

CIS11012

ESSENTIALS OF ICT AND PC APPLICATIONS

Introduction - ICT, Data & Information

Lesson 1

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Course Structure

- Course Title : Essentials of ICT and PC Applications
- Course Code : CIS 1101**2**
- Number of credits : **02**
- Type of Credits : Compulsory
- Methodology : **Two (02)** hours of lecture per week
- Scheme of Evaluation:
 - *Continuous Assessment* : 40% (*Pass marks 40%*)
 - *End Semester Examination* : 60% (*Pass marks 35%*)

NOTE: An amendment (changes coloured in **red**) was done from your batch (2022/2023) onwards.

Indented Learning Outcome(ILO)s

- At the end of this course students able to,
 - *Explain the role and applications of ICT in digital era*
 - *Enlighten computer system and its evaluation, and the basic concept of programming language*
 - *Identify the components of a computer system and its functions*
 - *Gain knowledge on different operating system environment and utility packages*
 - *Gather knowledge about different types of application software to apply on real world practical*



-START-

Information and Communication Technology - ICT

What is ICT?

- **Combination of Information Technologies and Communication Technologies**
- The technologies that provide access to information through the communications
- Similar to Information Technology, but focuses on communication technologies as well

Information and Communication Technology - ICT

Extended term for **information technology** (IT) which stresses the role of **unified communications** and the integration of **telecommunications** (*telephone lines and wireless signals*), **computers as well as necessary enterprise software, middleware, storage, and audio-visual systems**, which enable users to access, store, transmit, and manipulate information

-(<http://en.wikipedia.org/>)

Data

- Raw material
- Simply **facts or figures** which do not have meaning in alone.
- Can be any **character, text, words, number, pictures, symbol, sound, or video**
- Data are
 - *Meaningless*
 - *Unorganized/ Unordered*
 - *Can not take conclusion from it*
 - *Can not be used for decision making*
 - *Not processed/ interpreted*

Types of Data

- Data can be categorized into two (02) general types
 - *Qualitative Data*
 - *Quantitative Data*

Qualitative Data

- The data about **qualities**
- Can **not** actually be measured or compared using **numerical values**
- Can **not** use for **arithmetic calculations**
- It can be either
 - *Ordinal*
 - *Nominal*

Qualitative Data (contd.)

■ Ordinal

- *There is an order between categories*
- *E.g.*
 - Exam result
 - Attitude of acceptance

■ Nominal

- *No natural order between the categories*
- *E.g.*
 - Gender
 - Color

Quantitative Data

- The data can be **quantified** or **expressed** using numbers
- Can be **measured** or **compared** using **numerical values**
- Can use for **arithmetic calculations**
- It can be either
 - *Discrete*
 - *Continuous*

Quantitative Data (contd.)

■ Discrete

- *Can not find all values between two numbers (**finite**)*
- *Distinct values*
- *E.g.*
 - Shoe size
 - No. of students in a class

■ Continuous

- *Can find all values between two numbers (**infinite**)*
- *Continuous variables*
- *E.g.*
 - Temperature
 - Body weight

Information

- **Processed** or **interpreted** or **organized** data so as to make them **meaningful** or **useful**, can be called information
- Provides context for data
- Information are
 - *Meaningful*
 - *Organized*
 - *Can take conclusion from it*
 - *Can be used for decision making /planning*

Data and Information

- The **Processed Data** in such a way as to be **meaningful** is **Information**.



“ In some situations, **information** can be used **as data** for another process ”

Characteristics of quality Information

- Reliability
 - *Truth of information*
- Accuracy
 - *Needs to be more accurate*
- Relevancy
 - *Should be relevant to the purpose for which it is required*
- Completeness
 - *Should contain all the required details*
- Availability
 - *Should be easy to access or obtain*
- Timeliness
 - *Must be on time for the purpose for which it is required*

Data & Information

199.71
199.71
199.67
199.76
199.77
200.05
199.72
199.73
199.73
199.54
199.77
199.97
199.5
199.58
199.62



2021-10-02
2021-10-01
2021-09-30
2021-09-29
2021-09-28
2021-09-27
2021-09-26
2021-09-25
2021-09-24
2021-09-23
2021-09-22
2021-09-21
2021-09-20
2021-09-19
2021-09-18

Data, Information & Knowledge

- Summarizing the data
- Averaging the data
- Selecting part of the data
- Graphing the data
- Adding context
- Adding value

Data



Information



Knowledge

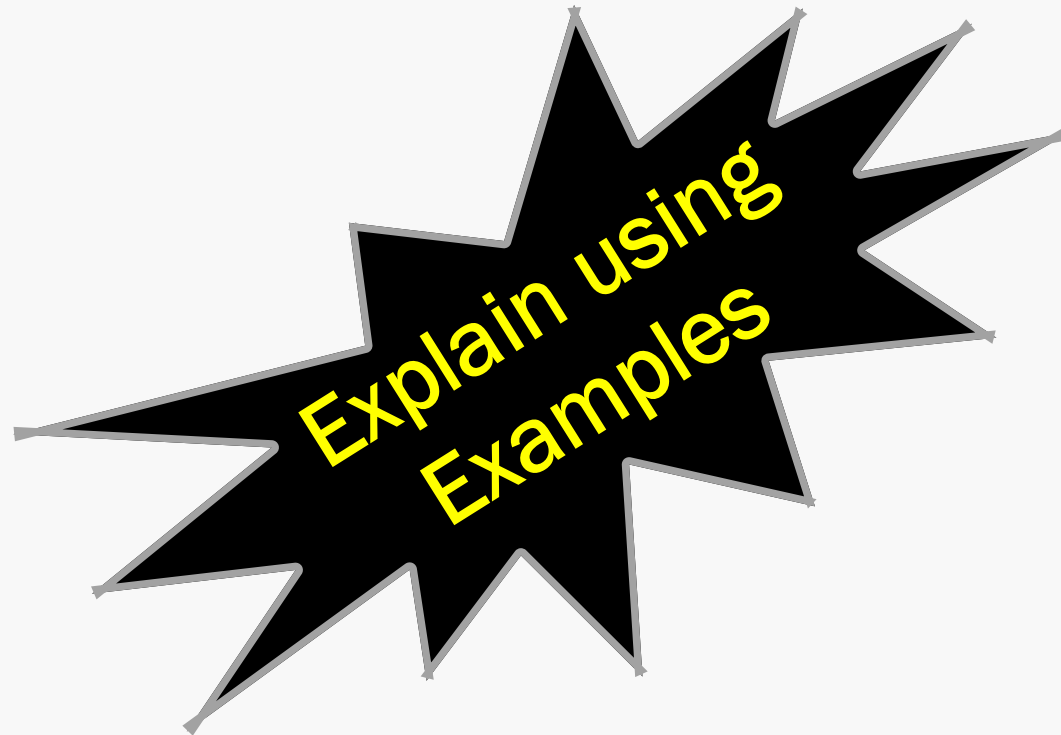
- How is the info tied to outcomes?
- Are there any patterns in the info?
- What info is relevant to the problem?
- How does this info effect the system?
- What is the best way to use the info?
- How can we add more value to the info?

Role of ICT in society

- Gives opportunities to improve the **quality of community life**
- Expands level of reflection on **community dynamics**
- Helps to get **reliable** and **timely information**
- Creates **healthy society** by making people aware of the benefits derivable from the use of ICTs

Application of ICT

- Education
- Health
- Transportation
- Agriculture
- Government
- Business
- Industry
- Entertainment
- Research and Development



Task. 01

Explain the “ **Role of ICT in the Digital era** “ using its pros and cons.

■ **Deadline:**

– *21st February 2025 on or before 11.59 pm*



Thank You