

EDO STATE POLYTECHNIC  
USEN NIGERIA

**TUTORIAL KIT  
FIRST SEMESTER**

**PROGRAMME: COMPUTER**

**COURSE: COM 424**

### **1a. EXPLAIN INFORMATION TECHNOLOGY AS AN ACADEMIC DISCIPLINE?**

ANSWER: Information technology (I.T) as an academic discipline field is concerned with issues related to users and meeting their needs through organizational societal context through selecting, creating, application, integrating and administration of computing technologies.

It is also an academic discipline started with a small field in mathematical and electrical engineering before its inception of computer science was formed.

It is an academic discipline has yielded positive result for the past ten years, where I.T professionals practitioner/personnel emerge and they are fit in different sector of the economy. It is noted that, since in inception I.T has helped many sector, firm, organization, institute, schools, churches, hospital in carrying out their task or operation easily and very fast through their I.T personnel employed in such organization. Through I.T academic discipline, many I.T career personnel have been produced in various higher institution such as web developers, networks administrator's database administrators, graphic designers, architectural designer, programmers etc. where they are fit in various firms and organization.

### **1b. STATE AND EXPLAIN FIVE CLASSIFICATION OF INFORMATION?**

ANSWER: The five classification of information are:

1. By source
2. By channel
3. By media
4. By recipient
5. By information need

- By Source: This is where the information is originated from, it is can be form of signs, symbols, text and graphic. The source of information is very vital because it deals with where the information is gotten from.
- By channel: Channel is a carrier that designate information to appropriate receiver of the information. It also involves the way in which information is passed across or gotten. Channel involves: literature, information institution distributing agencies.

- By media: This is the physical media, path through which the information is sent from one person to another. This can be in form of oral, one to one, one to many. It can also be in form of recording which is paper print, microforms, audio-visual and electronic.
- By recipient: It is the ultimate receiver of information who may also generate or create information sent through one channel or the other. The receiver can be individual, groups, organization and institution.
- By information need: This is the process where information needed is received based on different need. It is noted that information is needed only on the basis of who need it and the purpose of the needed information.

**2a. STATE SEVEN (7) CHARACTERISTICS OF I.T GRADUATE?**

ANSWER:

1. I.T graduate must have the ability to apply knowledge of computing and mathematics appropriate to the discipline.
2. He must have the ability to analyze a problem, identify and define the computing requirement appropriate to its solution.
3. He should have the ability to design, implement and evaluate a computer based system, process, component or program to meet the desired needs.
4. He should have the ability to function as a team to accomplish a common goal.
5. He should have the ability to effectively integrate I.T based solutions into the user environment.
6. He should have the ability to assist in the creation of an effective project plan.
7. He should have the ability to analyze the local and global impact of computing on individuals, organization and society.

**2b. DEFINE INFORMATION TECHNOLOGY?**

ANSWER: It is the technology that use computer to store, retrieve, transmit and manipulate data or information through the internet.

**3a. EXPLAIN FIVE GOALS OF AN I.T PROGRAM?**

ANSWER: The goals of an I.T program are as followed;

1. To be able to explain and apply appreciate information technologies and employ appropriate methodologies to help an individual and organization to achieve its goals and objective.
2. To function as a user advocate: Here the I.T professional personnel has to perform higher I.T work with loyalty and honesty without been favored or partiality.
3. Manage information technologies resources of an individual and organization: This is the process where I.T professionals needs to care for and protect organizational (IT) tools and equipment such as computer system, printers, photocopies machine, network router/switch etc.
4. Anticipate the changing direction of information technologies and evaluate and communicate the likely utility of new technologies to an individuals and organization: Here the I.T personnel need to be up to date in the I.T trend currency going on the I.T would new.
5. To have understanding, in some cases contribute to the mathematical, scientific and theoretical foundation where information technologies are built.

### **3b. EXPLAIN FIVE PROPERTIES OF DATA?**

ANSWER: Properties of data are:

1. Amenability to use: A large volume of data need to be in the form in which it can be amended, that is edited, mining before such data is correctly presented.
2. Accuracy: The properties of data involves accuracy, this is a process where data is complete and accurate in nature. Data obtained in the field or through the process of experiment need to be thoroughly looked into for accuracy.
3. Clarity: This is a process where data obtain must be clear, also a process where appropriate editing is done and the data corrected is presented clearly for readers understanding.
4. Compression: This is a process where large amount of data obtained through an experiment conducted need to be compressed properly. Through the process of compression which is one of the property of data, data is fully compressed which save memory and space.

5. Essence: This is the process where the purpose of the obtained data is known and appropriately utilized, that is before data is gotten or obtained. It has to be extracted from a large volume of data, that is to derived qualitative value of the data.

**4a. DISTINGUISH BETWEEN DATA, INFORMATION AND KNOWLEDGE WITH AN ILLUSTRATIVE EXAMPLE OF EACH?**

ANSWER: Data are raw fact that can be feed into processing or raw material cotton. Information is a processed data or intermediary that is in between raw material and finished product e.g. yarn.

Knowledge is a consolidated and structured information or a finished product e.g. cloth which is gotten from cotton.

|             |                  |         |                |
|-------------|------------------|---------|----------------|
| data        | raw material     | cotton: | destination    |
| information | intermediary     | yarn:   | tour operator  |
| knowledge   | finished product | cloth:  | conducted tour |

**4b. STATE FIVE ETHICAL GUIDANCE FOR I.T PROFESSIONAL?**

ANSWER: Ethical guidance for I.T professional are:

1. Integrity: To be straight forwards and honest in all professional and business.
2. Objectivity: Not to allow bias, conflict of interest or undue influence of others to override professional or business judgements, and having the resolve to ensure those judgements are ethical.
3. Professional competence and due care: To maintain professional knowledge and skill at the level required to ensure that a client or employer receives competent professional services based on current developments in practice, legislation & techniques and act diligently and in accordance with applicable technical and professional standard.
4. Confidentiality: To respect the confidentiality of the information acquired as a result of professional and business relationships and therefore not disclose any such information to third parties without proper and specific authority.

5. Professional behavior: To comply with relevant laws and regulations and avoid any action that discredit the profession.