

ICT

INFORMATION AND COMMUNICATION TECHNOLOGY

GRADE 10



UNIT 1

Information and Communication Technology

Student Workbook



"The King of ICT"

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STUDENT DETAILS

Name:

School:

Institution:

Contact:

BEFORE WE START



What This Unit Is About

Read this page with your teacher

AT THE END OF THIS UNIT YOU WILL BE ABLE TO

- ☐ Say what data is and what information is.
- ☐ Explain how an information system works.
- ☐ Name the five qualities of good information.
- ☐ Explain what ICT means.
- ☐ Give examples of ICT in government, education, health, farming, business, transport and entertainment.
- ☐ Name the bad effects of ICT and use ICT in a responsible way.
- ☐ Tell the story of the computer, from the abacus to today.

THREE RULES FOR THE COMPUTER ROOM

- **Never** touch a power cable before the teacher says you may.
- **Always** ask the teacher before you visit a new website.
- **Never** share your password or your personal details online.

HOW TO USE THIS BOOK

Each chapter has three parts. First you **read** the chapter with your teacher. Then you **do** the activity. Last you **write** the exercises in this book.

Tick each box in the chapter when you can do it. Ask your teacher about anything you did not understand.

THE WORDS YOU WILL LEARN

Data	Information	System	Input / Output
ICT	e-Government	LMS	WBT
Telemedicine	RFID	CCTV	e-Banking
Video conferencing	Abacus	Transistor	Integrated circuit
Microprocessor	Copyright	e-waste	

"Data is only numbers until you give it a meaning. Then it becomes power."

- THE KING OF ICT



CHAPTER 1

Data, Information and Systems



1.1 Data and information

Data are numbers, words, pictures and symbols. On their own, they have **no meaning**. When we arrange and **process** data, we get **information**. We use information to **make decisions**.

Example. These are the term test marks of three students. The marks are **data**. The total, the average and the rank are **information**.

Name	Lang.	Maths	Sci.	Hist.	Health	Eng.	Total	Average	Rank
Ravi	78	90	79	67	76	78	468	78.0	2
Saman	76	78	67	80	79	76	456	76.0	3
Rizwan	87	70	80	75	80	80	472	78.7	1

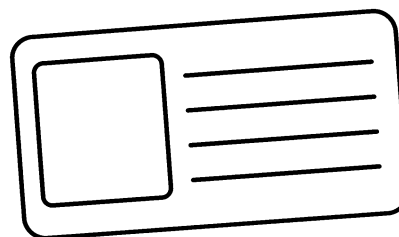
Data: the names and the marks. Information: the total, the average and the rank. The teacher uses this information to decide who needs help.

i EXAMPLE - THE NATIONAL IDENTITY CARD

An NIC number looks like just a number. But when we **process** it, we get information.

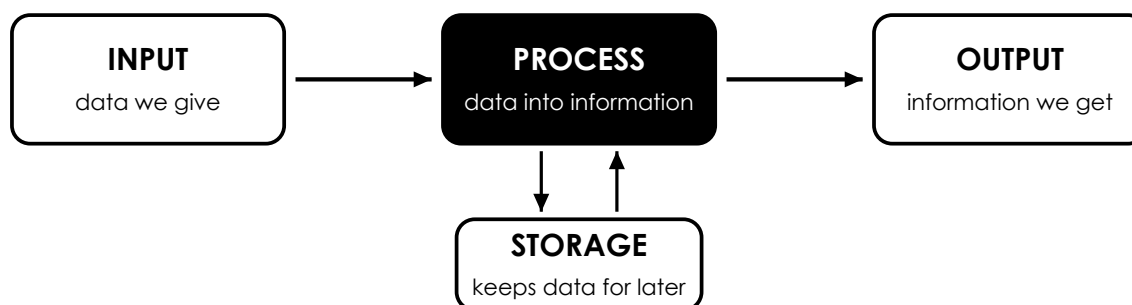
The first two digits give the year of birth.

The third digit: 0 to 4 means male, 5 to 9 means female.

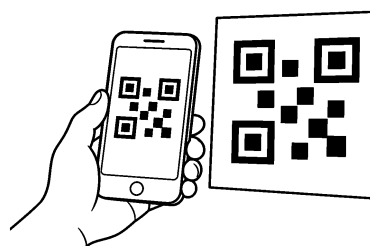
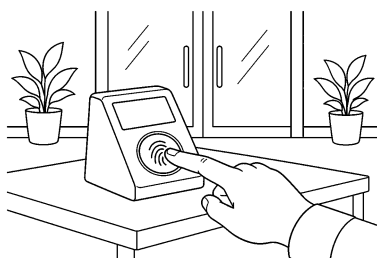
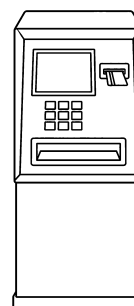


1.2 Information systems

A **system** is a group of parts that work together to do a job. Giving data is called **input**. Changing data into information is called **processing**. The result is called **output**. Data can also be kept for later - this is **storage**. A computer does all of this, so we call it an **information system**.



System	Input (data)	Output (information)
ATM machine	ATM card and PIN number	Account balance or cash
Fingerprint reader	The fingerprint of a worker	Time of arrival and time of leaving
QR code	The QR code, scanned with a phone	Details about the item



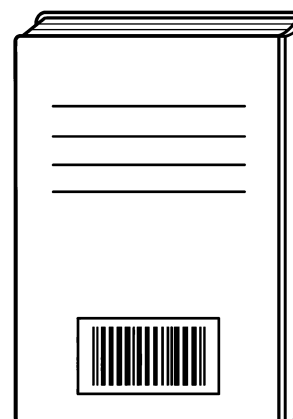
1.3 Good information

Not all information is good for making decisions. Good information has these five **qualities**:

Quality	It means	Example
Relevant	Only the information you need	A job form needs only your best result, not every mark since Grade 1.
Complete	Nothing important is missing	Asking only a few people is not enough to find the income of a country.
Accurate	The information is correct	Wrong information about a patient can harm the patient.
Timely	The information is up to date	Today's weather report cannot tell you tomorrow's weather.
Cost effective	It does not cost more than it is worth	Spending more money than you earn from the information is a loss.

DO IT - ACTIVITY 1

1. Look at something you bought from a shop. Find the **barcode**. The cashier scans it with a barcode reader.
2. Look at the back of a book. Find the **ISBN** number. Ask your librarian what information the ISBN gives.
3. Write five more examples of data and information in your exercise book.



A Data or information?

10 marks

Write D for data and I for information.

1. ☐ 78
2. ☐ Ravi's average mark is 78.
3. ☐ Colombo
4. ☐ Rizwan came first in the class.
5. ☐ Blue
6. ☐ It will rain in Kandy tomorrow afternoon.
7. ☐ 12, 45, 67, 23
8. ☐ Our school has 250 more students than last year.
9. ☐ Kasun
10. ☐ The shop made a profit of Rs. 50,000 this month.

B Fill in the blanks

8 marks

Use the words in the box.

WORD BANK

data	information	decisions	system
input	output	processing	storage

1. Numbers, words and pictures that have no meaning on their own are called
2. When we process data, we get
3. We use information to make
4. A is a group of parts that work together to do a job.
5. The data we give to a computer is called
6. The result we get from the computer is called
7. Changing data into information is called
8. Keeping data safe to use later is called

C Complete the systems

8 marks

Write the input and the output of each system.

System	Input (data)	Process	Output (information)
ATM machine		The bank computer checks the account.	



System	Input (data)	Process	Output (information)
Fingerprint reader		The computer finds the worker.	
QR code		The phone opens the website.	
Term test report		The computer adds and divides.	

D Which quality is missing?

5 marks

Use the words in the box.

QUALITIES

Relevant Complete Accurate Timely Cost effective

- The weather report you are reading is from last week.
- A doctor gets the wrong blood group of a patient.
- To find the average income of Sri Lanka, only 10 people were asked.
- A job form asks for all your marks from Grade 1 to Grade 11, but it only needs your best result.
- A shop spends Rs. 100,000 to find information that earns it only Rs. 20,000.

E Turn data into information

10 marks

Work out the total, the average and the rank.

Name	Maths	Science	English	Total	Average	Rank
Amal	60	70	80			
Nadee	90	80	85			
Kasun	50	65	60			

Which student should the teacher help first? Why?



F Read the NIC number**8 marks***Write the year of birth and male or female.*

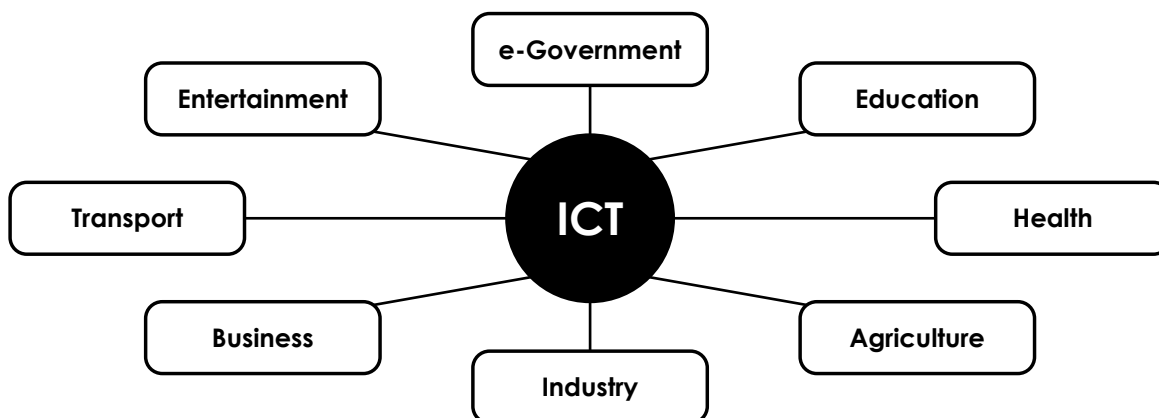
The NIC number begins with	Year of birth	Male or female
92 1 V		
88 6 V		
79 2 V		
95 8 V		

CHAPTER 2

ICT in Government, Education and Health**1.4 What is ICT?**

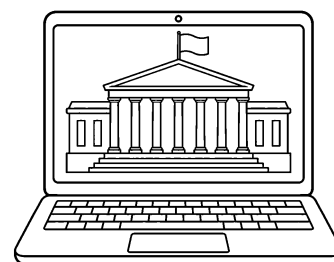
Sharing information between people, or between systems, is called **communication**. Long ago this was slow and hard. Today technology makes it easy. Using technology to change data into information and to share it is called **Information and Communication Technology (ICT)**.

Today almost every person and every place uses ICT:

**1.5 e-Government**

When a government uses ICT to communicate with its **citizens**, companies, organisations and other governments, it is called **e-Government**.

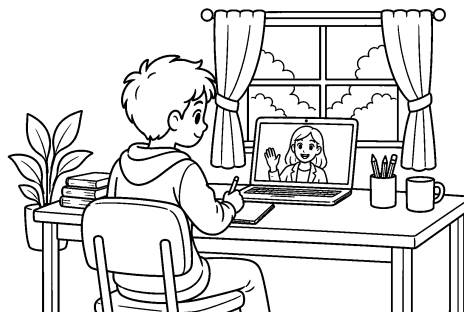
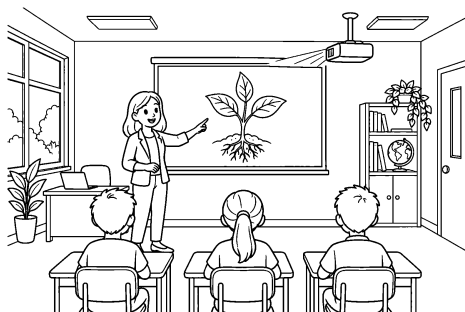
In Sri Lanka we can use the official government web portal **www.gov.lk**, the Government Information Centre and **ICTA** (Information and Communication Technology Agency). Now it is easy to get government information and services.



Short name	It means	Example
G2C	Government to citizen	You renew a licence on www.gov.lk
G2B	Government to business	A company registers or pays a tax
G2E	Government to employee	An officer checks a salary or leave
G2G	Government to government	One department sends data to another

1.6 ICT in education

Where	How ICT helps
In the classroom	Presentations, videos of experiments, making pictures and videos, school magazines, edutainment (learning with educational games), finding information on the Internet.
Anywhere, any time	Learn at home with educational websites such as e-thaksalawa.moe.gov.lk. Learning from a teacher over the Internet is called WBT (Web Based Training). It saves time and money.
For the teacher	Pictures, animations and videos explain hard lessons. Presentations make lessons interesting.
LMS	A Learning Management System is a school website. You need the Internet and you must register. Students, the school and parents all use it.
Distance learning	Study at a university in any country, from home, at a low cost. Flexible time, a digital library, online quizzes, and contact with a teacher online.

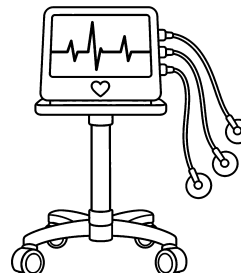
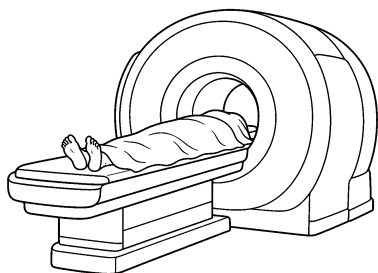


1.7 ICT in health

Modern machines help doctors to find diseases early and give the right treatment.

Machine	What it does
CAT machine	Makes 3D pictures of parts of the body
MRI machine	Uses strong magnets and radio waves to make pictures of the organs
ECG machine	Records the electrical signals of the heart
EEG machine	Records the activity of the brain
Cardiac screening machine	Shows the movements inside the heart
Blood sugar testing machine	Finds the glucose level in the blood

Machine	What it does
Blood pressure wrist band	Measures blood pressure at rest and during exercise



i TELEMEDICINE

Using ICT to examine or treat a patient who is **far from the hospital** is called **telemedicine**. The patient is connected to specialist doctors through a network.

Emergency telemedicine - help for a patient in a village, a plane or a ship.

Home health - the patient is watched at home.

Consultation - a specialist gives advice from far away.

Telesurgery - a surgery is done with a specialist in another town or country.

Teletraining - hospital staff are trained from far away.



> DO IT - ACTIVITY 2

1. Visit **www.gov.lk** with your teacher. Write five services that you, as a citizen of Sri Lanka, can get from it.
2. Visit an educational website. Write three ways it helps you learn.

A Fill in the blanks

8 marks

Use the words in the box.

WORD BANK

communication

ICT

e-Government

edutainment

WBT

LMS

distance learning

telemedicine

1. Sharing information between people or systems is called
2. Using technology to change data into information and to share it is called
3. When a government uses ICT to work with its citizens, it is called



4. Learning by playing educational games is called
5. Learning from a teacher over the Internet is called
6. A school website where students upload their homework is an
7. Studying at a university in another country from home is called online
.....
8. Treating a patient who is far from the hospital using ICT is called

B Match the machine to its job

7 marks

Write the correct letter in the box.

A - The machine		B - What it does
1. CAT machine		A. Records the activity of the brain
2. MRI machine		B. Makes 3D pictures of parts of the body
3. ECG machine		C. Finds the glucose level in the blood
4. EEG machine		D. Records the electrical signals of the heart
5. Cardiac screening machine		E. Measures blood pressure at rest and during exercise
6. Blood sugar testing machine		F. Uses strong magnets and radio waves to make pictures of the organs
7. Blood pressure wrist band		G. Shows the movements inside the heart

C True or false

8 marks

Write T or F in the box.

1. e-Government helps citizens to get government services easily.
2. WBT means Web Based Training.
3. You do not need the Internet to use an LMS.
4. Parents can check their child's progress using an LMS.
5. An MRI machine uses X-rays to make pictures.
6. An ECG machine records the activity of the brain.
7. In telesurgery, the specialist doctor can be in another country.
8. Online distance learning costs much more than studying abroad.



D Who uses the LMS?

6 marks

Tick the correct column for each service.

LMS service	Student	School	Parent
Upload the homework done at home	☐	☐	☐
Add good learning materials	☐	☐	☐
Check the progress of a child from home	☐	☐	☐
Publish the test results	☐	☐	☐
Use the lessons at any time, from anywhere	☐	☐	☐
Keep the records of students and teachers up to date	☐	☐	☐

E Answer these

6 marks

Write full sentences.

1. What is e-Government? Give one example from Sri Lanka.

2. What is telemedicine? Write two types of telemedicine.

3. Write two features of online distance learning.

CHAPTER 3

ICT at Work, on the Road and at Play



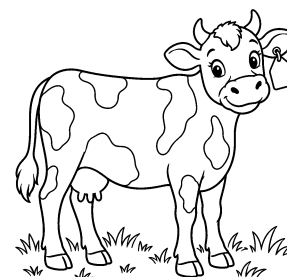
1.8 ICT in agriculture and fishing

Automatic machines make the farmer's work easy and help to grow better crops.

Machine	What it does
Weather devices	Measure the weather, rain and wind, to decide when to plant and harvest.
Automatic insect control	Shows where the insects are and how many there are.



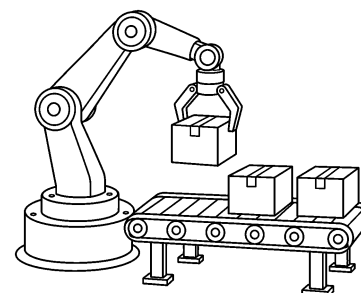
Machine	What it does
Field sensors	Measure how fertile and how wet the soil is.
Drip irrigation	Gives each plant the right amount of water. No water is wasted.
Weed remover and robots	Remove weeds, plant seedlings and harvest crops in big fields.
Greenhouse	ICT controls the light, water and air inside, so crops are safe from sun, rain and pests.
RFID tags	Radio Frequency Identification. Find and count farm animals.
Automatic milking	Milks the cows and checks their health and the milk.
Sensors in the sea	Send information about where the fish are to the computers on fishing boats.



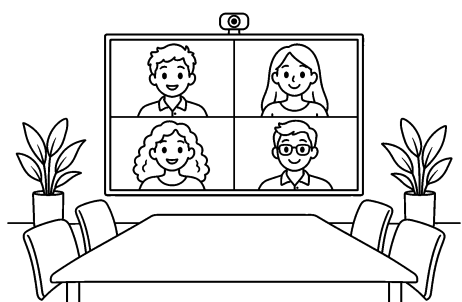
1.9 ICT in industry and business

Long ago, factories needed many workers. Today **robots** do much of the work. Robots:

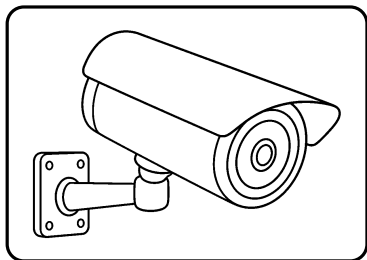
- work 24 hours a day
- are efficient
- are hygienic (clean)
- never get tired
- are accurate



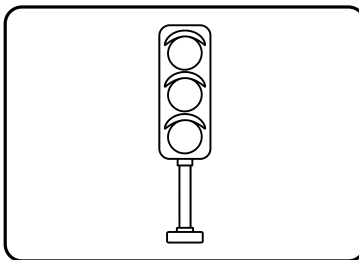
Business use	How it helps
Video conferencing	People in different places meet face to face on screens. No travel, so it saves time and money.
Fingerprint scanner and card reader	Record when workers come in and go out, for salaries and leave.
e-Banking	Take cash from an ATM any time. Send money between banks. Pay bills and check your balance with a phone.
Online shopping	Buy from shops all over the world, 24 hours a day. Pay by card. The goods come to your home.



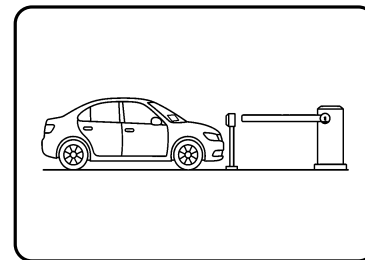
1.10 ICT in transport and entertainment



CCTV cameras watch the traffic, accidents and crime.



Traffic lights control vehicles and people at junctions.



A **parking placard** lets a sensor open the gate for a registered vehicle.

For **entertainment** we use ICT to listen to music, watch movies and TV, play video games, read e-books, take digital photos and keep in touch through social media. Hidden computers are also in cars, bus ticket machines and washing machines.

1.11 The bad effects of ICT

ICT is a good friend, but using it in the wrong way can harm us and our society.

- **Addiction** - sore eyes, back pain, headaches, missing school
- Viruses from careless use of the Internet
- Sharing changed photos and videos of people
- Isolation - being alone too much
- **e-waste** - old computers and phones become electronic rubbish
- Unsuitable friendships on social media
- Harm from improper websites
- Obesity from too little exercise
- Breaking copyright



So we must use ICT in a responsible way. We can make less e-waste too: look after your devices, recycle the ones that cannot be repaired, and do not buy what you do not need.

> DO IT - ACTIVITY 3

Find three places in your town where ICT is used in business or in a factory. Write a short report about one of them.

A Name the ICT device

8 marks

Write the name under each picture. Use the words in the box.

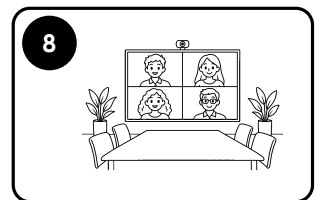
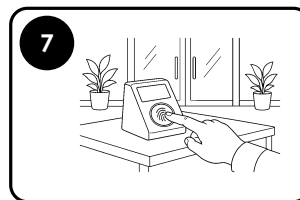
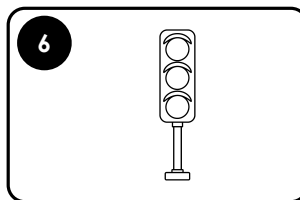
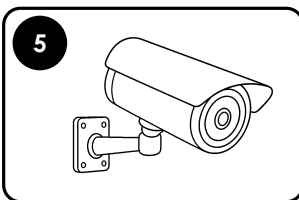
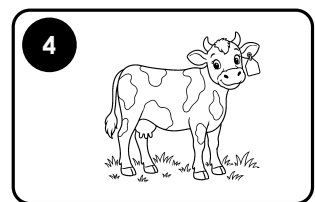
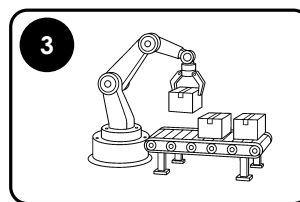
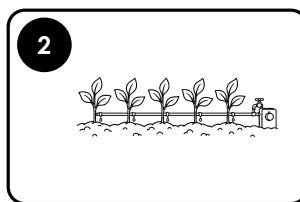
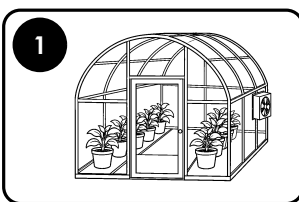
WORD BANK

Greenhouse
CCTV camera

Drip irrigation
Traffic light

Robot
Fingerprint scanner

RFID tag
Video conferencing



B Which field?

10 marks

Tick the field where each one is used.

Device or service	Agriculture	Health	Business	Transport
Drip irrigation	☐	☐	☐	☐
Parking identification placard	☐	☐	☐	☐
ECG machine	☐	☐	☐	☐
Video conferencing	☐	☐	☐	☐
Automatic weed remover	☐	☐	☐	☐
Traffic light control system	☐	☐	☐	☐
e-Banking	☐	☐	☐	☐
Telesurgery	☐	☐	☐	☐
RFID tags for farm animals	☐	☐	☐	☐
Online shopping	☐	☐	☐	☐

C Good use or bad effect?

10 marks

Write G for a good use and B for a bad effect.

1. ☐ Checking the weather with ICT before planting crops
2. ☐ Playing online games all night and missing school
3. ☐ Paying the electricity bill with a mobile phone
4. ☐ Making friends with strangers on social media
5. ☐ Watching a lesson video when you were sick at home
6. ☐ Sharing a changed photo of a classmate to make fun of them
7. ☐ Copying a song and selling it without permission
8. ☐ Talking to your uncle abroad on a video call
9. ☐ Sitting at the computer all day with no exercise
10. ☐ A robot that works 24 hours a day in a factory

D Answer these

7 marks

Write full sentences.

1. Write three advantages of online shopping. (3 marks)

2. Write two reasons why factories use robots. (2 marks)

3. Write two ways to use ICT in a responsible way. (2 marks)

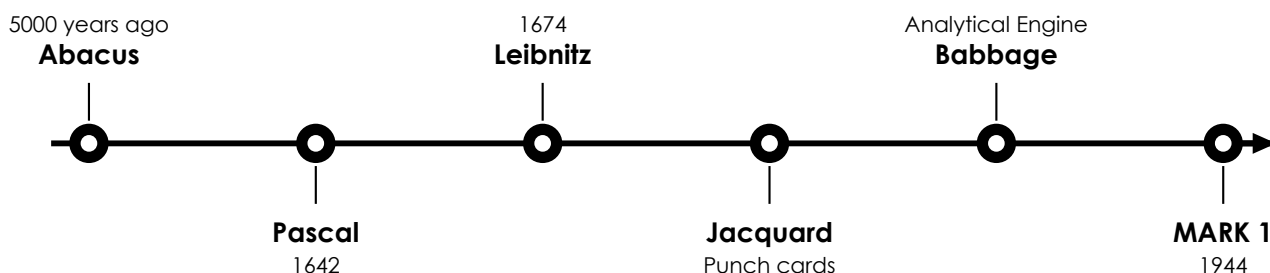
CHAPTER 4

The History of the Computer

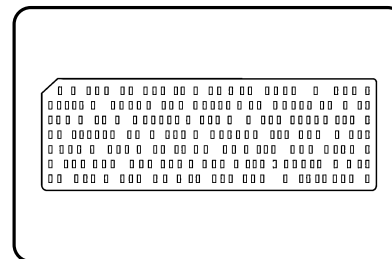
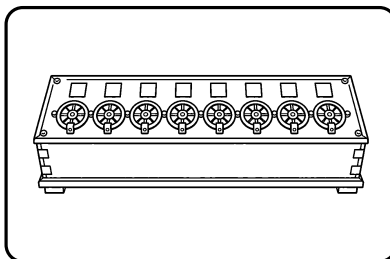
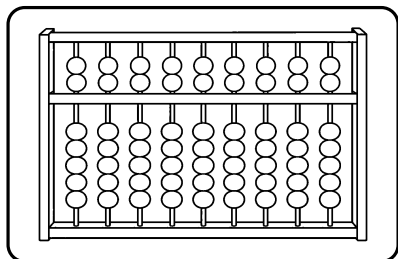


1.12 From the abacus to MARK 1

The computer was born when people tried to make a machine to **add numbers**. Here is the story:

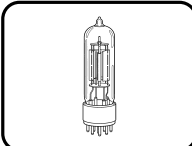
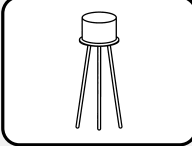
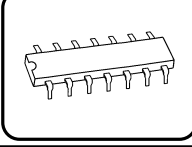
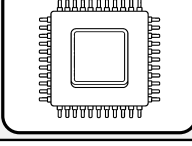


When	Who	What happened
About 5000 years ago	-	The abacus was made to add numbers.
1642	Blaise Pascal	Made the Adding Machine , the first mathematical machine in the world.
1674	Gottfried Wilhelm von Leibnitz	Improved Pascal's machine. Now it could also multiply and divide .
-	Joseph Jacquard	A French scientist. Made a loom that used punch cards .
-	Charles Babbage	Started the Analytical Engine with punch cards. It used input, process, output and storage. Known as the Father of Computing .
-	Ada Augusta Lovelace	Wrote programs for the Analytical Engine. Known as the first programmer .
1944	Howard Aiken	With IBM, built the Automatic Sequence Controlled Calculator at Harvard University. It was named MARK 1 .



1.13 The five generations of computers

The early machines worked with moving parts. When computers became electronic, we put them into **generations**:

	Generation	Main hardware	Features and examples
	First 1940 - 1956	Vacuum tubes Machine language, assembly language	Very large, a lot of heat, slow, uses a lot of electricity, expensive <i>ENIAC, EDVAC, UNIVAC, IBM 701</i>
	Second 1956 - 1963	Transistors High-level languages, assembly language	Smaller, less heat, less power, faster than the first, still expensive <i>IBM 7030, CDC 1604, Honeywell 400</i>
	Third 1964 - 1975	Integrated circuits (IC) The first operating systems	Smaller again, less heat, faster, keyboard and mouse <i>IBM 360, PDP-8, PDP-11, CDC 6600</i>
	Fourth 1975 - 1989	LSI and VLSI chips, the microprocessor Operating systems with a GUI, UNIX	Very small, portable, low power, can be upgraded <i>IBM PC, Apple II</i>
5	Fifth 1989 - today	ULSI chips Internet, multimedia, voice and handwriting recognition	Portable, cheaper, easy to use, reliable, efficient <i>Pentium PCs, notebooks, SUN workstations</i>

"The computer grew up one idea at a time. So will you."

- THE KING OF ICT

A Put the story in order

6 marks

Number the events from 1 (the oldest) to 6.

- Howard Aiken builds MARK 1.
- People use the abacus to add numbers.
- Charles Babbage starts to build the Analytical Engine.
- Blaise Pascal makes the Adding Machine.
- Joseph Jacquard makes a loom that uses punch cards.
- Leibnitz improves Pascal's machine so it can multiply and divide.

B Who am I?

6 marks

Write the correct letter in the box.

The clue		The person
1. I made the first mathematical machine, the Adding Machine, in 1642.		A. Charles Babbage
2. In 1674 I made the Adding Machine able to multiply and divide.		B. Howard Aiken
3. I made a loom that used punch cards.		C. Blaise Pascal
4. People call me the Father of Computing.		D. Ada Augusta Lovelace
5. People call me the first programmer.		E. Joseph Jacquard
6. I built MARK 1 at Harvard University in 1944.		F. Gottfried Wilhelm von Leibnitz

C Complete the generations

5 marks

Write the main hardware. Use the words in the box.

HARDWARE

Vacuum tubes

Transistors

Integrated
circuits

Microprocessor

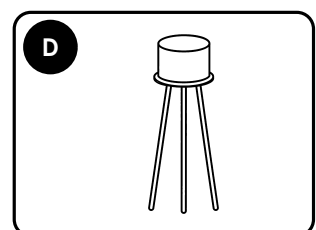
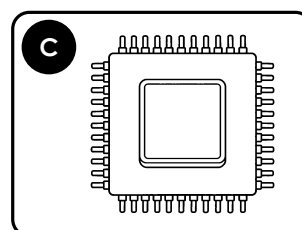
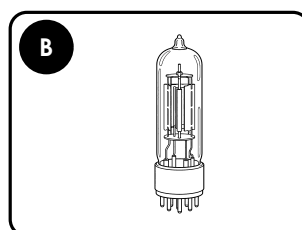
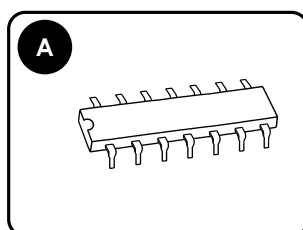
ULSI chips

Generation	Years	Main hardware
First	1940 - 1956	
Second	1956 - 1963	
Third	1964 - 1975	
Fourth	1975 - 1989	
Fifth	1989 - today	

D Which generation?

4 marks

Write the generation under each picture.



E Choose the correct answer**5 marks***Underline your answer.*

1. The computer was first made as a machine to
 - (a) draw pictures
 - (b) add numbers
 - (c) play games
 - (d) send messages
2. Who is called the Father of Computing?
 - (a) Blaise Pascal
 - (b) Howard Aiken
 - (c) Charles Babbage
 - (d) Joseph Jacquard
3. Which generation of computers used transistors?
 - (a) First
 - (b) Second
 - (c) Third
 - (d) Fifth
4. Operating systems were first used in the
 - (a) first generation
 - (b) second generation
 - (c) third generation
 - (d) fourth generation
5. Which is true about first generation computers?
 - (a) They were very small
 - (b) They were portable
 - (c) They used little power
 - (d) They made a lot of heat

F Answer these**6 marks***Write full sentences.*

1. Why do we call Charles Babbage the Father of Computing? (2 marks)

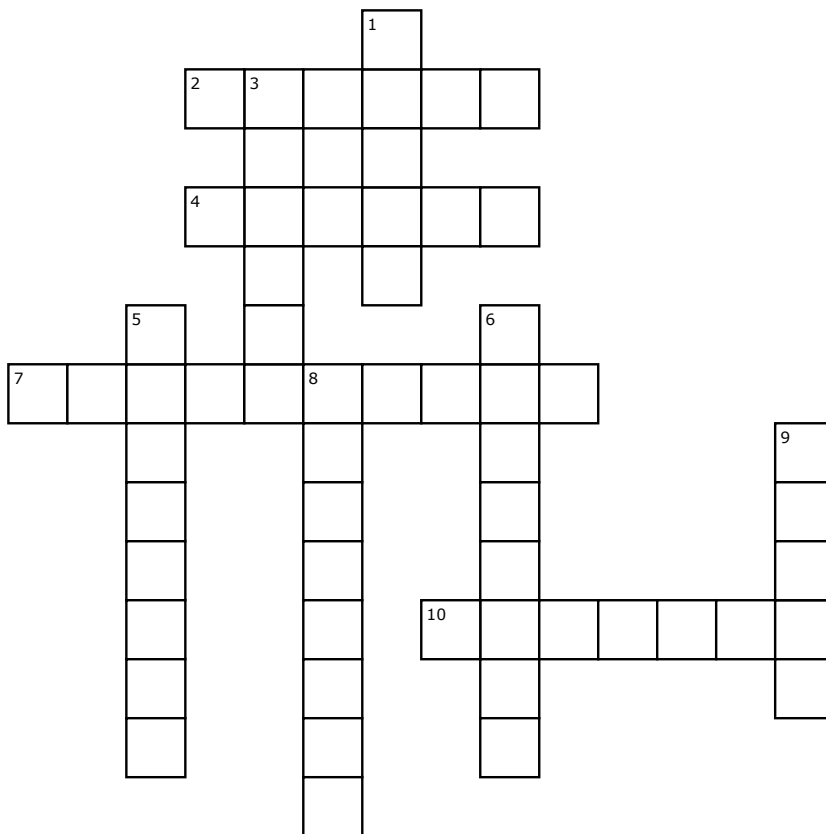
2. Name two machines that used punch cards. (2 marks)

3. Write two ways the second generation was better than the first generation. (2 marks)

G Crossword

10 marks

Write one letter in each box.



ACROSS

2. _____ tubes were used in the first generation
4. Made the Adding Machine in 1642
7. The main part of second generation computers
10. The Father of Computing

DOWN

1. _____ cards were used for input and storage
3. It was used to add numbers about 5000 years ago
5. Made a loom that used punch cards
6. Ada _____, the first programmer
8. It connects computers all over the world today
9. Howard _____ built MARK 1

★ TICK WHEN YOU CAN DO IT

- ☐ I can explain the difference between data and information.
- ☐ I can draw an information system.
- ☐ I can name the five qualities of good information.
- ☐ I can give uses of ICT in six different fields.
- ☐ I can name the bad effects of ICT.
- ☐ I can tell the story of the computer and its five generations.



REVISION

Unit 1 in One Page

Read this the night before the test



Topic	The key facts
Data	Numbers, words, pictures and symbols with no meaning on their own.
Information	Processed data. We use it to make decisions.
System	Parts that work together. Input → Process → Output, with Storage.
Good information	Relevant · complete · accurate · timely · cost effective.
ICT	Technology used to change data into information and to share it.
e-Government	www.gov.lk · Government Information Centre · ICTA.
Education	Classroom · edutainment · WBT · LMS · online distance learning.
Health	CAT · MRI · ECG · EEG · cardiac screening · blood sugar · blood pressure · telemedicine.
Agriculture	Weather devices · sensors · drip irrigation · robots · greenhouse · RFID · automatic milking.
Business	Robots · video conferencing · fingerprint scanner · e-Banking · online shopping.
Transport	CCTV · traffic lights · parking placards.
Bad effects	Addiction · bad friendships · viruses · changed photos · obesity · isolation · copyright.
The story	Abacus → Pascal 1642 → Leibnitz 1674 → Jacquard → Babbage (Father of Computing) → Lovelace (first programmer) → MARK 1, 1944.
Generations	1 vacuum tubes · 2 transistors · 3 IC · 4 microprocessor (VLSI) · 5 ULSI.

"Practise today. Lead tomorrow."

- THE KING OF ICT



END OF UNIT

Unit 1 Test

Time: 45 minutes

Total: 40 marks



Name _____

Class _____

Marks

1 Choose the correct answer

8 marks

Underline your answer.

1. Numbers and words that have no meaning on their own are called
 - (a) information
 - (b) data
 - (c) output
 - (d) systems
2. Which one is information?
 - (a) 45
 - (b) Kandy
 - (c) The class average is 67
 - (d) Green
3. Giving data to a computer is called
 - (a) input
 - (b) output
 - (c) storage
 - (d) processing
4. Last week's weather report is not useful today because it is not
 - (a) relevant
 - (b) complete
 - (c) timely
 - (d) cost effective
5. Using ICT to examine a patient who is far from the hospital is
 - (a) e-Government
 - (b) telemedicine
 - (c) e-Banking
 - (d) video conferencing
6. On a farm, RFID tags are used to
 - (a) water the plants
 - (b) remove the weeds
 - (c) find and count animals
 - (d) milk the cows
7. Who is called the first programmer?
 - (a) Ada Augusta Lovelace
 - (b) Charles Babbage
 - (c) Blaise Pascal
 - (d) Howard Aiken
8. Third generation computers used
 - (a) vacuum tubes
 - (b) transistors
 - (c) integrated circuits
 - (d) ULSI chips

2 Fill in the blanks

8 marks

One word in each blank.

1. The result we get after processing data is called
2. A group of parts that work together to do a job is called a
3. Information must be correct. This quality is called
4. A school website for lessons, homework and results is called an
5. The machine records the electrical signals of the heart.
6. Buying goods from home using the Internet is called online

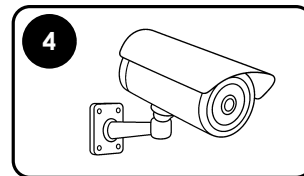
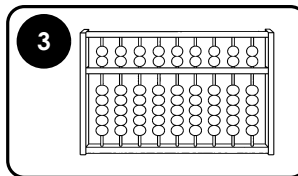
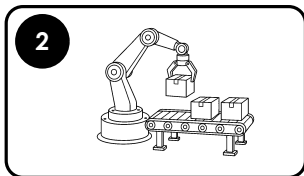
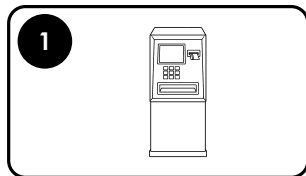


7. The was used to add numbers about 5000 years ago.
8. First generation computers used tubes.

3 Name the picture

8 marks

Write the name under each picture.



4 Answer these

16 marks

Write in the space given.

1. Write the difference between data and information. Give one example of each. (4 marks)

2. Name the three main parts of an information system. Say what each part does. (3 marks)

3. Write two uses of ICT in (a) education and (b) agriculture. (4 marks)

4. Write three demerits of ICT. (3 marks)

5. Write two differences between first generation and fourth generation computers. (2 marks)

WORD POWER

Unit 1 Word List

Nineteen words you must know



Word	What it means
Data	Numbers, words, pictures or symbols that have no meaning on their own.
Information	Processed data. It has a meaning and helps us make decisions.
System	A group of parts that work together to do a job.
Input / Output	The data we give to a system / the information we get from it.
ICT	Using technology to change data into information and to share it.
e-Government	A government using ICT to work with its citizens and others.
LMS	Learning Management System. A website for lessons, homework and results.
WBT	Web Based Training. Learning from a teacher over the Internet.
Telemedicine	Using ICT to examine or treat a patient who is far away.
RFID	Radio Frequency Identification. A tag used to find and count animals or things.
CCTV	Closed Circuit TV. Cameras used for security and to watch traffic.
e-Banking	Using ATMs, the Internet and phones to do bank work.
Video conferencing	A meeting where people in different places see and talk to each other on screens.
Abacus	A frame with beads, used to add numbers about 5000 years ago.
Transistor	A small part that took the place of vacuum tubes in second generation computers.
Integrated circuit	A small chip with many parts on it. Used from the third generation.
Microprocessor	One chip that does all the processing. Used from the fourth generation.
Copyright	The right of a person to own their work. Copying it without permission is wrong.
e-waste	Old computers, phones and other electronic things thrown away as rubbish.

"Every expert was once a beginner who refused to give up."

- THE KING OF ICT



PAST PAPERS



Questions You Can Answer Now

Real O/L questions, easy ones first

HOW TO USE THESE

Every question here comes from a real G.C.E. O/L paper. You can answer all of them with what you learned in this unit. The year of the paper is beside each question. They get harder as you go down. Underline your answer.

- The three main functions of an information system are (2020 O/L)
 - input, process and output
 - code, compile and execute
 - design, develop and test
 - select, copy and paste
- Which of the following is **not** essential for an officer in Sri Lanka to join a video conference involving officers in USA and Japan? (2022 O/L)
 - A computer or an equivalent device with a camera, microphone and a speaker
 - An internet connection
 - Relevant video conferencing software
 - USB drive
- Krishna accessed the official web portal of the government of Sri Lanka (<http://www.gov.lk>) to renew her vehicle revenue licence online. Which of the following services was obtained by her? (2021 O/L)
 - G2B
 - G2C
 - G2E
 - G2G
- Which of the following could arise due to the usage of ICT?
A - e-waste problems
B - security threats
C - health hazards (2021 O/L)
 - A and B only
 - A and C only
 - B and C only
 - All A, B and C
- Which of the following will help to reduce the e-waste problem?
A - people protecting and maintaining their electronic items
B - finding new ways of recycling unusable electronic items
C - avoiding buying unnecessary electronic items (2024 O/L)
 - A and B only
 - A and C only
 - B and C only
 - All A, B and C
- Kamalasiri accessed the official web portal of government of Sri Lanka (<http://www.gov.lk>) to get details about the government web directory. Which of the following service was obtained by Kamalasiri from the Sri Lanka government web portal? (2020 O/L)
 - G2B
 - G2C
 - G2E
 - G2G



7. Which of the following is an example for a data processing task of a user? (2021 O/L)
- (a) Installing word processing software in a personal computer
 - (b) Formatting the hard disk in a personal computer
 - (c) Reading an online newspaper using a web browser
 - (d) Calculating the average marks obtained by a student using a spreadsheet software
8. Which of the following statements are correct regarding the generations of computers?
- A - Transistors were introduced in the first generation computers.
B - High-level programming languages were used in the second and third generation computers.
C - Operating systems with graphical user interfaces (GUI) have been used in fourth generation computers. (2020 O/L)
- (a) A and B only
 - (b) A and C only
 - (c) B and C only
 - (d) All A, B and C
9. You have been assigned to design a web page to be used by the out-patients to reserve times to meet doctors at a clinic of a government hospital. Which of the following is **not** essential to be included on that page? (2023 O/L)
- (a) A video showing the doctors treating the patients in the clinic
 - (b) Facility to view times available for reservation on a selected date
 - (c) Facility to enter patient's name, NIC number and phone number to complete a reservation
 - (d) Information on dates and times the clinic is open and location of the clinic

 IN THE PAPER, REMEMBER

- ☐ Read the question twice. Look for the word **not**.
- ☐ Cross out the answers you know are wrong, then choose.
- ☐ A question with A, B and C: test each one on its own.
- ☐ Answer every question. A blank never earns a mark.