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Role of ICT

The modern society is greatly driven by Information and Communications Technology. ICT stands for Information and Communication Technology. It is a broad term that includes a wide range of technologies and tools used for handling, processing, storing, and communicating information. All communication devices, cell phones, radio, television, and computers along with satellite systems, are ICT tools.

It is a combination of wired and wireless networking tools that enables receiving and transmitting information and communicating through varied mediums.

Key Components of ICT

The following are the key components of ICT:

Computers   Desktops, Personal computers, laptops, tablets, and smartphones help in processing and storing data.

Software   Software applications like operating systems, OpenOffice applications (Writer, Calc, Impress, Base), multimedia tools, web browsers, and specialised applications perform specific tasks and help run ICT devices.

Internet   The Internet is a global network that connects computers and servers. It allows users to get information, communicate, and share data across the world.

Telecommunication   Communication technologies like telephones (landlines and mobiles), messaging, emails, video conferencing, and social media platforms are part of ICT.

Networking   Computer networks, both wired and wireless, simplify the exchange of information between devices and across the internet. Wired (e.g., Ethernet) or wireless (e.g., Wi-Fi) networking enables the creation of local area networks (LANs) within homes or businesses and a wide area networks (WANs) that connect computers across larger geographical areas.

Data Storage   Hard drives, solid-state drives (pen drives, SD cards), cloud storage (Google drive, iCloud), and external storage devices help ICT in storing data.

Think and Tell

When was the last time you saw or used a landline phone to make a call?

⚠ Error Alert!

The Cloud is Actually in the Sky! Cloud, literally means the sky, but in computer language, the cloud refers to remote servers and data centres located all around the world.

Information Security It involves measures and protocols needed for protecting the information and ensuring the confidentiality, integrity, and availability of data and information. It helps prevent data breaches, unauthorised access, and cyberattacks.

Multimedia ICT allows integration of text, images, audio, video, and interactive elements, contributing to richer content experiences.

Role of ICT

ICT tools have become an integral part of our lives and have a huge impact on the way we live, work, and interact with each other.

Importance of ICT in Personal Life

ICT has deeply impacted our personal lives. It has made possible the convenience, efficiency, connectivity, and accessibility of information and resources at every doorstep. It has become part of our lives at varied levels.

Purpose	Tools
Connecting with people	Smartphones, Messaging Apps, Social Media Platforms.
Entertainment	Television, Radio, Tablets, Computer Applications, and Web Browsers for watching movies, listening to music and news.
Learning and information	Internet enables us to watch educational videos, to find answers to questions, learn new things online.
Online Shopping	Applications that allow people to shop easily from the comfort of their homes.
Organisation	Tools like note-taking and digital calendars enhance the productivity of the people.
Money management	Online banking apps have made sending and receiving of money secure and convenient. It can be used for paying bills.
Making friends	Social media platforms have helped people connect with those who share common interests and make new friends.
Healthy living	Many health and fitness-related apps have allowed people to keep track of their daily steps and oxygen levels.
Travel	ICT has enabled people to travel across the globe by easy booking of train/bus/airplane tickets and hotels.

Importance of ICT at Workplace

ICT plays a very significant role in our workplace and has been contributing immensely to the economy through its seamless integration of varied sectors like education, business, communication, entertainment, agriculture, and research. At the workplace, it contributes to improved efficiency through different computer software and applications. These enable keeping important data safe and organised; collaborating with others on projects; training and learning skills needed for performing the job effectively; and presenting data and information using multimedia elements.

Example: In the education sector, the integration of ICT tools has enhanced the learning experiences through the use of videos, audios, images, and online quizzes while making learning more interactive. It provides a wide range of content for the students and teachers to learn from. They enable teachers to record students' data and map their learning journey.

Sectors	Use of ICT
Healthcare	It helps in maintaining electronic health records, telemedicine, testing, and consultancy for patients living far away.
Banking and finance	It has enabled online banking, making payments through mobile apps, and managing finances efficiently.
Agriculture	It helps in weather forecasting and enables farmers to do research and training in the field of agriculture for better farming practices.
Manufacturing and industry	ICT can help automate the production process and make use of the latest technologies and machinery for mass production and manufacturing.
Business	Tools like note-taking and digital calendars enhance the productivity of the people.
Advertising and marketing	It enables marketing and advertising for products and services on online platforms through social media campaigns and analytics for advertising agencies.
Fashion and retail	It has helped in the online selling of goods and services to customers through applications, allowing virtual try-ons, and supply chain management for the fashion industry.

We are highly dependent on these tools and technology for our day-to-day life and for the efficient and effective functioning of our work. The constant development and integration of these technologies have transformed the way we live, work, learn, and interact, thereby improving our quality of life.

ICT Tools

ICT tools like smartphones, tablets, radio, televisions, laptops, and computers are part and parcel of modern society. The accessibility of these tools has made our daily chores easier and improved our quality of life.

Smartphones Mobile phones are portable communication devices that allow people to make and receive calls and send and receive messages. On the other hand, smartphones are advanced mobile phones. They allow one to do things one normally does on a computer. It has a touchscreen that permits users to browse the internet, take pictures, play games, and use multiple apps with touch. It has many helpful features like note-taking, voice assistance, GPS for maps, setting reminders, and so on. They have multiple apps for communications, entertainment, shopping, and banking purposes.

Tablets Tablets are portable computing devices that are bigger than smartphones but smaller than laptops. They have a flat, rectangular design with a touchscreen interface. Unlike laptops, they do not have a physical keyboard. Tablets are lightweight, easy to carry, and have a wide range of functions. They also have productivity applications like word processors, spreadsheets, and presentation software, making them useful for work-related tasks. They are suitable for a wide range of activities, making them popular among individuals of all ages for both personal and professional use.

Did You Know?

Google's original name was "Backrub." It was changed to "Google" in 1997, inspired by the word "googol," which refers to the number 1 followed by 100 zeros, representing the vast amount of information the search engine aimed to organise.

Television   Televisions, also known as TVs, are being used for a long time. They were invented in 1927, and since then, they have been making a significant impact on our society by influencing people, shaping culture, entertaining, and giving information. Television uses moving pictures with sounds. It has brought entertainment, news, and educational shows inside every house. Televisions have evolved over the years, and now we also have smart TVs that can connect to the internet and provide a wide range of options from online sources.
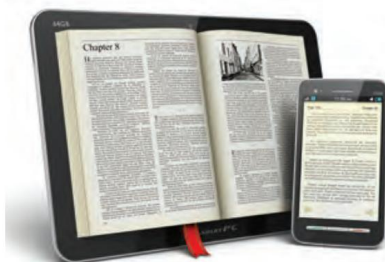
Radio   Radio is one of the oldest and first ICT tools. It allows people to listen to audio broadcasts for entertainment, information, weather forecasts, commentary, and educational purposes. Radio uses radio waves to broadcast audio in long range. With the advent of the internet, radio has become a more interactive medium, allowing users to access content from anywhere and at any time, at their convenience.

Email   Electronic Mail, commonly known as email, enables the exchange of digital messages between individuals and organisations. It has become a primary method of communication in both personal and professional environments. One can have access to their email on their smartphones, laptops, and tablets. It requires an internet connection and allows users to attach files in the form of images, audio, video, or documents.

E-newspaper   An e-newspaper, or electronic newspaper, is a digital version of a traditional print newspaper that is accessible through electronic devices such as computers, tablets, smartphones, and e-readers. This allows readers to access news content anytime and anywhere, whether they're commuting, travelling, or simply relaxing at home. E-newspapers can provide real-time updates and live coverage through text updates, images, and even live video streams.

E-readers   An e-reader, short for electronic reader or e-book reader, is a specialised electronic device designed primarily for reading digital books and other written content. It serves as an ICT tool with a focus on helping readers enjoy the experience of reading at their own convenience. This is an environment-friendly initiative, allowing readers to have access to a library of books at their fingertips.

Difference Between ICT Tools

Aspects	Smartphones	Tablets	Television	Radio
Type	Portable audio-visual device	Portable audio-visual device	Audio-visual device	Audio broadcast
Communication type	Two-way	Two-way	One-way	One-way
Screen	Small touchscreen, that can fit in pocket	Bigger than smartphones, touchscreen	Larger than smartphones and tablets, may or may not be touchscreen	No screen

Portability (Easy to carry)	Yes	Yes	No	Yes
Applications	Uses many applications	Uses many applications	May or may not use some applications	No applications used
Purpose	Communication, Entertainment, Information Access	Communication, Entertainment, Information Access	Entertainment, Information Access	Audio Content for Communication, Entertainment, Information Access
Internet	Yes	Yes	May or May not SMART TV uses internet	May or May not Podcasts are forms of radio broadcasts that use internet
Storage	Comes with different storage capacity	Comes with higher storage capacity	No storage capacity	No storage capacity
Battery	Operates on rechargeable battery	Operates on rechargeable battery	Operates on power, not battery	Operates on power, not battery
Economical	Comes in all price ranges	Expensive than smartphones	Comes in all price ranges	Cheapest of all four
Accessibility over large distance	Can be accessed from places with network and internet coverage	Can be accessed from places with network and internet coverage	Accessible only within a given room or area	Can be accessed through satellite or internet coverage
Content control/ moderation	No control	No control	Controlled by Censor Board	Controlled by Telecom Regulartory Authority
GPS	Yes	Yes	No	No

Activity Time

Activity 1: ICT in Routine Life *(Group Work)*

In a group of 4–5 students, perform a role play presenting the important role of ICT tools in our personal and work lives. Each role-play should include at least two scenes showing the personal scenario and a work environment.

Activity 2: Importance of ICT *(Group Work)*

Divide the class into small groups of 4–5 students. Ask the groups to choose one of the two topics and discuss the role of ICT. They shall make a poster/ collage on the selected topic based on the ideas discussed.

Topics:

Role of ICT at Workplace

Role of ICT in personal life

Activity 3: Advertising ICT Tools *(Group Work)*

In a group of 4–5 students, prepare a sales pitch for one of the ICT tools. Highlight the key advantages of the chosen tool in your presentation. You may prepare a poster to support your presentation.

Chapter Checkup

A **Select the correct option.**

1 What is the main benefit of using ICT for information access?

   a Limited access to information

   b Instant access to a wide range of information

   c Offline access only

   d Access to information only during the daytime

2 Which aspect of personal life can be enhanced by ICT through online courses and tutorials?

   a Physical fitness   **b** Social interactions

   c Language learning   **d** Shopping experience

3 What is the significance of ICT in emergency situations?

   a No relevance in emergencies

   b Provides only entertainment during emergencies

   c Offers access to emergency services, information, and resources

   d Causes more problems during emergencies

B **Fill in the blanks with the most suitable words.**

1 The use of ICT tools has led to the rapid exchange of information and _____ across the globe.

2 ICT tools have improved _____ in the workplace, allowing teams to work together efficiently.

3 One of the potential risks of using ICT tools is _____ theft, where sensitive information is accessed without authorisation.

4 _____ is an ICT tool that enables users to search for information on the World Wide Web.

C **State whether the following is *True* or *False*. Correct the statements that are false.**

1 E-readers are electronic devices designed for playing games and watching movies.

2 ICT has no role in managing personal finances or budgeting.

3 Remote work and online learning are made possible by ICT tools like video conferencing and collaboration platforms.

4 ICT primarily focuses on communication and does not impact other areas of life.

D **Answer the following questions. *(Solved)***

Q1. Explain the meaning of "ICT tools" and provide two examples of commonly used ICT tools.

A1. ICT tools also known as Information and Communication Technology, is a broad term for various technological devices, software applications, and platforms that help us to communicate, access information, process data, and perform various tasks in personal, professional, educational, and other sectors.

Two examples of commonly used ICT tools are:

Smartphones: Smartphones are versatile ICT tools that combine communication, computing, and connectivity features. They allow users to make calls, send messages, access the internet, use apps for various purposes, take photos and videos, and perform a wide range of tasks.

Email Services: Email services like Gmail, Outlook, and Yahoo Mail provide platforms for sending and receiving electronic messages over the Internet. They enable communication through text, attachments, and media files, making it easy to correspond professionally and personally.

Q2. Describe how ICT tools have revolutionised the healthcare sector.

A2. ICT tools have sparked a profound revolution in the healthcare sector, transforming how medical services are delivered, accessed, and managed. Telemedicine platforms and video conferencing enable remote consultations, connecting patients with healthcare professionals, regardless of location. Electronic Health Records (EHRs) digitise patient information, streamlining data management, reducing errors, and improving care coordination. Smart watches and mobile apps empower patients to monitor vital signs and chronic conditions in real-time, allowing for proactive interventions.

Q3. Differentiate smartphones and tablets on the basis of any three aspects.

A3. Smartphones and tablets are different from each other in the following ways:

Aspects	Smartphones	Tablets	Television	Radio
Purpose	Communication, Entertainment, Information Access	Communication, Entertainment, Information Access	Entertainment, Information Access	Audio Content for Communication, Entertainment, Information Access
Economical	Comes in all price ranges	Expensive than smartphones	Comes in all price ranges	Cheapest of all four
Storage	Comes with different storage capacity	Comes with higher storage capacity	No storage capacity	No storage capacity

Answer Key

A 1. b   2. c   3. c

B 1. communication   2. efficiency   3. cyber/data   4. Internet

C 1. False. E-readers are electronic devices designed for reading digital books and other written content.
     2. False. ICT has a significant role in managing personal finances or budgeting.
     3. True.
     4. False. ICT has a huge impact on the way we live, work, and interact with each other.