Audience – 2022 ICT IGCSE 0417

1. June/2022/Paper_13/No.7(b)

(b) Tawara Stores are also aware that many current websites do not cater for older people. They intend to create a version of their website for this audience.

Describe the features of this website to meet the needs of an older audience, giving reasons for your choice of features.

....

....

....

....

....

....

....

.... [4]

2. Nov/2022/Paper_11/No.10

A group of students in a school are planning to publicise a school concert. They can either produce a web page which will be sent to the company that runs the school website or create a multimedia presentation and show this to students and visitors.

(a) Give **two** types of content which could be used in a multimedia presentation that cannot be used in a printed leaflet.

1 ....

2 ....

[2]

(b) Describe the advantages and disadvantages of using a multimedia presentation rather than a web page on the school website.

....

....

....

....

....

....

....

....

....

....

.... [6]

The students need to test their multimedia presentation before it can be used.

(c) Name **two** output devices they can use and for each one, write down a reason for its use.

Output device 1 ....

Reason ....

....

Output device 2 ....

Reason ....

....

[4]

Communication – 2022 ICT IGCSE 0417

1. June/2022/Paper_11/No.13(c)

   (c) In order to log onto online gaming a user ID and password is needed.

   Explain what is meant by a user ID and password and why they are needed.

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   .... [4]

2. March/2022/Paper_12/No.11

   When creating an ICT solution, the legal, moral, ethical and cultural implications have to be considered.

   Choose the most appropriate implication that matches the descriptions given below.

   (a) Ensuring that copyright laws have been followed.

   .... [1]

   (b) Not giving information about the ICT solution to another company.

   .... [1]

3. Nov/2022/Paper_11/No.8

Discuss the moral implications which need to be considered when creating an ICT solution.

....

....

....

....

....

....

....

.... [4]

4. Nov/2022/Paper_12/No.11(a)

A village is built next to a river. During heavy rain the river floods and endangers the people living in the village. If the river is in danger of flooding, an email is sent to all members of the village.

(a) Explain why an email group is used when contacting the villagers.

....

....

....

....

....

.... [3]

5. Nov/2022/Paper_13/No.9

The use of email has replaced many forms of communication.

Describe the constraints that you need to consider when writing and sending an email.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

5. Nov/2022/Paper_13/No.9

Databases – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.12

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]

2. June/2022/Paper_11/No.7

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]

3

3. June/2022/Paper_11/No.14

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]

4

4. June/2022/Paper_11/No.15(a)

A customer is booking a seat on a theatre's online booking system. The customer reserves seats using the theatre's website and a debit card. The website displays the seats that are available and a database stores the customer details, the payment details and the seat details.

When the customer enters their debit card details for a seat, the theatre's computer communicates with the bank's computer.

(a) Describe **four** checks that the bank's computer will make on the customer's bank account.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

5. June/2022/Paper_12/No.(d)

(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 ....

....

[2]

6. June/2022/Paper_13/No.2

Name an appropriate validation routine for each statement. Each answer must be different.

(a) The last digit in a code used to ensure the other digits have been entered correctly.

.... [1]

(b) This validation routine ensures a password is always 8 characters.

.... [1]

(c) This validation routine ensures data has been entered into a field.

.... [1]

(d) This validation routine ensures that a date is entered as DD/MM/YYYY.

.... [1]

6. June/2022/Paper_13/No.2

7. Nov/2022/Paper_11/No.4(b)

(b) Part of the database is shown.

Student_name	Date_of_birth	Gender	Exam_mark	Average_mark
Seth	25/02/2007	M	22	43.4
Adom	17/07/2007	M	67	73.1
Maria	02/05/2007	F	78	67.9
Lesedi	15/12/2006	F	45	50.0

Write down the field name which is the most appropriate for the data type, based on the data shown in the table. Your answers must be different in each case.

Boolean ....

Numeric: integer ....

Numeric: decimal ....

Alphanumeric ....

[4]

7. Nov/2022/Paper_11/No.4(b)

8. Nov/2022/Paper_12/No.5

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.

....

....

....

....

....

....

....

.... [4]

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]

9. Nov/2022/Paper_13/No.7(a, b)

A school librarian is setting up a database of all the revision books he has in stock. The school library sells revision books to students. The books range in value from $1 to $10 and are available either in electronic book type (E) or physical book type (P).

(a) The librarian is planning to set up a number of different types of validation rule for the fields to check data entry. Write down the most appropriate field name from the table that could be used with each of the validation rules. Your answers must be different in each case.

Name_of_book	Department	ISBN	Book_type	Cost
Modern History	HIS	0140621393432	P	$5.20
GCSE ICT	ICT	0006132237	E	$1
A Level Calculus	MAT	0006153516	E	$1
Human Biology	SCI	0006511376	E	$2.30

Presence ....

Lookup ....

Range ....

Length ....

[4]

The librarian needs to set up a primary key field.

(b) Write down the most appropriate field name from the table that could be used as a primary key field.

.... [1]

Document production – 2022 ICT IGCSE 0417

1. June/2022/Paper_12/No.4

   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]

2. June/2022/Paper_13/No.13

   In a college library if a book is not available students can reserve the book. When the book becomes available the librarian needs to inform the student. He does this by typing a letter and printing it. He has a database of students and has decided that in future he will use mail merge to produce the letters.

   Give **four** advantages of using mail merge instead of typing out the letter each time.

   1 ....

   ....

   2 ....

   ....

   3 ....

   ....

   4 ....

   ....

   [4]

3. Nov/2022/Paper_11/No.1

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]

4. Nov/2022/Paper_11/No.11(a)

A receptionist in a medical centre is going to send out emails to patients about medical results. The receptionist will use the data from patients' medical and personal records and mail merge these. One of the disadvantages of this system is that the receptionist will have access to personal data.

(a) Describe **four** other disadvantages of using mail merge.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

5. Nov/2022/Paper_12/No.1

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]

6. Nov/2022/Paper_13/No.1

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

centred	a footer	a gutter	a header	indented
justified	landscape	an orphan	portrait	a widow

(a) The orientation of a page that is taller than it is wide is called

.... [1]

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

.... [1]

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

.... [1]

(d) Text that is aligned horizontally in the middle of a line is called

.... [1]

7. Nov/2022/Paper_13/No.14

Explain why page, section and column breaks are used in documents.

....

....

....

....

....

.... **[3]**

7. Nov/2022/Paper_13/No.14

File management – 2022 ICT IGCSE 0417

1. Nov/2022/Paper_12/No.14

   A computer system uses a Graphical User Interface (GUI).

   Write down **two** features of a GUI and for each give a reason why they are needed.

   Feature 1 ....

   Reason 1 ....

   ....

   Feature 2 ....

   Reason 2 ....

   ....

   [4]

2. Nov/2022/Paper_13/No.6(b)

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

   ....

   ....

   ....

   ....

   ....

   .... [3]

3. Nov/2022/Paper_13/No.7(c)

Most of the revision books are available in electronic book type as digital versions of the printed books. These are stored as interactive PDF files.

(c) Describe the benefits and drawbacks of using the digital versions.

....

....

....

....

....

....

....

....

....

....

.... [6]

3. Nov/2022/Paper_13/No.7(c)

ICT applications – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.4

   Tick (✓) whether the following statements refer to control, measurement or modelling systems.

   Only tick (✓) **one** answer for each statement.

	control (✓)	measurement (✓)	modelling (✓)
Maintaining the growing conditions in a glasshouse			
Aircraft flight simulation			
Monitoring the pollution in a river			
Using what-ifs			

   [4]

2. March/2022/Paper_12/No.6

   Global Positioning Systems (GPS) are used for many different applications.

   (a) Describe how GPS is used by a smartphone to pinpoint its location.

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   .... [4]

(b) Give **three** other examples of the use of GPS.

1 ....

....

2 ....

....

3 ....

....

[3]

3. March/2022/Paper_12/No.7(a)

Tawara School is presenting a concert. For previous concerts the booking of tickets was carried out manually using pen and paper.

For this concert they are going to use an online booking system.

(a) Discuss the advantages and disadvantages of Tawara School using an online booking system rather than the manual system.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

4. June/2022/Paper_11/No.10

A river authority is concerned about levels of pollution in a major river. The quality of the water in the river needs to be monitored using sensors.

(a) Name **three** sensors that could be used to measure the pollution in the river.

1 ....

2 ....

3 ....

[3]

(b) Discuss the advantages and disadvantages of using computers to measure the pollution in the river rather than humans measuring the pollution.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

5. June/2022/Paper_11/No.15(b)

   (b) Describe the processing carried out by the theatre's computer when making a booking.

      ....

      ....

      ....

      ....

      ....

      ....

      ....

      .... **[4]**

6. June/2022/Paper_12/No.2

  A computer-controlled glasshouse is used to grow plants.

  Identify **two** output devices used in this glasshouse.

  1 ....

  2 ....

                                                                                      [2]

7. June/2022/Paper_12/No.11

A car manufacturing company uses computer-controlled robots to manufacture its cars.

Discuss the advantages and disadvantages to the company of using computer-controlled robots rather than using humans to manufacture the cars.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

8. June/2022/Paper_13/No.5(c)

(c) Discuss the advantages and disadvantages of using manual booking systems rather than online booking systems.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

9. June/2022/Paper_13/No.7(a)

Tawara Stores has realised that the number of people shopping for food online has increased over the past few years.

(a) Discuss the advantages and disadvantages to the customer of shopping for food online.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

June/2022/Paper_13/No.7(a)

10. June/2022/Paper_13/No.14

People can manage their banking transactions using the internet. However, if the internet signal is poor telephone banking can be used.

A person wishes to use telephone banking without speaking to an operator to transfer money from one bank account to another.

Describe the steps needed to do this.

....

....

....

....

....

....

....

....

....

....

.... [6]

11. Nov/2022/Paper_11/No.5

A student is carrying out a scientific experiment to measure the temperature of a liquid as it cools down. The student uses a sensor connected to a computer to read the temperature.

(a) Give **three** advantages of using computers and sensors rather than the student taking the temperature readings herself.

1 ....

....

2 ....

....

3 ....

....

[3]

(b) Describe how the readings taken by the sensor are displayed on a graph using the computer.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

(c) Explain the differences between measurement systems and control systems.

....

....

....

....

....

....

....

.... **[4]**

12. Nov/2022/Paper_11/No.14

A research student is undertaking a study of endangered animals in the Amazon rainforest. She is using a drone to replace surveys carried out on foot. A drone is a remote-controlled flying vehicle.

Describe the benefits and drawbacks of using a drone to monitor the animals in the rainforest.

....

....

....

....

....

....

....

....

....

....

.... [6]

13. Nov/2022/Paper_12/No.6

In June 2000 the London Millennium Bridge opened to the public but closed shortly afterwards for repairs. The bridge was swaying as people walked across it. Before bridges are built, computer models are produced and the models are tested.

Explain why computer models are used before building a bridge.

....

....

....

....

....

....

....

.... [4]

14. Nov/2022/Paper_12/No.8

In 2019 Cambridge recorded the highest temperature for July in the UK. The data was collected automatically using sensors by a weather station and sent to a computer.

Discuss the advantages and disadvantages of using sensors to collect data rather than humans collecting the data.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

15. Nov/2022/Paper_12/No.11(b, c)

Sensors are placed in the river to check the water level. If the water level in the river rises more than 5m above normal river levels, a flood barrier is raised to safeguard the village. The flood barrier remains raised until the water level drops to normal levels.

(b) Explain why the data from the sensors cannot be read directly by the computer and name the device that needs to be used so that the computer can read the data.

....

....

....

....

....

.... [3]

(c) Describe how a microprocessor uses the data from the sensors to raise and lower the flood barrier.

....

....

....

....

....

....

....

....

....

....

.... [6]

16. Nov/2022/Paper_13/No.4

A person contacts an online medical website that uses an expert system to allow users to self-diagnose illnesses.

(a) Write down the component within the expert system that matches the definition given.

(i) This component contains a database of facts.

....

.... [1]

(ii) This component carries out the reasoning of the expert system.

....

.... [1]

(iii) This component allows the person to interact with the system.

....

.... [1]

(b) Describe how an expert system is used to diagnose an illness.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

17. Nov/2022/Paper_13/No.5(a)

A restaurant uses a number of different types of software. These include control, measurement, spreadsheet and word processing software.

(a) Tick (✓) the most appropriate piece of software to carry out the tasks shown.

	Control (✓)	Measurement (✓)	Spreadsheet (✓)	Word processing (✓)
Producing menus for the restaurant				
Calculating the cost of each of the meals				
Automatically turning on the fans when the room gets too hot				
Monitoring the temperature in the restaurant				

[4]

Images – 2022 ICT IGCSE 0417

1. June/2022/Paper_13/No.11

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.

....

....

....

....

....

....

....

.... [4]

2. Nov/2022/Paper_13/No.6(a)

    A web page can contain images saved as png or gif file types.

    (a) State what is meant by png and gif file types.

    png ....

    ....

    gif ....

    ....

                                                                                                              [2]

Input and output devices – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.1(b)

(b) One input device used on a tablet computer is a touch screen.

Name **two** other input devices built into a tablet computer.

1 ....

2 ....

[2]

2. March/2022/Paper_12/No.2

Circle **two** items that contain personal data.

bank card   bar code   laser printer

medical record   mouse   sensor

[2]

3. March/2022/Paper_12/No.10

A touch screen is both an input device and an output device. Touch screens are used on many devices. A tablet computer uses a touch screen.

Describe the advantages and disadvantages of using a touch screen rather than a monitor and keyboard for the tablet computer.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

3. March/2022/Paper_12/No.10

4. June/2022/Paper_11/No.2

Complete each sentence using the most appropriate item from the list. Your answers must be different in each case.

ADC	an applet	hardware	HDD
a router	a sensor	software	SSD

(a) The physical components of a computer are called

.... [1]

(b) Programs and data are examples of

.... [1]

(c) A small application performing one or two simple functions is called

.... [1]

(d) An input device used in measurement applications is called

.... [1]

5. June/2022/Paper_11/No.3

Identify **two** devices which are used in control systems.

1 ....

2 ....

[2]

6. June/2022/Paper_11/No.5

Many bank cards now use contactless technology.

Describe the advantages and disadvantages of using these cards rather than cards that use chip and PIN.

....

....

....

....

....

....

....

.... [4]

7. June/2022/Paper_11/No.9(b)

(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]

8. June/2022/Paper_12/No.1

Circle **two** input devices.

3D printer	Actuator	CD ROM	Digital camera
Keyboard	Linker	Monitor	Speaker

[2]

9. June/2022/Paper_12/No.5

A library is considering the way it issues books. The librarians are planning to use RFID rather than bar codes.

Describe the advantages of using RFID rather than bar codes.

....

....

....

....

....

....

....

.... [4]

10. June/2022/Paper_13/No.3

Identify **two** input devices which are used in computer control systems.

1 ....

2 ....

[2]

11. June/2022/Paper_13/No.5(b)

(b) When a ticket is produced for the new system it contains a QR code.

Here is an example of a QR code.

Describe the benefits of using a QR code.

....

....

....

....

....

....

....

....

....

.... [5]

12. June/2022/Paper_13/No.8

Tawara Hotel uses magnetic stripe cards to allow guests access to their bedrooms. The hotel is changing the electronic lock it uses on its bedroom doors so the lock can work with RFID cards.

Compare the use of magnetic stripe cards and RFID cards for key entry. Your answer must include similarities and differences.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

13. Nov/2022/Paper_13/No.2

A computer controlled glasshouse is used to grow plants.

State **three** sensors that could be used in the glasshouse.

1 ....

2 ....

3 ....

[3]

Networks and the effects of using them – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.5

    The World Wide Web (WWW) is often mistaken for the internet.

    (a) Explain the differences between the WWW and the internet.

    ....

    ....

    ....

    ....

    ....

    ....

    ....

    .... [4]

    (b) The web address for Cambridge IGCSE is:

    https://www.cambridgeinternational.org/IGCSE

    Describe the following parts of the web address.

    https:// ....

    ....

    cambridgeinternational ....

    ....

    .org ....

    ....

    /IGCSE ....

    ....

    [4]

Networks and the effects of using them – 2022 ICT IGCSE 0417

2. March/2022/Paper_12/No.13

A family has a number of different devices connected to the internet.

(a) Identify **three** items of computer hardware that may need to be purchased in order to set up a computer network so the devices can use the internet.

1 ....

2 ....

3 ....

[3]

(b) Arjun is a member of the family. He uses the internet to carry out research and send work to his office.

Describe **three** other ways he could make appropriate use of the internet.

1 ....

....

2 ....

....

3 ....

....

[3]

(c) Arjun uses the internet to carry out research for his work.

Describe **two** drawbacks of Arjun using the internet for research.

....

....

....

.... [2]

(d) Arjun can log directly into his office system from his home computer. The office system only requires users to enter their user id and a password.

(i) Explain why this is **not** very secure.

....

....

....

.... [2]

(ii) Describe **two** other ways the office system could identify the user securely.

1 ....

....

....

....

2 ....

....

....

....

[4]

3. June/2022/Paper_11/No.1

A tablet computer consists of both hardware and software.

(a) Define the term hardware.

....

.... [1]

(b) One input device used on a tablet computer is a touch screen.

Name **two** other input devices built into a tablet computer.

1 ....

2 ....

[2]

(c) Write down **two** examples of system software.

1 ....

2 ....

[2]

4. June/2022/Paper_12/No.3

Identify **two** devices which are used in control systems.

1 ....

2 ....

[2]

5. June/2022/Paper_12/No.8

Uniform Resource Locators (URL) are used to locate websites and resources. A teacher needs to find a teaching guide from Cambridge Assessment International Education. To download the teaching guide she types in:

https://www.cambridgeinternational.org/igcse-ICT-0417/2193733.pdf

(a) Write down only the part of the URL which shows the file name of the teaching guide.

.... [1]

(b) Write down only the part of the URL which is the folder where the teaching guide is stored.

.... [1]

(c) Write down only the part of the URL which is the domain name.

.... [1]

(d) Explain what is meant by https.

....

.... [1]

5. June/2022/Paper_12/No.8

6. June/2022/Paper_13/No.9

The Internet of Things (IoT) allows devices as well as computers to connect to the internet using a router. Each device uses an IP address.

(a) Explain what is meant by an IP address.

....

....

....

....

....

.... [3]

(b) Explain how a router sends data packets to another network.

....

....

....

....

....

.... [3]

(c) The network has a firewall.

Explain why a firewall is needed.

....

....

....

....

....

....

.... [4]

7. June/2022/Paper_13/No.10

Both the internet and the intranet are used for communication.

(a) Define the terms internet and intranet.

(i) Internet

....

....

....

.... [2]

(ii) Intranet

....

....

....

.... [2]

7. June/2022/Paper_13/No.10

Both the internet and the intranet are used for communication.

(b) The World Wide Web is part of the internet.

Explain why the World Wide Web has become so popular.

....

....

....

....

....

....

....

....

....

....

.... **[6]**

8. Nov/2022/Paper_11/No.9

Use of smartphones to access the internet has increased by over 200% in the past five years.

Compare the use of smartphones to access the internet with the use of desktop computers to access the internet. Your answer must include similarities and differences.

....

....

....

....

....

....

....

....

....

....

....

....

.... [6]

9. Nov/2022/Paper_12/No.10

High street banks now offer customers access to internet banking when they are in the physical bank.

Discuss the advantages and disadvantages to the bank of using internet banking in this way.

....

....

....

....

....

....

....

....

....

....

.... [6]

Nov/2022/Paper_12/No.10

10. Nov/2022/Paper_13/No.11

A student is carrying out some research for school.

(a) Explain **two** ways she could search for information on the World Wide Web (WWW).

1 ....

....

2 ....

....

[2]

(b) Explain the differences between the internet and the World Wide Web (WWW).

....

....

....

....

....

....

....

.... [4]

Presentations – 2022 ICT IGCSE 0417

1. June/2022/Paper_11/No.9(a)

   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]

2. Nov/2022/Paper_11/No.10

A group of students in a school are planning to publicise a school concert. They can either produce a web page which will be sent to the company that runs the school website or create a multimedia presentation and show this to students and visitors.

(a) Give **two** types of content which could be used in a multimedia presentation that cannot be used in a printed leaflet.

1 ....

2 ....

[2]

(b) Describe the advantages and disadvantages of using a multimedia presentation rather than a web page on the school website.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

3. Nov/2022/Paper_13/No.3

Circle **two** features of multimedia presentations which would **not** be found in a word processed document.

bullets   images   numbers   photographs

sound   tables   text   video

[2]

Safety and security – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.9(d)
   (d) The office must be a safe working environment.

   State **two** physical safety issues that might exist from the introduction of computers.

   1 ....

   ....

   2 ....

   ....

   [2]

2. June/2022/Paper_11/No.12

Many company computer network systems use WiFi as a communication system to help prevent the issue of tripping over trailing cables.

(a) For each of the following physical safety issues describe **two** ways of helping to prevent them.

    (i) Fire

        Prevention 1 ....

        ....

        Prevention 2 ....

        ....

        [2]

    (ii) Electrocution

        Prevention 1 ....

        ....

        Prevention 2 ....

        ....

        [2]

A common use of home computers is online gaming.

(b) Describe **three** eSafety measures which should be taken when playing games on the internet.

    1 ....

    ....

    2 ....

    ....

    3 ....

    ....

    [3]

(c) In order to log onto online gaming a user ID and password is needed.

Explain what is meant by a user ID and password and why they are needed.

....

....

....

....

....

....

....

.... **[4]**

3. June/2022/Paper_11/No.13

(a) Explain the need for copyright legislation when data is published on the internet.

....

....

....

....

....

....

....

.... [4]

(b) Describe methods that software producers use to prevent software copyright being broken.

....

....

....

....

....

....

....

.... [4]

(c) Emails are used by people to communicate with each other. Copyright and using acceptable language in the email are two of the constraints that affect the use of email.

(i) Describe **four** other constraints that may affect the use of email.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

(ii) Describe **two** rules of the use of acceptable language in emails.

1 ....

....

2 ....

....

[2]

4. June/2022/Paper_12/No.7

A patient has an injury and the doctor treating him needs to find out information about the patient. Most of the data he needs to collect is personal data.

The data collected is protected by data protection legislation. Most data protection acts include the principle that data should be kept confidential and secure.

(a) List **four** other principles of a typical data protection act.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

(b) Explain what is meant by personal data. Include **two** examples of personal data in your answer.

Explanation ....

....

....

....

Example 1 ....

....

Example 2 ....

....

[3]

(c) Explain why personal data should be kept confidential and secure.

....

....

....

....

....

....

....

.... **[4]**

5. June/2022/Paper_12/No.14

Spam is associated with ICT systems.

(a) Explain what is meant by the term spam.

....

....

....

.... [2]

(b) Describe the ways that a user can recognise spam and methods to help prevent it.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

6. June/2022/Paper_12/No.15

(a) Explain what is meant by cloud storage and how it is used.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

(b) Describe **two** issues related to the security of data in the cloud.

1 ....

....

2 ....

....

[2]

7. June/2022/Paper_13/No.12

The protection of personal data is important as many transactions are carried out online.

(a) Explain how to avoid inappropriate disclosure of personal data.

....

....

....

....

....

....

....

.... [4]

(b) Controlling the freedom of speech is part of policing the internet.

Discuss whether the internet should be policed or not.

....

....

....

....

....

....

....

.... [4]

8. Nov/2022/Paper_11/No.3

According to research carried out on passwords the top three most used passwords are 12345, qwerty and sunshine.

Describe, using other examples, the difference between a weak password and a strong password.

....

....

....

....

....

....

....

.... [4]

9. Nov/2022/Paper_11/No.6

There have been major issues regarding the accuracy of facial recognition systems for identifying suspects by the police.

Tawara Airport has installed biometric security including facial recognition systems to help the police recognise known criminals entering and leaving the country. Previously video was taken of all passengers and then checked manually.

(a) Discuss the effectiveness of using facial recognition systems rather than the manual video system to increase security in this way.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

9. Nov/2022/Paper_11/No.6

(b) Give **three** examples of biometric data.

1 ....

2 ....

3 ....

[3]

10. Nov/2022/Paper_11/No.7

Instant messaging involves users sending text messages to each other.

Evaluate how you would use eSafety strategies in your own use of instant messaging.

....

....

....

....

....

....

....

....

....

....

....

....

....   [6]

11. Nov/2022/Paper_11/No.11(b)

Due to data protection laws, personal data should be kept confidential and secure.

(b) Explain why personal data should be kept confidential and secure.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

12. Nov/2022/Paper_12/No.4

Workers in an office log onto the office computer network using a password.

(a) Aaron is using his name as his password.

Give **two** reasons why this is **not** a good idea.

1 ....

....

2 ....

....

[2]

(b) One method that hackers use to find people's passwords is to install key-logging spyware onto computers.

Give **two** methods that could be used to safely enter passwords even if key-logging spyware has been installed on a computer.

1 ....

....

2 ....

....

[2]

13. Nov/2022/Paper_12/No.9(c)

As our use of the cloud increases, new ways of accessing it safely need to be developed.

(c) The use of typed passwords is being replaced by biometric methods.

Discuss the benefits and drawbacks of using biometric methods.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

14. Nov/2022/Paper_13/No.8

An organisation has changed the way in which members of staff can enter the building. Previously they typed in a four-digit code on a key pad; now they use a device that reads a handprint.

(a) Discuss the effectiveness of using a handprint to enter the building rather than keying in a code.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

Handprint scans are an example of a biometric method to enter a building.

(b) Give **two** other examples of biometric methods that could be used in this scenario.

1 ....

2 ....

[2]

15. Nov/2022/Paper_13/No.13

A teacher is concerned that students are playing online computer games at home without considering eSafety. The teacher is going to create a set of rules that he feels they should be following.

Write down a list of eSafety rules that he could include.

....

....

....

....

....

....

....

....

....

....

.... [6]

16. Nov/2022/Paper_13/No.15(b)

   (b) Describe what is meant by the term encryption and why it is used.

....

....

....

....

....

.... [3]

Spreadsheets – 2022 ICT IGCSE 0417

1. June/2022/Paper_12/No.9(a_ c)

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]

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

....

....

....

....

....

....

....

....

....

....

....

.... [6]

Storage devices and media – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.3
   Network devices are used in computer systems.

   Complete each sentence by identifying the most appropriate network device.

   (a) The network device that is used to transmit the data along an analogue telephone line is a

   .... [1]

   (b) The network device that connects a LAN to a WAN is a

   .... [1]

   (c) The network device that allows data to be directed to a specific computer on a LAN is a

   .... [1]

   (d) The internal network device that allows a computer to connect to a LAN is a

   .... [1]

2. June/2022/Paper_11/No.4
   Many laptop computers use the cloud to store data. A technician has produced a report on his laptop computer but has stored the report on a memory stick rather than storing it on the cloud.

   Describe **two** advantages of using a memory stick rather than the cloud to store data.

   1 ....

   ....

   2 ....

   ....

   [2]

3. June/2022/Paper_12/No.6

Laptop computers use Solid State Drives (SSD) rather than Hard Disc Drives (HDD).

Describe **two** disadvantages of using an SSD rather than an HDD in a laptop computer.

1 ....

....

2 ....

....

[2]

4. June/2022/Paper_12/No.5

A library is considering the way it issues books. The librarians are planning to use RFID rather than bar codes.

Describe the advantages of using RFID rather than bar codes.

....

....

....

....

....

....

....

.... [4]

5. June/2022/Paper_13/No.1

Circle **two** storage devices.

Bridge	Digital camera	DVD RAM Drive	Linker
Memory stick	Mouse	Printer	Spreadsheet

[2]

6. June/2022/Paper_13/No.4

Computers can store data in the cloud rather than using storage devices in the computer.

(a) Describe **three** benefits of storing data in the cloud.

1 ....

....

2 ....

....

3 ....

....

[3]

(b) Describe **three** drawbacks of storing data in the cloud.

1 ....

....

2 ....

....

3 ....

....

[3]

7. Nov/2022/Paper_11/No.12

Many students prefer to store data on external storage devices like pen drives or portable hard disk drives.

Describe **four** advantages of using a pen drive rather than a portable hard disk drive.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

8. Nov/2022/Paper_13/No.10

(a) For each of the following types of backing storage give **one** example of its associated media. Your answers must be different in each case.

Optical ....

....

Magnetic ....

....

Solid state ....

....

[3]

4

(b) Describe **three** differences between optical and magnetic backing storage.

1 ....

....

2 ....

....

3 ....

....

[3]

9. Nov/2022/Paper_13/No.15(a)

An employee is carrying out work for her company at home. The work she is doing is confidential. She has been advised by her company to use encryption. She wishes to transfer some of this work to the office.

(a) Discuss **two** different methods she could use to transfer this work to the office. Include in your answer the advantages and disadvantages of each method.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [6]

The effects of using IT – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.9(a_ c)
   The introduction of computers into the work place has affected job patterns.

   (a) Explain what is meant by part-time working.

   ....

   ....

   ....

   .... [2]

   (b) Explain what is meant by compressed hours working.

   ....

   ....

   ....

   .... [2]

   (c) Employees working in an office use computers for prolonged periods of time.

   Describe **three** items that an employee should be provided with to help reduce the health problems related to prolonged use of computers.

   1 ....

   ....

   2 ....

   ....

   3 ....

   ....

   [3]

2. June/2022/Paper_11/No.8

When using computers people can suffer from Repetitive Strain Injury (RSI).

(a) Describe the term RSI. Include in your answer the causes of RSI.

....

....

....

....

....

.... [3]

(b) Identify **three** methods of reducing the effects of RSI.

1 ....

....

2 ....

....

3 ....

....

[3]

June/2022/Paper_11/No.8

3. June/2022/Paper_12/No.10

The prolonged use of computers can cause several health problems particularly when sitting down and using monitors.

Discuss the strategies that you have developed to minimise health risks which only relate to sitting down and using a monitor.

....

....

....

....

....

....

....

....

....

....

....

....

....

....

.... [8]

4. June/2022/Paper_13/No.6(a_ b)

Eye strain is one of the health issues associated with using computers.

(a) Explain **three** causes of eye strain when using computers.

1 ....

....

2 ....

....

3 ....

....

[3]

(b) Identify **four** methods of reducing the effects of eye strain.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

5. Nov/2022/Paper_12/No.9(a, b)

Many organisations store data in the cloud.

(a) Explain what is meant by the ICT term cloud.

....

....

....

....

....

.... [3]

(b) Explain the issues of storing data in the cloud.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

6. Nov/2022/Paper_12/No.13

Computers are being used in offices.

Describe how the use of computers has affected the work of employees and their working patterns.

....

....

....

....

....

....

....

....

....

....

.... [6]

6. Nov/2022/Paper_12/No.13

7. Nov/2022/Paper_13/No.15(c)

(c) Tick (✓) the most appropriate working pattern to match the following statements.

	Compressed hours (✓)	Flexible hours (✓)	Job sharing (✓)	Part-time working (✓)
An employee works a full day but negotiates with the employer the start and end times				
An employee works the same number of hours as a full week but in fewer days				
An employee works for fewer hours than a full-time employee				

[3]

The systems life cycle – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.7(b_ c)

   (b) Identify the most appropriate method of implementation of the new online booking system in this scenario.

   .... [1]

   (c) Explain, giving reasons, why your answer to **part (b)** is the most appropriate method of implementation for this scenario.

   ....

   ....

   ....

   ....

   ....

   .... [3]

2. June/2022/Paper_11/No.11

A system can be analysed using different methods.

Discuss the advantages and disadvantages of analysing a system by interviewing staff rather than using questionnaires.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

2. June/2022/Paper_11/No.11

3. June/2022/Paper_12/No.12

Different methods can be used to analyse a system.

Discuss the benefits and drawbacks of analysing a system by observing staff rather than looking at the current systems documentation.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

4. June/2022/Paper_12/No.13

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 ....

....

....

....

2 ....

....

....

....

[4]

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

....

....

....

....

....

....

....

.... [4]

5. June/2022/Paper_13/No.5(a)

The manager of a cinema has purchased a new booking system. There are 26 rows in the cinema with 20 seats on a row. Each seat is identified by a unique ID. The seat ID consists of the row letter followed by the position of the seat on the row. An example of the seat on row F position 12 would be F12.

He is setting up a test plan to test the system.

(a) Write down **one** example of each of the following types of test data. The answers must be different in each case.

Normal ....

Abnormal ....

[2]

6. Nov/2022/Paper_11/No.4(a)

A teacher is setting up a database which she will use to record her student's exam marks.

(a) The teacher is planning to test the mark range using different types of test data. The range of marks that the teacher can award is 0 to 100.

    (i) Write down **one** example of extreme test data that the teacher can use to check the range.

       .... [1]

    (ii) Extreme test data is one type of test data. The teacher uses two other pieces of test data.

       Write down the type of test data for each of the examples.

       TEN ....

       55 ....

[2]

7.

Proofreading is often confused with visual verification.

Describe the differences between proofreading and visual verification.

....

....

....

.... [2]

8.

The restaurant owner is planning to upgrade the software used to book reservations. He has employed a systems analyst who is analysing the current system. The systems analyst can either send out questionnaires for staff to answer or observe staff working with the current system.

(b) Discuss the advantages and disadvantages of using questionnaires that staff answer rather than observing staff to gather information about the current system.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

Types and components of computer systems – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.1(a, c)

   A tablet computer consists of both hardware and software.

   (a) Define the term hardware.

   ....

   .... [1]

   (c) Write down **two** examples of system software.

   1 ....

   2 ....

   [2]

2. March/2022/Paper_12/No.8

   Describe the advantages and disadvantages of using a smartphone rather than a laptop computer to access the internet.

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   ....

   .... [6]

3. June/2022/Paper_11/No.9(c)

(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]

3. June/2022/Paper_11/No.9(c)

4. Nov/2022/Paper_11/No.2

Smartphones and smartwatches can be used in everyday life. A smartwatch is a wearable computer in the form of a wrist-watch.

(a) Apart from accessing the internet, give **three** other uses of a smartphone.

1 ....

....

2 ....

....

3 ....

....

[3]

(b) Give **two** advantages of using a smartwatch rather than a smartphone.

1 ....

....

2 ....

....

[2]

(c) Give **two** disadvantages of using a smartwatch rather than a smartphone.

1 ....

....

2 ....

....

[2]

5. Nov/2022/Paper_11/No.9

Use of smartphones to access the internet has increased by over 200% in the past five years.

Compare the use of smartphones to access the internet with the use of desktop computers to access the internet. Your answer must include similarities and differences.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

6. Nov/2022/Paper_12/No.2

Database, presentation, spreadsheet and word processing software are used by a medical centre.

Tick (✓) the most appropriate piece of software to carry out the tasks shown.

	database (✓)	presentation (✓)	spreadsheet (✓)	word processing (✓)
Producing a letter to send out to patients				
Creating graphs to show numbers of people attending the medical centre				
Creating queries from patients' details				
Creating an interactive display of services offered				

[4]

7. Nov/2022/Paper_12/No.3

Smartphones use a Graphical User Interface (GUI).

(a) Give **three** benefits of using a GUI.

1 ....

....

2 ....

....

3 ....

....

[3]

(b) Give **three** characteristics of a smartphone.

1 ....

....

2 ....

....

3 ....

....

[3]

Nov/2022/Paper_12/No.3

8. Nov/2022/Paper_12/No.12

A computer system uses a Graphical User Interface (GUI).

Write down **two** features of a GUI and for each give a reason why they are needed.

Feature 1 ....

Reason 1 ....

....

Feature 2 ....

Reason 2 ....

....

[4]

Nov/2022/Paper_12/No.12

Website authoring – 2022 ICT IGCSE 0417

1. June/2022/Paper_11/No.6

    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]

2. Nov/2022/Paper_11/No.13

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]

3. Nov/2022/Paper_13/No.12

The internet contains three web development layers. One layer is the content layer. This layer is used to enter the content of a web page structure.

(a) Name and describe the other **two** web development layers.

Layer ....

Description ....

....

Layer ....

Description ....

....

[4]

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

....

....

....

....

....

.... [3]