2002 | England | | | |
| 19 | 2006 | Australia | | | |
| 20 | 2010 | India | | | |
| 21 | 2014 | Scotland | | | |
| 22 | 2018 | Australia | | | |
| 23 | 2022 | South Africa | | | |
| 24 | | | | | |

**(a)** Cells E5 to E14 contain the number of times each country has been selected to host the Commonwealth Games.

Write down the formula which should go in cell E5 so that it can be replicated down to cell E14.

..... [5]

**(b)** Papua New Guinea are interested in bidding to host the 2026 Commonwealth Games. If they are successful the spreadsheet will need to be updated.

Apart from those in column E, write down the cell references of those cells which will need to change.

..... [3]