



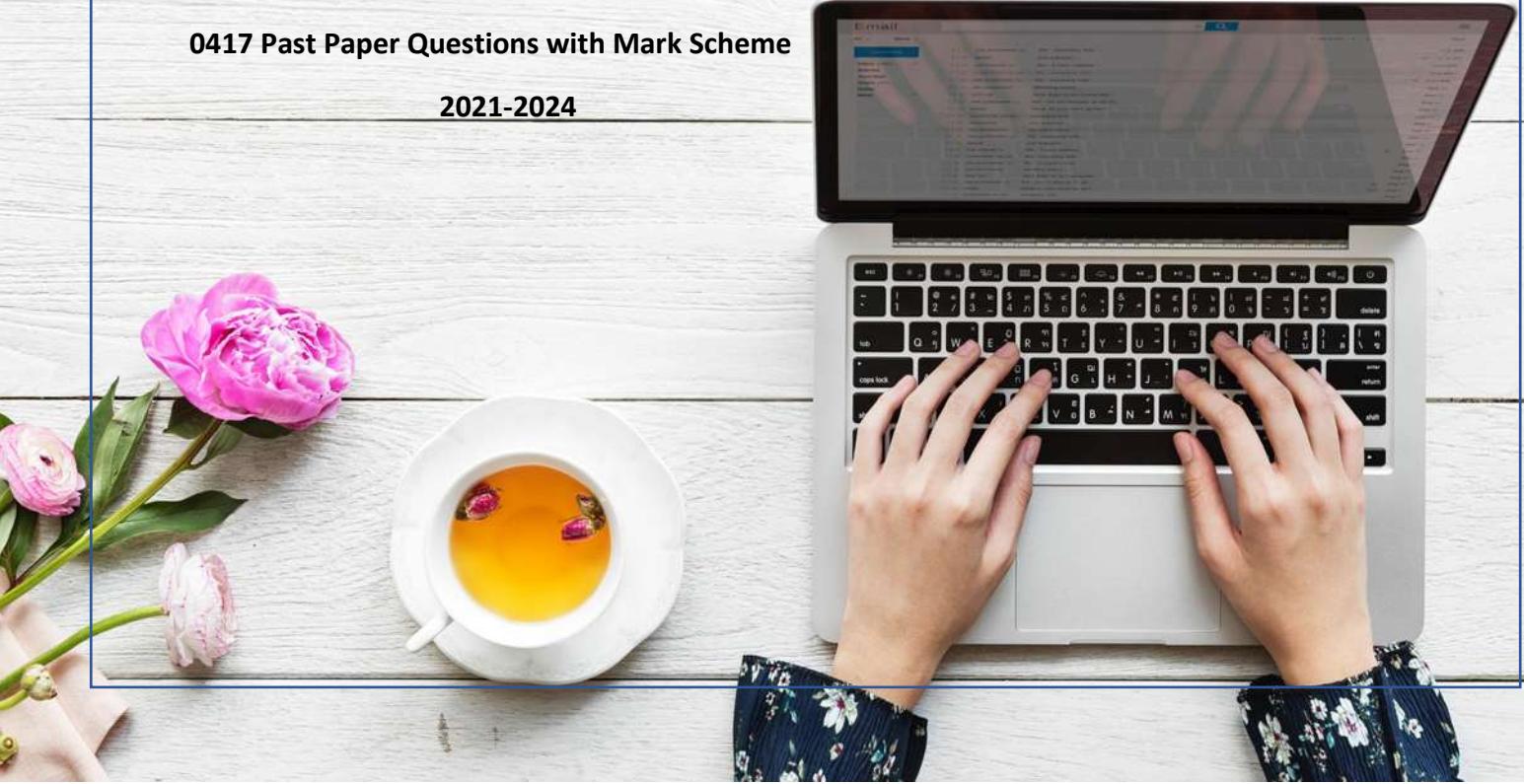
Information and Communication Technology

-0417-

Practical Chapters 11-21

0417 Past Paper Questions with Mark Scheme

2021-2024



1 Falyaz has created a diary using word processing software. The diary entry for 17th May 2020 is shown.

17th May 2020

First day of the holidays today and the family went to stay in a hotel near Cherai Beach in Kerala. This was a lovely place to spend the holidays with a long stretch of beach to play on. It is called the *Princess of the Arabian Sea*. We also visited a number of the lagoons in the area and met a lot of people. The weather was lovely, and the sun shone throughout most of the day.



(a) Write down **four** formatting features of the word processing software used to make this diary entry.

Feature 1.....

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Feature 2.....

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Feature 3.....

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Feature 4.....

[4]

(b) The original diary entry typed into the word processing software did not include an image.

Describe the steps that would be carried out by Falyaz to include in his diary entry an image taken from his digital camera.

[6]

Chapter Two

(c) Name two other sources of digital images apart from using a digital camera.

Source 1.....

Source 2

[2]

(d) Tick (✓) whether the following statements about generic image files refer to jpg, png or gif file types.

	jpg (✓)	png (✓)	gif (✓)
This file type stores still or moving images			
This file type uses lossy compression			
This file type is used for storing photographs on a digital camera			
This file type is limited to 256 colours			

[4]

(e) Falyaz wants to add a header in his word processed diary.

Explain what is meant by a header and why it is needed.

[4]

2 A computer system is being created to calculate the scores in a diving competition. Every dive by an athlete is awarded a score out of 10 by each judge.

The system is being tested using live data. An athlete completes his dive with a difficulty of 3.4 and achieves the following scores, which are displayed in a spreadsheet.

	A	B	C	D	E
1	Athlete:	Shivani Nehwal	Difficulty:	3.4	
2					
3		Score			
4	Judge 1	4.1			
5	Judge 2	6.3			
6	Judge 3	6.2			
7	Judge 4	5.3			
8	Judge 5	7.3			
9	Judge 6	6.1			
10	Judge 7	7.0			
11					
12	Overall Score				

(a) Before the overall score is calculated the judges' scores need to be sorted into ascending order.

Describe the steps that would be carried out to sort the data into ascending order.

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[3]

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(b) Cell B12 contains the formula, $\text{ROUND}((\text{SUM}(\text{B5:B9}) * \text{D1}), 1)$.

Explain what the formula in cell B12 does.

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[3]

(c) The judges' score column will be tested using normal, abnormal and extreme data.

Explain, giving examples of test data which would be used, what is meant by:

Abnormal test data.....
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Extreme test data.....
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[4]

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3 Tawara school has a shop that sells items needed by pupils in school. Part of a spreadsheet with details of the items is shown.

	A	B	C	D	E	F	G	H	I
1	Tawara School Shop							Tax rate	20%
2	Item	Cost Price	Selling Price	Profit	Tax	Amount sold	Total profit per item	Total tax per item	
4	School tie	\$7.00	\$9.99	\$2.99	Y	139	£415.61	\$277.72	
5	School scarf	\$10.00	\$15.00	\$5.00	Y	50	\$250.00	\$150.00	
6	School blazer	\$20.00	\$25.00	\$5.00	Y	180	\$900.00	\$900.00	
7	Pen set	\$10.00	\$12.50	\$2.50	N	100	\$250.00		

(a) Write down the number of rows that are shown in the spreadsheet that contain text.

..... [1]

(b) Write down the number of columns that are shown in the spreadsheet that contain text.

..... [1]

(c) Tax is paid on certain items sold in the shop. The tax rate that has to be paid is 20% of the selling price. If tax is to be paid on an item, then 'Y' is placed underneath the Tax heading.

The formula in I4 is: **IF(F4="Y",(\$I\$1*D4*G4),"")**

Explain, in detail, what the formula does.

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[5]

(d) Explain the steps that need to be taken to display cell H4 as US dollars.

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[2]

4 A systems analyst has created a new computer system to keep records in a medical centre. She has created a relational database to store the medical records of patients.

The database uses primary and foreign keys.

(a) Describe what is meant by a relational database.

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[3]

(b) Explain the difference between a primary key and a foreign key.

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[4]

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(c) A dentist works at the medical centre. The dentist stores the medical records of his patients.

Describe **four** other uses of the database software that the dentist can use to help him in his work.

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[4]

Chapter Four

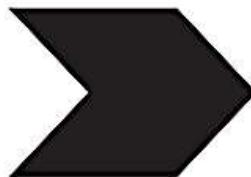
(d) The data stored on the computer system needs to be protected from unauthorised access.

Discuss the effectiveness of different methods of increasing security of this data.

[8]

5 An image has been changed in a number of different ways.

Original image



For each of the following images describe the software editing technique used in order to produce the edited images shown from the original image.

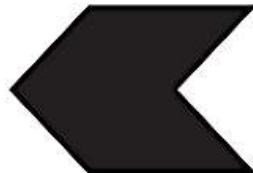
Edited images



A



B



C



D

A

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B

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C

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D

[4]

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6 Petr has set up a database for a science project on planets in the solar system. Part of the database is shown.

ID	Name_of_planet	Number_of_moons	Orbital_period	Rings	Gravity	Type_of_planet	First_observed
4	Mars	2	1.88	N	0.38	Regular	1610
5	Ceres	0	4.61	N	0.27	Dwarf	1801
7	Saturn	62	29	Y	1.16	Gas Giant	1610
9	Neptune	14	165	Y	1.21	Gas Giant	1846
10	Pluto	5	248	N	0.62	Dwarf	1930
11	Haumea	1	309	N	0.401	Dwarf	2004

(a) When Petr was designing his database, he had to set the data types for each field. Complete the design table below by filling in the data types for each named field. Use the **most** appropriate data type. Each data type must be different. For any numeric field, specify the type of number.

Field name	Data type
Number_of_moons	
Orbital_period	
Rings	
Name_of_planet	

[4]

(b) Operators such as AND, OR, NOT, LIKE, $>$, $>=$, $<$, $<=$, $=$, $<>$ can be used to search Petr's planet database. The search criteria for all the gas giant planets with more than 20 moons would look like this:

Type_of_planet = "Gas Giant" AND Number_of_moons > 20

Write down the search criteria that will produce a list of planets that are not gas giants but have at least one moon and were first observed after 1800.

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[7]

(c) Write down the names of the planets that are not gas giants but have at least one moon and were first observed after 1800.

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[2]

(d) Petr has copied the data from the Orbital_period field into a spreadsheet. The data for the orbital period for Mars, 1.88, is stored in cell A2. In cell B2 he has entered a function of:

ROUND(A2,0)

Explain in detail the function used in cell B2.

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[2]

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7 The student plans to create a table, using word processing software, to display the information he has found out about the animal.

The completed table will look like this:

Name of animal	Tiger quoll
Scientific name	Dasyurus maculatus
Pouched	No
Habitat	Australia
Conservation status	Threatened

(a) Explain how the student can create a table to enter this data.

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[2]

(b) The student has saved a picture from the internet of a tiger quoll.

Explain how he could create a new row above the Pouched row and place the picture into the right-hand cell of this new row.

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[4]

8 Susan is creating a database about cars and needs to save it in the shared area (S:) on the school network. It will be stored in the folder ICT which is contained in the IGCSE folder. She needs to save the file with a file name that is different from file names used by other students in the group.

(a) Write down a suitable file name for the file so that the teacher can easily find Susan's work and identify its contents. The file name should not contain spaces.

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[1]

(b) Write down the file path which Susan would use to store the file in the correct folder.

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[2]

(c) Susan plans to work on her database at home. However, the database is very large so her teacher has told her that it needs to be reduced in size. She will then be able to attach it to an email so she can send it home.

Explain why the file size would need to be reduced.

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[2]

9 Many teachers feel that monitoring student progress is an important part of the teaching and learning process.

Describe how the features of a spreadsheet can be used by a teacher to help monitor student progress.

[6]

10 Aimi works for a shop that sells toys. She is setting up a relational database of the stock in the shop. She has started designing the database. Aimi has written down the questions that are asked about each toy and needs to produce appropriate field names from them. An example of the type of data that is to be stored is shown.

What is the toy? Tawara Doll

Who manufactured the toy? Tinky

What year was it manufactured? 2020

What price was it bought for? \$12.99

(a) Complete the design table below by filling in an appropriate field name for each question. Each field name must be different. Field names must not include spaces.

Question	Field name
What is the toy?	
Who manufactured the toy?	
What year was it manufactured?	
What price was it bought for?	

[4]

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(b) When Aimi created the whole database one of the fields was set as integer. However, as data is entered Aimi realises that the field should have been set to two decimal places.

Describe the steps that need to be taken, by Aimi, to change the field from an integer to a decimal. This field will be set to two decimal places.

[4]

(c) Aimi created a relational database but could have created a flat file database.

Discuss the advantages and disadvantages of using a relational database rather than a flat file database.

[6]

11 The director of a zoo is writing a document about wallabies. He has taken an image of some wallabies (Fig. 12.1) and is planning the layout of the pages which will include part of the image. The image he plans to use is shown in Fig. 12.2.



Fig. 12.1

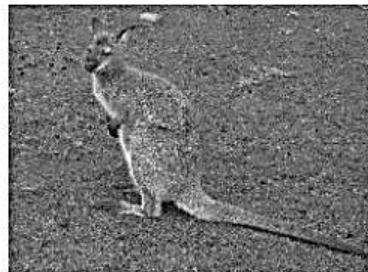


Fig. 12.2

(a) Name the editing technique that was used to change Fig. 12.1 to Fig. 12.2.

..... [1]

(b) The director will include images and information about the wallabies in the document. Each page will be set out in 2 columns with a line between them.

(i) Describe the steps taken to create the columns. Assume the software has been loaded and the text has been entered.

The Habitat

The natural habitat of the wallabies¹ of New Guinea varies by species. The **forest wallaby** inhabits wooded and brush areas, whereas the **rock wallaby** inhabits the mountain areas. The **swamp wallaby** lives in the wetlands and swamps. Wallabies feel safer by inhabiting the rougher terrain such as heavily wooded areas, cliffs and wet areas.

Some types of rock wallaby live in the southern desert on almost vertical rock walls whilst others live in a more versatile habitat. To keep their young safe in these inhospitable areas the baby wallabies which are small, weak and vulnerable live in their mother's pouch for at least eight weeks.

..... [3]

(ii) Describe the steps taken to add the image as shown.

The Habitat



Some types of rock wallaby live in the southern desert on almost vertical rock walls whilst others live in a more versatile habitat. To keep their young safe in these inhospitable areas the baby wallabies which are small, weak and vulnerable live in their mother's pouch for at least eight weeks.

[4]

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(c) As the document is being written for the zoo it needs to conform to the corporate house style.

Explain what is meant by corporate house style.

[4]

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12 A student is looking for information on the internet for his school project. He has found a number of web pages that are useful.

(a) Explain the following terms when referring to web pages:

(i) Bookmark

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[2]

(ii) Anchor

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[2]

(iii) Hyperlink

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[2]

(b) The student has found a website that is very useful and is planning to bookmark it.

Describe the steps he will need to take to set up a bookmark for the website.

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[2]

13 (a) Explain the differences between a VLOOKUP function and a LOOKUP function.

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[3]

(b) A spreadsheet contains a list of staff and the rooms they work in at a school.

	A	B	C	D	E
1	Room	Department	Name		
2	29	Languages	Aaron Garcia	31	=VLOOKUP(D2,A2:C7,3)
3	30	History	Julieta Diaz		
4	28	Chemistry	Ernesto Fernandez		
5	26	Biology	Salvador Calbo		
6	31	ICT	David James		
7	49	Mathematics	Adriene Martinez		

(i) Explain, in detail, what the formula in cell E2 does.

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[3]

(ii) When certain room numbers are typed into cell D2 unexpected results appear in cell E2.

Suggest improvements that could be made to ensure the correct result is displayed.

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[2]

A teacher in the school has created a spreadsheet to display whether a student has good timekeeping when arriving at lessons. He has produced a formula but thinks it could be improved. The formula is:

=IF(B4>=A\$18,B\$18,IF(B4>=A\$17,B\$17,IF(B4>=A\$16,B\$16,IF(B4>=A\$15,B\$15,IF(B4>=A\$14,B\$14,""))))

	A	B	C
1			
2	Name of Student		
3	Half term	Lates	
4	1	17	=IF(B4>=A\$18,B\$18,IF(B4>=A\$17,B\$17,IF(B4>=A\$16,B\$16,IF(B4>=A\$15,B\$15,IF(B4>=A\$14,B\$14,""))))
5	2	20	
6	3	1	
7	4	12	
8	5	18	
9	6	0	
10			
11			
12			
13			
14	0	Excellent	
15	1	Very Good	
16	5	Good	
17	15	Poor	
18	25	Very Poor	
19			

(c) Write down the value that should appear in cell C4.

..... [1]

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(d) The teacher has improved the formula and has typed in =VLOOKUP(B4,A\$14:B\$18,2)

Explain the advantages of using this formula compared to the original one.

[4]

14 A student is working on a project on the World Games. He has produced some information but has decided to produce a second layout including a table. The original layout and the new layout are shown.

2021 World Games

This will be the 11th World Games, a major international multi-sport event, for sports, or disciplines within a sport, that were not contested in the Olympic Games.

Dates: Thu, 15 Jul 2021 – Sun, 25 Jul 2021

Location: Legion Field, Birmingham, Alabama, United States

Host city: Birmingham, Alabama, United States

Opening ceremony: July 15

Closing ceremony: July 25

Main venue: The New Birmingham Stadium

The original layout

2021 World Games

This will be the 11th World Games, a major international multi-sport event, for sports, or disciplines within a sport, that were not contested in the Olympic Games.

Dates	Thu, 15 Jul 2021 – Sun, 25 Jul 2021
Location	Legion Field, Birmingham, Alabama, United States
Host city	Birmingham, Alabama, United States
Opening ceremony	July 15
Closing ceremony	July 25
Main venue	The New Birmingham Stadium

The new layout

(a) Explain, step by step, how the table was created, without the text being entered by hand.

[4]

(b) The student checks the text he has written using a spell checker.

Explain how a spell checker works.

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[2]

(c) Explain why the suggestions made by the spell checker do **not** always give the correct response.

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[2]

15 You are creating a presentation on the World Games. You have created a spreadsheet showing the number of gold, silver and bronze medals awarded to different countries.

You are planning to create a graph in the presentation showing the country, the number of gold medals and the total number of medals.

	A	B	C	D	E	F
1		<u>World Games Medals</u>				
2						
3		Country	Gold	Silver	Bronze	Total
4	1	Italy	153	145	142	440
5	2	United States	142	131	109	382
6	3	Germany	137	111	138	386
7	4	Russia	137	110	72	319
8	5	France	101	102	105	308
9	6	China	68	55	27	150
10	7	Great Britain	61	89	210	360
11	8	Japan	55	38	53	146
12	9	Ukraine	47	36	125	208
13	10	Spain	42	42	42	126

Original data

(a) Explain how you would create a vertical bar chart, showing the name of the country, the number of gold medals and the total number of medals awarded to each country, on a new slide in the presentation.

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(b) The total number of medals has been calculated manually and entered as a value. This could lead to errors.

Explain how you could create a formula to calculate the total number of medals awarded for Italy, using only the mouse.

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..... [4]

(c) Explain how the data could be sorted by the total number of medals won by each country. The country with the largest number of medals should be at the top of the list.

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..... [4]

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16 Identify and describe the three web development layers.

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[6]

17 A library system has two tables; one for borrowers and one for books. Extracts from these tables are shown.

Borrower_ID	Borrower_name	Contact_telephone	Contact_email
5404	Susan Stranks	01632 960321	rockit@cambridgeinternational.org
9867	Fei Hong Zhao	07700 900222	tawara@cambridgeinternational.org

Borrowers table

Book_ID	ISBN	Name_of_book	Author_of_book	Date_published	Borrower_ID	Date_due_back
1	0859550153	Bird of Prey	David James	1977	5404	27/10/2021
34	3301028345	The Fifth Man	Colin Turner	1998	9324	05/10/2021
35	4237681321	A View of the Temple	Yu Yan Zhang	2017	8854	07/10/2021
59	4237681321	A View of the Temple	Yu Yan Zhang	2017	5404	27/10/2021

Books table

(a) Name the most appropriate validation check for each of these fields. Your answer must be different for each field.

ISBN

Date_due_back

[2]

(b) (i) For the books table, name the most appropriate field that could be used as a primary key.

..... [1]

(ii) The librarian has created a relationship between the books table and the borrowers table.

For the books table, name the most appropriate foreign key field that would be used to create the relationship.

..... [1]

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(c) The data type for Contact_telephone has been set as text.

Explain why this field has been set to text rather than integer.

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..... [2]

(d) At the end of each day the tables are searched to issue reminders to borrowers about books that are overdue.

Describe the automatic processing involved in searching and issuing of reminders for overdue books.

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..... [6]

18 The manager of Rockit Motors has created many different types of documents including letters and memos for the company. Each of them is produced using its corporate house style.

Explain why corporate house styles are required.

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[4]

19 A student has taken a photograph of him and his friend, using a digital camera. He needs to increase the size of the image to include it on a poster.

(a) Give **one** disadvantage of increasing the size of this image.

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[1]

(b) He now wishes to edit the image to remove his friend. He edits the image by cropping it and removing part of the image.

Describe, step by step, how he would crop the image.

[5]

20 A doctor measures the blood pressure of some of his patients regularly. The patients take home a blood pressure machine and record their results on a spreadsheet which the doctor has created. Part of the spreadsheet is shown.

	A	B	C	D	E	F	G	H	I
1	Blood pressure readings				Blood pressure warnings				
2	Date	Sys	Dia	Warning		Sys	Dia	Warning	
3	10-Feb	134	74	Normal		60	40	Low	
4	11-Feb	137	67	Normal		120	80	Normal	
5	12-Feb	145	81	Mild		140	90	Mild	
6	13-Feb	150	86	Mild		160	100	Moderate	
7	14-Feb	180	74	Severe		180	110	Severe	
8	15-Feb	134	75	Normal					
9	16-Feb	130	57	Normal					

(a) When a reading produces a Severe or Low warning then the text automatically changes to a red font on a light red background.

Explain how the doctor could set up automatic colour change for these warnings on the spreadsheet.

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[5]

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The doctor has set up a named range called Bloodpressure for the cells F3 to H7.

(b) Explain why the doctor has used a named range.

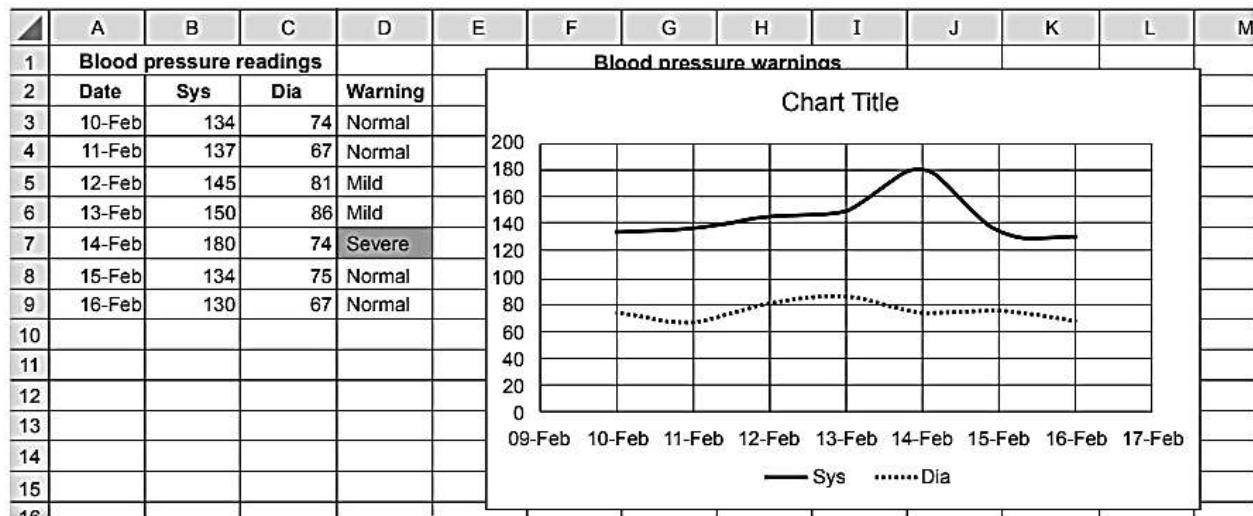
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..... [3]

The formula =VLOOKUP(B3,Bloodpressure,3) has been entered into cell D3.

(c) Explain what the formula does.

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..... [4]

The doctor has created a graph of the readings for one patient and has displayed it on the spreadsheet. However, there are elements missing.



(d) Explain how the doctor created the graph. Write in your answer **one** improvement that could be made to the graph.

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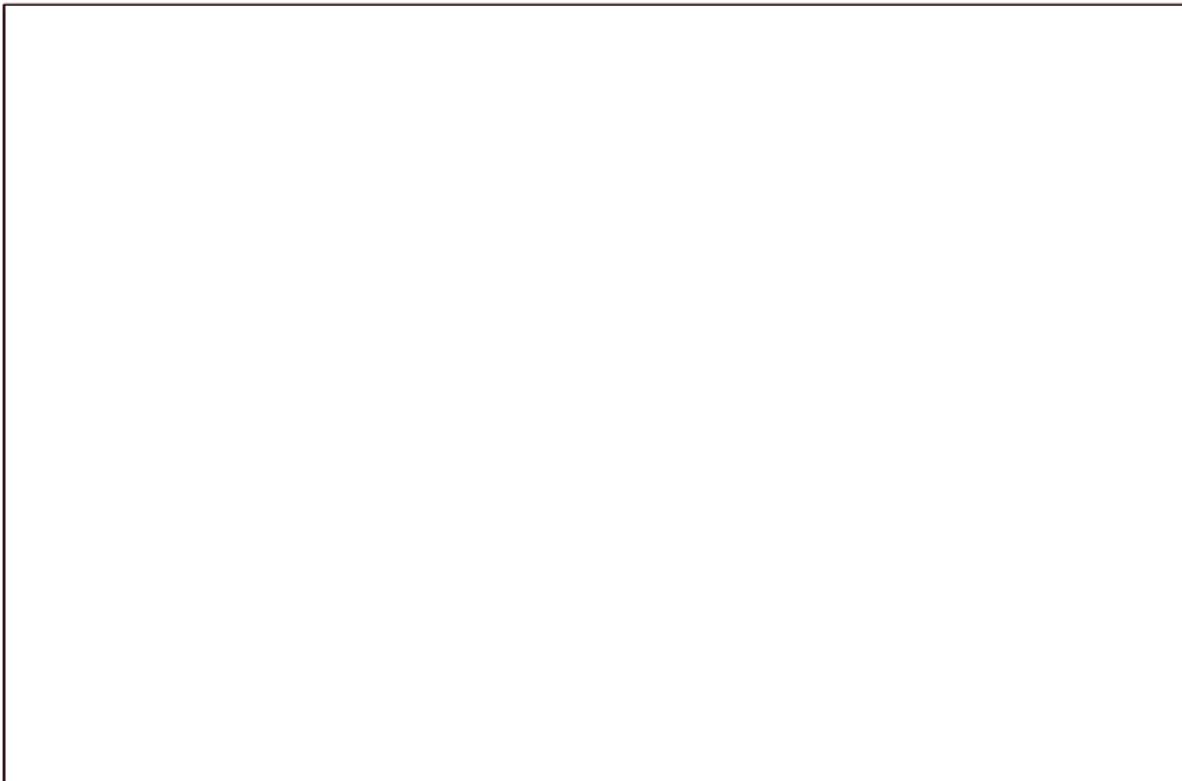
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[3]

(e) At the end of the month the doctor needs to produce a hard copy document showing information about a patient: their name, date of birth and patient number, as well as data and the graph from the spreadsheet.

Design a suitable document layout. The document must have appropriate spacing.



[5]

21 The manager of a car garage has asked a systems analyst to create a new database system for the checking of cars making sure they are safe to drive. The checking of cars is known as a service.

Each car has a unique licence plate.

The cars can either be powered by electric or petrol.

Cars are serviced every 10000 km, for example 10000 km, 20000 km.

The minimum cost of the service is 1500 rupees and the maximum is 5000 rupees depending on the model of car.

Different models of car are serviced.

The date of the service is agreed.

(a) Complete this table, filling in the field names and the most appropriate data types to create the database using the information given above. For any numeric field, specify the type of number.

Field name	Data type
Vehicle_licence_plate	
Powered_by	
	Numeric:integer
Cost_of_service	
	Text
Date_of_service	

[6]

(b) The systems analyst is planning to create a relational database.

Discuss the advantages and disadvantages of creating a relational database rather than a flat file database.

[6]

(c) For each of the fields shown, name and describe **one** validation check that could be used on the data. Your answers must be different in each case.

(i) Vehicle_licence_plate

Validation check

Description

Page 10 of 10

[2]

(ii) Cost_of_service

Validation check

Description

For more information, contact the Office of the Vice President for Research and the Office of the Vice President for Student Affairs.

[2]

(iii) Date_of_service

Validation check

Description

[2]

22 Stylesheets are used in web pages.

(a) Explain the term stylesheets when used in web pages.

[2]

(b) Explain the differences between attached stylesheets and inline style attributes.

[4]

23 Two types of database are relational and flat file.

(a) Compare and contrast relational databases and flat file databases. Your answer must include similarities and differences.

[8]

(b) Give, using an example, **one** reason why flat file databases are used in certain applications rather than relational databases.

Reason

Example

[2]

24 Martin, who is a teacher, is creating a multimedia presentation to explain a topic to his students.

(a) He produces a master slide.

Write down **four** objects he could include in the master slide.

- 1
- 2
- 3
- 4

[4]

Chapter Two

(b) Martin wants to record a message for his students. His voice will be added to the presentation. He will also need to listen to his voice to make sure the sound is of good quality.

Name **two** devices that he will need.

- 1
- 2

[2]

Chapter One

(c) Martin will need to use software to create different types of content before including them in the presentation.

Name **two** types of software that he might use and for each one, write down what he would use it for.

Software 1

.....

Use

.....

Software 2

.....

Use

[4]

25 The manager of a medical centre keeps the doctor's stock records in a database. The stock for any item is not allowed to fall below 15 items and the manager keeps a maximum of 100 items in stock.

The table shows examples of the stock.

Name_of_item	Serial_number	Number_in_stock	Name_of_supplier	Shelf_number
Medihoney	3081043612211	15	Capimed	0126
Sodium fusidate	1437210227870	60	Brooks Medical	0112
Crepe bandage	2541233164353	100	Capimed	0064
Crepe bandage	2834954736849	89	Cams Meds	0064

As data is entered it needs to be verified and validated.

(a) Explain why verification is carried out.

.....
.....
.....
.....

[2]

(b) Write down the field name from the table that would be the most appropriate for each of these validation checks. Each answer must be different.

Check digit

Length

Type

[3]

(c) Name the most appropriate field from the table that could be used as a primary key in the database.

..... [1]

26 Many word processing packages have a number of formatting features.

The paragraph below shows some of the formatting features that can be used.

The Northshire Steam Railway (**NSR**) today approved the events programme for the Summer Steam Festival (**SSF**) 2022 to be held between June and August in Norton which will see **five** new steam engines join the existing twenty eight steam trains they have in stock. A special attraction for the Festival will be the *Teal Steam Crane*.

(a) Write down **four** of the formatting features that have been used in the paragraph shown.

1

2

3

4

[4]

(b) The logo for the Summer Steam Festival is shown and labelled A. The organisers of the event are planning to create a second logo for all their correspondence. This is shown and labelled B.



A



B

Describe the steps that have been used to transform logo A into logo B.

[4]

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27 A student is creating a spreadsheet of airports for a project.

	A	B	C	D	E	F	G
1	Code	Name	Country		Airport Name		
2	LHR	London Heathrow	UK		MIL	Milan	
3	ROM	Rome	Italy		Airport Country		
4	PAR	Paris	France		MIL	Italy	
5	MIL	Milan	Italy				
6	SNN	Shannon	Ireland				
7	STO	Stockholm	Sweden				
8	LBA	Leeds and Bradford	UK				
9	GVA	Geneva	Switzerland				
10							

The formula in G2 is:

=VLOOKUP(F2,A2:B9,2,0)

(a) Explain, in detail, what the formula in G2 does.

.....
.....
.....
.....
.....
.....
.....
.....

[4]

(b) Before the spreadsheet can be used, data needs to be entered to test the spreadsheet.

There are three types of test data: normal, abnormal and extreme.

Explain what is meant by these three types of test data.

Normal

.....

Abnormal

.....

Extreme

.....

[3]

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(c) Explain, using examples, the differences between a function and a formula.

[6]

(d) The completed file could have been created using a database.

Describe **two** reasons why databases are used in certain applications rather than spreadsheets.

1

2

Digitized by srujanika@gmail.com

[2]

28 A librarian in a college department library is entering data into a student borrowers' file. As the data is entered it needs to be verified.

(a) Describe the **two** types of verification.

1

.....

.....

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[4]

(b) Explain, using examples, why it is necessary to carry out validation as well as verification for this system.

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[4]

29 A company uses corporate house style within the headers and footers in its documents.

(a) Explain what is meant by corporate house style.

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.....
.....

[2]

(b) Explain why headers and footers are needed.

.....
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.....
.....

[2]

30 An image has been taken of a bird watcher and a bird. The original image has been saved as a jpg file type. You have been asked to remove parts of the image to just show the bird and to save it as a png file type to become the new image.



Original image



New image

(a) Explain the steps needed to change the original image to the new image.

[4]

(b) Explain the differences between a jpg and a png file type.

.....
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.....
.....
.....

[4]

31 Complete the following sentences using the most appropriate words from the list.

centre	double line space	footer	gutter	hanging
header	indented	justified	left	wrapping

(a) A margin between the main content of the page and the fold of a book is called a

..... [1]

(b) An area at the top of a page is called a

..... [1]

(c) Feature of word processing that causes text to flow around an image is called

..... [1]

(d) When text is aligned along both the left and right margins this is called

..... [1]

32 Hyperlinks, bookmarks and anchors are software tools used in web pages and web browsers.

(a) Describe the function of a hyperlink.

.....
.....
.....
.....

[2]

(b) Describe the term bookmark.

.....
.....
.....
.....

[2]

(c) Describe the function of an anchor.

.....
.....
.....
.....

[2]

33 Complete the following sentences using the most appropriate words from this list of word processing terms.

bullet	centred	gutter	hanging	header
justified	landscape	orphan	portrait	widow

(a) The orientation of a page that is wider than it is high is called

..... [1]

(b) A symbol placed in front of each item in a list is called a

..... [1]

(c) The indentation of a paragraph where all the lines except the first are indented is called

..... [1]

(d) The last line of a paragraph that appears as the first line of the next page is called a

..... [1]

34 The secretary of a sports club is setting up a database of members to replace the current manual system. He will need to create a database structure.

(a) Describe the steps involved in setting up and testing the database structure before it can be used in the new system.

.....
.....
.....
.....
.....
.....
.....
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.....
.....

[4]

Chapter Seven

When the new system is completed it needs to be implemented. The secretary of the sports club can implement it using direct changeover or parallel running.

(b) Describe the term parallel running, giving **one** benefit and **one** drawback of using this method of implementation.

Parallel running

.....

Benefit

.....

Drawback

.....

[3]

35 A club has many members. The secretary of the club wants to keep details of the club members in a database.

(a) Describe the benefits and drawbacks of storing membership details on a computer database.

.....

.....

.....

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.....

.....

.....

.....

.....

[6]

Chapter Seven

(b) The secretary collects data from the members on paper-based forms.

Describe **five** features of a well-designed paper-based data capture form.

1

.....

2

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3

.....

4

.....

5

[5]

36 rtf and pdf are file types.

(a) Describe what is meant by an rtf and a pdf file type.

rtf

.....

pdf

.....

[2]

(b) Explain the differences between the two file types.

.....

.....

.....

.....

.....

[3]

37 Proofreading is often confused with visual verification.

Describe the differences between proofreading and visual verification.

.....

.....

.....

.....

[2]

38 A student has created a document with images for her geography project.

(a) The layout of page one is portrait orientation. The student needs to set page two as landscape orientation. Before she can set the landscape orientation she needs to insert a break.

State the type of break that is needed.

..... [1]

(b) The student has placed images in the document.

State **two** file formats she could have used for the images.

1

2

[2]

(c) Each page of the document includes a footer.

Explain why a footer is used.

.....

.....

.....

.....

.....

[3]

39 A teacher is setting up a school shop. The teacher is setting up a spreadsheet to keep the accounts of the shop.

(a) Fig. 3.1 shows a box containing 50 Choco Bars to sell in the shop. The information on the box will be entered into the spreadsheet.

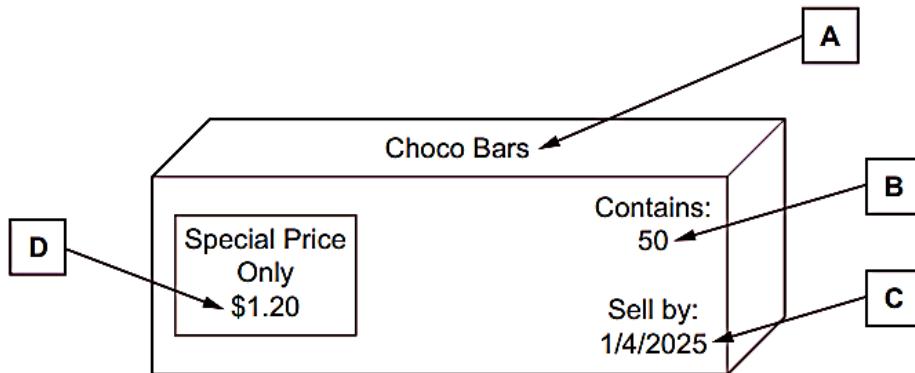


Fig. 3.1

State the most appropriate display format in the spreadsheet for each piece of data shown on the box. Your answer must be different in each case.

A

B

C

D

[4]

(b) The teacher has created a formula in the spreadsheet that calculates the cost of purchasing a number of different items.

She has created a formula that:

- subtracts the discount per item from the price of the item to find the cost of the item
- then multiplies the cost of the item by the quantity.

	A	B	C	D	E	F
1	Product	Price of item	Discount per item	Quantity	Total	
2	Choco Bar	\$1.20	\$0.20	15	-\$1.80	

The formula she enters into cell E2 is:

=B2-C2*D2

When this formula is entered into cell E2 the result is **not** what she expected. The result should be \$15.00

Explain why the result was **not** \$15.00

.....

.....

.....

.....

[2]

40 A form tutor at Tawara School is producing a database about the students in his class.

When the database is completed, it needs to be verified.

(a) Explain the importance of visual verification.

[2]

(b) An example of the date of birth stored on the database is: 15/05/2009

Describe **three** validation checks that could be carried out on the date of birth.

[6]

41 A stylesheet for a website can contain both styles and classes.

(a) Explain the differences between a style and a class.

[3]

(b) State the web development layer where the stylesheet is used.

[11]

[1]

42 A new patient is attending a medical centre. He completes a form with his details and gives this to the secretary who enters the details into a database.

(a) The age of the patient is stored on the patient's medical record.

(i) Explain why it is **not** sensible to store the age of the patient in the database.

[1]

(ii) Explain what change could be made to the database to solve this problem.

[1]

(b) The database includes primary and foreign keys.

A medical ID number is used as the primary key in the database. Examples of the medical ID number include:

556 442 8483

450 557 7104

485 777 3456

(i) State **two** validation checks that could be used to check the medical ID number.

1

2

[2]

(ii) Describe the characteristics of primary keys and foreign keys.

.....
.....
.....
.....
.....
.....
.....
.....

[4]

43 Complete each of the following sentences about web development layers.

(a) The layer used to create the structure of a web page is called

..... [1]

(b) The layer used to display and format elements within a web page is called

..... [1]

(c) The layer that is a scripting language to control elements within a web page is called

..... [1]

44 A shopkeeper sells fruit and has created a table containing the name of the fruit, its bar code number and an image of the bar code.

Part of the table is shown.

Type of fruit	Bar code number	Bar code
Apple – Fuji	977135120128	 9 77135 12012 8
Apple – Jona Gold	050023495154	 0 50023 49515 4
Apricot	050128440066	 0 50128 44006 6

Fig. 13.1

State and describe **two** validation checks that could be used for the bar code number.

1

.....

.....

2

.....

.....

[4]

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45 A computer uses a number of different generic file formats.

Describe each of the following generic file formats.

(a) pdf

.....
.....
.....
.....

[2]

(b) rtf

.....
.....
.....
.....

[2]

(c) css

.....
.....
.....
.....

[2]

46 A computer can use different generic file formats.

(a) Describe each of the following generic file formats.

(i) csv

.....
.....
.....
.....

[2]

(ii) rar

.....
.....
.....
.....

[2]

(iii) txt

.....
.....
.....
.....

[2]

(b) The file formats txt, rar and csv are examples of generic file formats.

State three other examples of generic file formats.

1

2

3

[3]

(c) Explain the need for generic file formats.

.....
.....
.....
.....

[2]

47 (a) Circle **two** web development layers.

Behaviour	Body	CSS	Display
Head	HTML	Presentation	Surface

[2]

(b) Explain why tables are used to structure elements within a web page.

.....
.....
.....
.....

[2]

Mark Scheme

Question	Answer	Marks																				
1a	<p>Four from:</p> <p>Bold on date Superscript on the date Left aligned on date Fully justified Text/word wrap Highlighted text Italics</p>	4																				
1b	<p>Six from:</p> <p>Plug in/Bluetooth the digital camera to the computer//Plug in the SD card/memory card Select the image to be uploaded Upload the image to the computer Save the image on the computer</p> <p>Load/open the word processing software Load the diary entry file Place the cursor where you want the image to be Click insert...image Choose/find/browse the image from the folder Insert the image in the text</p> <p>Reformat/resize/crop the image Reposition/place the image Click word wrap/text wrap Save the document</p>	6																				
1c	<p>Two from:</p> <p>Internet Scanned images Images stored on: Smartphone/Mobile phone/PC/Tablet/SD card/Smartwatch Clipart libraries Screenshot</p>	2																				
1d	<table border="1"> <thead> <tr> <th></th> <th>jpg</th> <th>png</th> <th>gif</th> </tr> </thead> <tbody> <tr> <td>This file type stores still or moving images</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>This file type uses lossy compression</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>This file type is used for storing photographs on a digital camera</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>This file type is limited to 256 colours</td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table>		jpg	png	gif	This file type stores still or moving images			✓	This file type uses lossy compression	✓			This file type is used for storing photographs on a digital camera	✓			This file type is limited to 256 colours			✓	4
	jpg	png	gif																			
This file type stores still or moving images			✓																			
This file type uses lossy compression	✓																					
This file type is used for storing photographs on a digital camera	✓																					
This file type is limited to 256 colours			✓																			

1e	<p>Max two from: It is an area of a document on <u>every</u> page At the top of a page The area is between the top of the page and the top of the margin</p> <p>Max two from: To show consistency on each page To ensure that each page has the same data in the header Saves time for the author typing out the data on each page</p>	4
----	--	---

Question	Answer	Marks
2a	<p>One from: Highlight cells A4 to B10 Click anywhere in the range Highlight A4 to A10 and click expand the selection Highlight B4 to B10 and click expand the selection</p> <p>Two from: Click on the down arrow//Click on Custom Sort Select column B Select smallest to largest/A ↓ Z</p>	3
2b	<p>Three from: Totals cells B5 to B9 Multiplies by cell D1/difficulty/3.4 Rounds the value to 1 decimal place</p>	3
2c	<p>Matched pairs Abnormal – data that is outside the range//Unacceptable data//Data of the wrong type Example: greater than 10, negative numbers, letters, symbols</p> <p>Extreme – data that is on the boundary of acceptability Example: 10</p>	4

Question	Answer	Marks
3a	6 rows	1
3b	8 columns	1
3c	<p>Five from: If Tax is payable then//If F4 is equal to "Y" then If true the tax is paid Multiply the rate of tax/I1 by the selling price/D4 ... by the amount sold/G4 If Tax is not payable//If F4 <>"Y"//Else//Otherwise then display a blank ... the tax is not paid</p>	5

3d	<p>Two from: Highlight/select cell H4 Select format cells Select currency/accounting Select dollar/USD icon</p>	2
----	--	---

Question	Answer	Marks
4a	<p>Three from: Contains more than one table Tables are linked It uses relationships Removes redundancy of data Saves storage space</p>	3
4b	<p>Four from: Primary key holds unique data Primary key identifies the record Primary key can be automatically indexed Each table has one primary key whereas a table can contain a number of foreign keys Foreign key is used to link with the primary key of another table</p>	4
4c	<p>Four from: Searches/queries can be used to search details of patients Reports can be created about treatment carried out Formulas can be created to calculate the cost of treatment Charts can be created showing missed appointments by patients Images are stored of the x-rays to identify the patient/determine treatment Mail merge appointments that have been missed Any other appropriate use plus explanation</p>	4

4d	<p>Eight from:</p> <p>Factors increasing effectiveness</p> <p>Strong passwords are difficult to crack Biometric passwords are harder to crack Regularly changing passwords increases security Use of two-factor authentication Using different passwords for parts of the computer system makes it more difficult to gain access to the full system Firewall required to stop attacks from computers Firewall stops fraudulent sites attacking the computer Anti-spyware stops passwords being seen when typed in</p> <p>Factors reducing effectiveness</p> <p>Too complex a password can be easily forgotten Passworded files may not be backed up Using a number of different passwords can become cumbersome Regularly changing passwords means that passwords may be forgotten May be difficult to choose unique password if it is changed every few weeks Passwords may become more easy to guess if regularly changed Hackers can breach most passwords The firewall can affect the operation of the computer and stop some uploads The firewall may need to be shut down at times to upload files therefore making computer unsafe Some legitimate software can be blocked by the firewall</p> <p>To gain full marks both sides of the discussion are needed</p>	8
----	---	---

Question	Answer	Marks
5	<p>A - Resize the image maintaining aspect ratio B - Rotate the image 90 degrees anti clockwise/counter clockwise//270 degrees clockwise C - Reflect the image in the Y axis D - Brightness adjusted</p>	4

Question	Answer		Marks
6a	Field name	Data type	4
	Number_of_moons	Numeric: Integer	
	Orbital_period	Numeric: Decimal	
	Rings	Boolean	
	Name_of_planet	Text	
6b	Type_of_planet<>"Gas Giant" AND Number_of_moons >=1 AND First_observed >1800 Only two ANDs correctly placed – 1 mark Type_of_planet – 1 mark <> "Gas Giant" – 1 mark Number_of_moons – 1 mark >=1 – 1 mark First_observed – 1 mark >1800 – 1 mark		7
6c	Pluto Haumea		2
6d	It would take the value of A2 – 1 mark Changes the value into an integer/zero decimal places – 1 mark		2

Question	Answer	Marks
7a	<p>Two from: Select the position for the table Click on Insert then table Select/type in 2 columns and 5 rows Type in the data</p>	2
7b	<p>Max three from: Highlight Scientific name row Right click select insert Click Insert new row below</p> <p>Or</p> <p>Highlight Pouched row Right click select insert Click Insert new row above</p> <p>Max three from Click on right hand cell in the row Click insert...pictures Locate/select picture Insert the picture Format the picture</p>	4

Question	Answer	Marks
8a	Example: Susan_car_database	1
8b	<p>S:\IGCSE\ICT\</p> <p>\IGCSE – 1 mark \ICT – 1 mark</p> <p>The overall answer must be in this order</p>	2
8c	<p>Two from: The larger it is the longer to transmit the email Some email companies set a limit on attachment file size The time to upload/download would increase with a large file</p>	2

Question	Answer	Marks
9	<p>Six from: Student progress can be shown over time using graphs Comparisons between students can be shown using graphs Comparisons with archive data can be shown using graphs Conditional formatting can be used to show how a student is performing compare to other students or past performance Data can be sorted to show the best performers in the class Calculate average marks to enable comparisons Automatic reporting results to parents Filtering students to show those above/below a threshold</p>	6

Question	Answer	Marks										
10(a)	<table border="1"> <tr> <td>Question</td><td>Field name (Examples)</td></tr> <tr> <td>What is the toy?</td><td>Name_of_toy</td></tr> <tr> <td>Who manufactured the toy?</td><td>Manufacturer</td></tr> <tr> <td>What year was it manufactured?</td><td>Year</td></tr> <tr> <td>What price was it bought for?</td><td>Buying_price</td></tr> </table>	Question	Field name (Examples)	What is the toy?	Name_of_toy	Who manufactured the toy?	Manufacturer	What year was it manufactured?	Year	What price was it bought for?	Buying_price	4
Question	Field name (Examples)											
What is the toy?	Name_of_toy											
Who manufactured the toy?	Manufacturer											
What year was it manufactured?	Year											
What price was it bought for?	Buying_price											
10(b)	<p>Four from: Open the table Select Design View Select the field Select field type Select from the drop down list – double Click decimal places Type in 2</p>	4										
10(c)	<p>Six from Advantages</p> <p>Data does not need to be entered a second time as tables are used Records cannot be duplicated but a flat file cannot stop this Saves time when entering data More efficient storage as data is only stored once Simpler to delete/modify details Complex queries can be carried out Complex reports can be created Better security as some tables can be made confidential Avoids inconsistent records More data independence Less inconsistency of data More ability to cater for future requirements</p> <p>Disadvantages</p> <p>More complex than a flat file database as more tables are required Takes more time to set up More of a reduction in performance if many tables are needed Slower extraction of data Less robust due to broken keys and records//Each table requires a key field and relationships to other tables Needs specialist personnel to setup the database More processing power needed for complex queries A relational database is more complex to understand than a flat file database</p> <p>To gain full marks there needs to be advantages and disadvantages</p>	6										

Question	Answer	Marks
11a	Cropping/crop/cut	1
11b(i)	<p>Three from:</p> <p>Highlight the body text Select layout/page set up Select columns Select more columns Select two columns Click line between Save the document</p>	3
11b(ii)	<p>Four from:</p> <p>Click insert select picture from file Locate the image Load the image Right click and list menu click format Format the image Position the image Click wrap text Save the document</p>	4
11c	<p>Two from:</p> <p>Used to make sure that all documents and other materials from an organisation have consistency Set of rules which state how all documents and written communication from an organisation should be formatted Use of branding</p> <p>Three from:</p> <p>Use of corporate/same colours Same font Same style of font Margins and white space look similar Graphics are similar Logos are the same Language used is the same on all documents within the organisation Position of the images are the same</p>	4

Question	Answer	Marks
12a(i)	<p>Two from: Saved shortcut Directs the browser to a specific web page It stores the title, URL, and favicon of the corresponding page Allows the user to easily access favourite locations on the Web</p>	2
12a(ii)	<p>Two from: The anchor is a link/placeholder/reference point The anchor links with another part of the web page</p>	2
12a(iii)	<p>Two from: Word/phrase/image When the hyperlink is clicked Links to another document/page/website/top/bottom of the page</p>	2
12b	<p>Two from: Open the website Click on the address bar/URL Select CTRL-D/click on the bookmark/favourite icon/star/add to favourites//Drag URL to bookmarks bar Type in/change the name Add the bookmark</p>	2

Question	Answer	Marks
13a	<p>Three from:</p> <p>LOOKUP allows for horizontal and vertical searching whereas VLOOKUP allows for vertical searching</p> <p>LOOKUP does not require an index value/only works on the second row/column whereas VLOOKUP requires an index value</p> <p>LOOKUP usually only works when the data is sorted</p> <p>VLOOKUP only returns data to the right of the searched column</p> <p>VLOOKUP user can select either an approximate or exact match to the lookup value</p>	3
13b(i)	<p>Three from:</p> <p>The formula looks up the value in D2...</p> <p>...In the (range) A2 to A7</p> <p>And returns the <u>corresponding</u> value</p> <p>In the 3rd column/Column C</p>	3
13b(ii)	<p>Add FALSE/0 to the end of the formula – 1 mark</p> <p>Sort the range into ascending order of column A – 1 mark</p>	2
13c	Poor	1
13d	<p>Four from:</p> <p>Quicker to type in the formula</p> <p>Fewer mistakes when typing in the formula</p> <p>Easier to spot mistakes</p> <p>Easier to expand the range</p> <p>Takes up less storage space</p> <p>Easier to remember when retying</p>	4

Question	Answer	Marks
14a	<p>Four from:</p> <p>Load the document Highlight the text Click Insert then Table Select Convert text to table Click on 2 columns Click separate by : Click ok</p>	4
14b	<p>Two from:</p> <p>Compares each typed word... ...with its dictionary/database Uses algorithms to check the spelling</p>	2
14c	<p>Two from:</p> <p>Real names are not recognised Badly spelt words will not be recognised Incorrect grammar may not be recognised It will not find words that sound the same but have been used incorrectly Some words may be spelt incorrectly but form another word They do not learn from their mistakes unless added to the dictionary They may use the wrong dictionary</p>	2

Question	Answer	Marks
15a	<p>Max four from:</p> <p>Open spreadsheet Load the file Select B3 to C13 Then hold CTRL and select F3 to F13 Click insert then click bar chart/graph Select the format/type of chart/graph Highlight the chart/graph Copy the bar chart/graph</p> <p>Max four from:</p> <p>Open the presentation software Add a new slide Click on new slide Paste the bar chart/graph Add titles/legend/axes labels Save the file</p>	6
15b	<p>Four from:</p> <p>Click on the cell F4 Select formulas Click Autosum/Σ Check the correct range has been highlighted/highlight/drag C4 to E4 Click ✓</p>	4
15c	<p>Four from:</p> <p>Highlight B3 to F13 Click Data then Sort Select data has headers Sort by Total/Column F Select Largest to smallest/Descending/Z to A Click OK/enter</p>	4
Question	Answer	Marks
16	<p>Three matched pairs from:</p> <p>Content layer Content can consist of text or images</p> <p>Presentation layer This layer is defined by the CSS or styles to indicate how elements are displayed</p> <p>Behaviour layer This layer of a web page allows interaction</p>	6

Question	Answer	Mark
17a	ISBN: Check digit <i>Date_due_back</i> : Format check	2
17b(i)	Book_ID	1
17b(ii)	Borrower_ID	1
17c	Two from: The field is not needed for calculation Number starts with a zero/+ symbol May include a space	2
17d	Six from: Books table opened Borrowers table opened First record is read from the books table First record is read from the borrowers table <i>Date_due_back</i> in books table is compared with the current date If the <i>Date_due_back</i> is after the current date then... ...Move to next record If the <i>Date_due_back</i> is before or equal to the current date then... ...Contact_email is located A reminder is generated automatically The reminder is sent to the borrower Process continues with next record	6

Question	Answer	Mark
18	Four from: Ensures consistency across all documents Lets people know that the stationery/documents belong to the same Motor company Easier to recognise documents from the same company To reduce the time spent in setting up and formatting documents To reduce cost of setting up and formatting documents To reduce the risk of errors e.g. misspellings, logos omitted, etc.	4

Question	Answer	Marks
19a	<p>One from:</p> <p>Can cause pixelation Lose some of the resolution/image quality reduced</p>	1
19b	<p>Five from:</p> <p>Open graphics/image editing software Load/import the image Select the image Click crop Click an edge/crop handle of the image Click and drag the edge/crop handle inwardsuntil cropped area appears Click done/finish Save the image</p>	5

Question	Answer	Mark
20a	<p>Five from:</p> <p>Highlight Column D Select Conditional Formatting Select Highlight Cell Rules Select Equal to Type in the Equal to box...Severe/Low Click on Format Select/Set the red font on light red background Repeat the process for Low/Severe</p>	5
20b	<p>Three from:</p> <p>Removes the confusion over absolute and relative referencing Reduces the issues involved in changing the range Easier to understand the formula Easier to check for errors in the formula Easier to enter the formula//Less errors in entering the formula Faster to write the name than to select the range</p>	3
20c	<p>Looks up the value of B3 Looks in the named range Bloodpressure Returns the corresponding value from the 3rd column</p>	4

20d	<p>Two from:</p> <p>Highlight A2 to C9 Click Insert Select table...Click Chart Select 2D line chart/select type of graph</p> <p>One from:</p> <p>Add a chart title Add axis title Remove 09-Feb/17-Feb as not needed</p>	3
20e	<p>Five from:</p> <p>Include Name, Date of birth Include Patient Number Graph is displayed Must look like a hard copy report Fills the report Suitable title at the top of the page title must relate to blood pressure readings</p>	5

Question	Answer		Marks
21a	Field name	Data type	6
	Vehicle_licence_plate	Text/alphanumeric	
	Powered_by	Boolean	
	Service_interval	Numeric:Integer	
	Cost_of_service	Numeric: Currency	
	Model	Text	
	Date_of_service	Date	

21b	<p>Six from:</p> <p>Advantages</p> <p>Service details only need to be entered once into the database Mistakes are less likely to happen when entering data if it already exists Uses data redundancy Data can be accessed using key fields Uses data flexibility Uses data integrity Uses data consistency Better security due to user level access control Caters for future requirements</p> <p>Disadvantages</p> <p>Relational databases can be more complex Requires training to set up Harder to set up Requires a data administrator therefore increasing the costs</p> <p>To gain full marks the discussion must have correct answers for both advantages and disadvantages</p>	6
21c(i)	<p>Presence check To make sure that it has been entered as its unique</p> <p>Format check To fit in with the layout</p>	2
21c(ii)	<p>Type check Digits only</p> <p>Range check Between 1500 and 5000</p>	2
21c(iii)	<p>Format check To ensure it is dd/MM/yyyy</p> <p>Range check To ensure it is between certain dates</p> <p>Length check Maximum of for example 11 characters (could be 8 or 6)</p>	2

Question	Answer	Marks
22a	<p>Used to describe the presentation of a document written in HTML Enables the separation of presentation and content Part of the presentation layer</p>	2
22b	<p>Four from:</p> <p>Attached stylesheets are separate from the web page whereas inline style attributes are within each web page An attached stylesheet is edited in one file whereas inline style attributes are edited by changing each web page Attached stylesheet link has to go into the head section of the web page whereas inline style attributes can be anywhere in the web page Inline style attributes can be within HTML tags Attached stylesheets can be applied to multiple pages whereas inline style attributes only apply to individual web pages Inline style attributes can be used to override the attached stylesheet</p>	4

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Question	Answer	Marks
23a	<p>Eight from:</p> <p>Similarity</p> <ul style="list-style-type: none"> Both use a primary key Both can create searches/reports Both store data in records and fields in the table Both use indexes <p>Differences</p> <ul style="list-style-type: none"> Flat file database is a plain text file Flat file is a simple structure Flat file uses one table Relational database has linked tables/relationships Relational database allows searches/reports to be created over multiple tables Relational database allows cross referencing between tables Relational database records are easier to add Relational databases are more powerful Relational database reduces duplicate data Relational database uses foreign keys <p>To gain full marks there must be correct answers for both similarities and differences</p>	8
23b	<p>One from:</p> <ul style="list-style-type: none"> The data is in a list There is only a small amount of data A single table is to be used <p>One mark: Example of a list such as name, address/CSV files</p>	2
Question	Answer	Marks
24a	<p>Four from:</p> <ul style="list-style-type: none"> Text Images Logos Slide footer/header Automatic slide number Link/button to other slide/file/web page Lines for layout <u>Animation/video/sound</u> 	4
24b	<p>Two from:</p> <ul style="list-style-type: none"> Microphone Headphones/speakers Sound card 	2
24c	<p>Matched pairs:</p> <ul style="list-style-type: none"> Word processing Type/enter the text for the presentation Image editing software/graphics package/photo editing To prepare images for inclusion in the presentation Sound editing software To record the message for the presentation Video editing software To change the video of Martin Spreadsheet To create a chart/graph 	4

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Question	Answer	Marks
25a	Checks the data entered/transferred/copied correctly Matches the original document	2
25b	Check digit: Serial_number Length: Shelf_number Type: Number_in_stock//Name_of_supplier//Name_of_item	3
25c	Serial_number	1

Question	Answer	Marks
26a	Four from: Bold Full justification Highlight Underlined Italic	4
26b	Four from: Click on the shape/logo A Slide the corners in to reduce the size of the shape/logo Keep the aspect ratio/type in the height and width Fill the shape/logo with black Highlight the text Reduce the size of the text Change the colour of the text to white Click on the image/train Reduce the height and width//reduce the size of the image/train	4

Question	Answer	Marks
27a	=VLOOKUP(F2,A2:B9,2,0) Four from: Looks up F2/Airport name Looks up in the range A2:B9/Code and Name Finds the corresponding value from the 2nd column Displays the value in G2 Finds exact match	4
27b	Normal Data that is within the boundary of acceptability Abnormal Data that is outside the boundary/limit of acceptability/incorrect data Extreme Data on the edge of acceptability	3

27c	<p>Max two from:</p> <p>Formula A formula is a statement written by the user A formula is an equation A formula can contain values/references to cells/defined names A formula can contain functions</p> <p>One mark Examples =A1+B1, =SUM(A2:B2)</p> <p>Max two from:</p> <p>Function A function is a named piece of code designed to calculate specific values Functions are used inside formulas A function is a built in/predefined operation</p> <p>One mark Examples SUM/AVERAGE etc</p>	6
27d	<p>Two from:</p> <p>A database can use queries A database can use relationships Referential integrity can be enforced in a database Easier to create forms on a database Easier to create reports on a database Better user security Data is easier to manage in a database A database can reduce data duplication</p>	2

Question	Answer	Marks
28a	<p>One mark for naming the verification and one mark for explanation</p> <p>Visual verification Person enters the data it is read through and corrected as needed using the original copy</p> <p>Double data entry</p> <p>One from:</p> <p>Person types the data then retypes the data from the original copy/source Person types the data and another types the data from the original copy/source</p>	4
28b	<p>Max three from:</p> <p>Not all errors are found by validation and verification separately Source document may contain errors Verification only checks that data is copied correctly Verification does not check if data is reasonable/sensible Validation checks are carried out automatically by the computer</p> <p>Max two examples:</p> <p>Correct appropriate example of a verification check e.g. data supplied by the borrower is incorrect on the source document and was copied Correct appropriate explanation of an example of a validation check e.g. (Number of books borrowed is 1 misread as a 7; in a range check of 1-10)</p>	4

Question	Answer	Marks
29a	<p>Two from:</p> <p>A set of rules</p> <p>House style states how all documents and written communication should be formatted</p> <p>Consistency across all documents in the portfolio of the company</p> <p>Used to promote the company</p> <p>Controls how the colours/font style/font size/font type/position of logo/justification of text/position and style of address details to be used – 1 mark for any two items</p>	2
29b	<p>Two from:</p> <p>To display descriptive information on each page</p> <p>Helps the user to navigate through the document</p> <p>Used for repeatable items</p> <p>Headers and footers can be on every page</p> <p>Maintains consistency in the document</p> <p>Saves time rather than writing the same things on each page</p>	2

Question	Answer	Marks
30a	<p>Four from:</p> <p>Load the image/photo editing software</p> <p>Load/import the image</p> <p>Click on image</p> <p>Click on crop</p> <p>Move arrows to select area to be cropped/Draw around the area to be cut out</p> <p>Click on delete/Click outside the image</p> <p>Select Save As/export and then select png format</p>	4
30b	<p>Four from:</p> <p>jpg is lossy format</p> <p>Smaller file size</p> <p>Joint photographic experts group</p> <p>Loses quality when compressed</p> <p>png is lossless format</p> <p>Does not lose quality when compressed</p> <p>Portable network graphics</p>	4

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Question	Answer	Marks
31a	Gutter	1
31b	Header	1
31c	Wrapping	1
31d	Justified	1

Question	Answer	Marks
32a	Two from: Method of accessing/linking other resources/web pages from the current web page Clicking on the word/phrase/image/area of page Navigation/re-directed to another web page	2
32b	Two from: Method of saving a web page's address Used for easy retrieval of the website Storing a link to a website	2
32c	Two from: An anchor is a specific location/reference point within a web page When clicked it can move the pointer to the start/end of a page Used on very long pages to save you having to physically scroll all the way down/up the page. The browser will automatically jump to the corresponding heading within the page/destination anchor	2

Question	Answer	Marks
33a	Landscape	1
33b	Bullet	1
33c	Hanging	1
33d	Widow	1

Question	Answer	Marks
34a	<p>Max three from:</p> <p>Load the database software</p> <p>Set up tables</p> <p>Set up field names</p> <p>Set up primary/foreign key fields</p> <p>Set up relationships</p> <p>Set up the field types/properties/formatting/data types</p> <p>Set up the validation routines</p> <p>Set up input forms</p> <p>Set up queries/reports</p> <p>Type in/import records</p> <p>Create a test strategy/plan</p> <p>Max three from:</p> <p>Test using normal, abnormal, and extreme data</p> <p>If errors are found, make corrections</p> <p>Re-test the database structure</p> <p>Test with live data</p>	4
34b	<p>The old and new systems/both run side by side until the new system takes over</p> <p>Benefit</p> <p>One from:</p> <p>The old system can be used as a back up</p> <p>Staff can be trained gradually</p> <p>Drawback</p> <p>One from:</p> <p>More time consuming as the data needs to be entered into two systems</p> <p>More chance of error on data entry as two systems are being used</p> <p>More costly as there are two sets of staff</p> <p>Uses more power running two systems</p>	3

Question	Answer	Marks
35a	<p>Six from: Benefits</p> <p>Membership details can be searched very quickly as there are many members Membership details can be quickly edited/updated The data in the database can be backed up easily Easier to create an archive of past members More secure with a valid reason Can be used as a source for mail merging Less errors as data does not have to be re-written Reduces the time as data does not have to be re-written</p> <p>Drawbacks</p> <p>Need IT skills to use the software/computer Need to have additional equipment which is expensive Can take up a lot of storage space/memory in the computer Expensive to buy software Expensive to secure the system as it contains personal data Training staff on how to use the software will be time consuming Training could be expensive for the club</p> <p>To gain full marks the description must have correct answers for both benefits and drawbacks</p>	6
35b	<p>Five from:</p> <p>Adequate space for response//Individual character boxes Fonts/font size should be easy to read Instructions how to complete form Logical order of questions Questions spaced out Appropriate white space Questions should be clear and understandable</p>	5

Question	Answer	Marks
36a	<p>rtf Text file with formatting/generic text files</p> <p>pdf Standard/generic image file</p>	2
36b	<p>Three from:</p> <p>pdf their layout and formatting stay the same, regardless of which device/operating system/application being used whereas rtf formatting can change</p> <p>pdf take up less memory for the same size of document</p> <p>pdf files are compressed</p> <p>pdf the formatting can be more complex whereas rtf has basic formatting</p> <p>pdf are harder to edit</p> <p>pdf generic image format</p> <p>rtf can be read by most word processing editors</p> <p>rtf is a generic text format</p>	3

Question	Answer	Marks
37	<p>Two from:</p> <p>Visual verification refers to the original document whereas proofreading does not need to refer to the original document</p> <p>Proofreading is checking spelling and grammar errors whereas visual verification does not check for errors</p> <p>Visual verification checks that the data has been copied correctly</p>	2

Question	Answer	Marks
38a	Section break	1
38b	<p>Two from, for example:</p> <ul style="list-style-type: none"> • Png • Gif • Jpg/Jpeg • Bmp • PDF • IMG 	2
38c	<p>Three from:</p> <ul style="list-style-type: none"> • Information is repeated on each page • Allows easier navigation in the document • Saves time for the user to add information manually • Information only needs to be entered once 	3

Question	Answer	Marks
39a	A Text B Number/Integer C Date D Currency	4
39b	Two from: <ul style="list-style-type: none"> Brackets/parentheses missing around B2-C2 Multiplication was carried out first then the subtraction The order of calculation should follow BODMAS/BIDMAS/PENDAS 	2

Question	Answer	Marks
40a	Two from: Prevents errors when data is being copied from one medium to another Comparing the data against the original If a second person carries out the checking then it ensures errors are not missed	2
40b	Three matched pairs: Format check Check that the format is dd/mm/yyyy Range check Month ranges from 01 to 12//Day range 01 to 31 Length check Exactly 8//Exactly 10 characters Character check The date of birth can only contain integers Type check The characters are all numbers The answer must relate to the question	6

Question	Answer	Marks
41a	<p>Three from:</p> <p>A class definition name starts with a full stop/period</p> <p>A class is used for adding or changing a style within CSS/stylesheet</p> <p>Classes are subtypes within an element</p> <p>Classes are user-defined whereas a style is pre-defined</p> <p>Classes are defined in a stylesheet whereas styles are defined in the head section of the web page</p> <p>Limited number of styles</p>	3
41b	Presentation//Styles	1

Question	Answer	Marks
42a(i)	<p>One from:</p> <p>The age of the patient changes every year</p> <p>The data would need to be updated regularly</p> <p>Time consuming to keep changing the age on the database</p>	1
42a(ii)	<p>One from:</p> <p>Use the field date of birth</p> <p>Use a calculated field from date of birth</p>	1
42b(i)	<p>Two from:</p> <p>Range check</p> <p>Character check</p> <p>Length check</p> <p>Type check</p> <p>Format check</p> <p>Presence check</p> <p>Check digit</p>	2
42b(ii)	<p>Max three from:</p> <p>A primary key is unique</p> <p>A primary key helps identify the record</p> <p>A primary key cannot be a null value</p> <p>Creates relationships</p> <p>Only one primary key per table</p> <p>Max three from:</p> <p>A foreign key can have a null value</p> <p>A foreign key is a key in a table which is a primary key in another table</p> <p>A foreign key enforces referential integrity</p> <p>Found in relational databases</p>	4

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Question	Answer	Marks
43a	Content/structure	1
43b	Presentation/style	1
43c	Behaviour/scripting	1

Question	Answer	Marks
44	<p>Two matched pairs:</p> <p>Check digit An extra digit added to a number which is calculated from the other digits, this ensures the rest of the number is correct</p> <p>Length check Checks that there are only 12 characters</p> <p>Presence check Checks that the number exists in the table/not a null value</p> <p>Type check Checks that the data entered is an integer</p> <p>Character check Checks that the data entered are only numbers</p>	4

Question	Answer	Marks
45a	<p>Two from:</p> <p>Portable document format The document has been converted into an image format Can be read by most computers/applications/apps Hard to edit therefore it can be used to protect the file from change</p>	2
45b	<p>Two from:</p> <p>Rich text format A file type that saves some of the formatting within the text Readable by most text editors</p>	2
45c	<p>Two from:</p> <p>Cascading style sheet Attached to one or more web pages Written in HTML Defines how the web pages look Part of the presentation layer</p>	2

Question	Answer	Marks
46a(i)	Two from: Comma Separated Values Delimited by commas Text file	2
46a(ii)	Two from: Roshal Archive Used for data compression Data container to hold other files	2
46a(iii)	Two from: Plain text file Contains un-formatted text data Can be used by any text editors	2
46b	Three from: css gif htm / html jpg / jpeg mp4 / mp3 pdf png rtf svg zip	3
46c	Two from: Allows users to save files so that they can be opened on any platform The formatting of the file is not package-specific therefore formatting will not affect the file Using generic formats allows files created on one type of computer to be read on another type of computer	2

Question	Answer	Marks
47a	Behaviour Presentation	2
47b	Two from: They restrict the output so that the display remains constant / fixed Different browsers should render the table in the same way The tables are independent of the screen resolution Organises the data on the web page	2