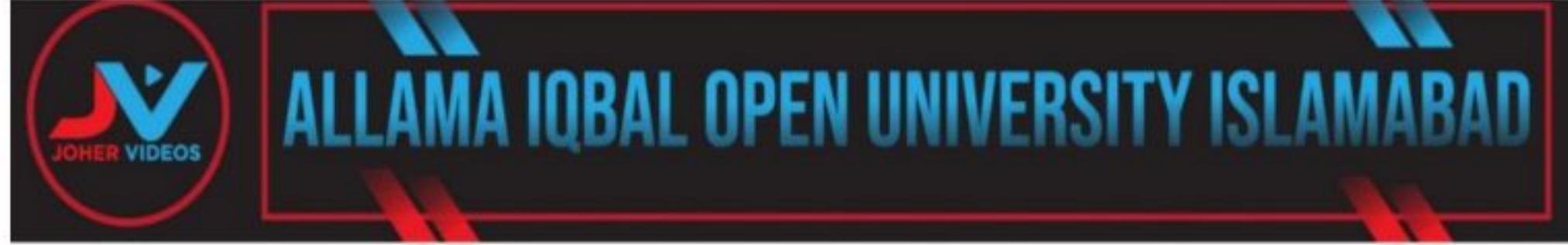**ALLAMA IQBAL OPEN UNIVERSITY**
Semester Terminal Exam Autumn 2020
Program /level: BA/B.Com/Associate Degree Program
Title /Course Code: Basics of ICT (1431)

Question No 1
1.Enlist any five application software and explain any three.
Answer

1. Word processing software

Word processing software is used to manipulate a text document, such as a resume or a report. You typically enter text by typing, and the software provides tools for copying, deleting and various types of formatting. Some of the functions of word processing software include:

- Creating, editing, saving and printing documents.
- Copying, pasting, moving and deleting text within a document.
- Formatting text, such as font type, bolding, underlining or italicizing.
- Creating and editing tables.
- Inserting elements from other software, such as illustrations or photographs.
- Correcting spelling and grammar.

Word processing includes a number of tools to format your pages. For example, you can organize your text into columns, add page numbers, insert illustrations, etc. However, word processing does not give you complete control over the look and feel of your document. When design becomes important, you may need to use desktop publishing software to give you more control over the layout of your pages.

Word processing software typically also contains features to make it easier for you to perform repetitive tasks. For example, let's say you need to send a letter to all your customers regarding a new policy. The letter is the same for all customers except for the name and address at the top of the letter. A mail merge function allows you to produce all the letters using one template document and a table with customer names and addresses in the database.

2. Database software

Database software is designed to create databases and to store, manage, change, search, and extract the information contained within them. A comprehensive database software program is sometimes called a database management system.

Mainly, database software exists to protect the information in the database and ensure that it's both accurate and consistent. Database software functions include:

- Data storage

- Data backup and recovery
- Data presentation and reporting
- Multi-user access control
- Data security management
- Database communication

3. Spreadsheet software

Spreadsheet software is a software application capable of organizing, storing and analyzing data in tabular form. The application can provide digital simulation of paper accounting worksheets. They can also have multiple interacting sheets with data represented in text, numeric or in graphic form. With these capabilities, spreadsheet software has replaced many paper-based systems, especially in the business world. Originally developed as an aid for accounting and bookkeeping tasks, spreadsheets are now widely used in other contexts where tabular lists can be used, modified and collaborated. Spreadsheet software is also known as a spreadsheet program or spreadsheet application.

4. Multimedia software

5. Presentation Software

2. Describe different types as well as applications of the computer.

Answer

Types of computer applications include word processing software, database software, spreadsheet software, presentation software, multimedia software, enterprise software, information worker software, simulation software, educational software, content access software, and software that enables the development or engineering of products. Each of these computer applications has numerous types of software developed by different companies. Computer applications are software made for specific purposes.

Common examples of word processors are Microsoft Word, WordPad and Notepad. Database application software includes MS Access and Oracle. Microsoft Excel and Lotus 1-2-3 are examples of spreadsheet applications. Multimedia application examples are Media Player and Real Player. The most common presentation software is Microsoft PowerPoint. Examples of

educational computer applications are Encarta, Britannica, NASA World Wind, and Google Earth.

3.Explain the main functions of an operating system.

Answer

- Security   –
  The operating system uses password protection to protect user data and similar other techniques. it also prevents unauthorized access to programs and user data.
- Control   over   system   performance   –
  Monitors overall system health to help improve performance. records the response time between service requests and system response to have a complete view of the system health. This can help improve performance by providing important information needed to troubleshoot problems.
- Job   accounting   –
  Operating system Keeps track of time and resources used by various tasks and users, this information can be used to track resource usage for a particular user or group of user.
- Error   detecting   aids   –
  Operating system constantly monitors the system to detect errors and avoid the malfunctioning of computer system.
- Coordination   between   other   software   and   users   –
  Operating systems also coordinate and assign interpreters, compilers, assemblers and other software to the various users of the computer systems.
- Memory   Management   –
  The operating system manages the Primary Memory or Main Memory. Main memory is made up of a large array of bytes or words where each byte or word is assigned a certain address. Main memory is a fast storage and it can be accessed directly by the CPU. For a program to be executed, it should be first loaded in the main memory. (778 words)

Question No 2

1. Explain utility programs and write down their purpose. Also describe important steps of installation and un installation of software.

Answer

What is a Utility Program?

Utility program is a system application that executes a specific task, generally pertaining to optimal maintenance or operation of the system resources. Operating systems such as Windows, macOS and Linux come with their own set of utility programs to maintain and execute different utility functions such as formatting, compressing, scanning, exploring and much more.

Utility programs also assists with the management of computer functions, resources and files. You can ensure complete password protection and keep your systems virus free using different utility programs.

Functions

Various functions are executed by a utility program to make the system's operations smoother and more efficient. Overall, utility programs can be broadly categorized into four parts:

- System Utilities

Some of the system utility programs are memory manager, antivirus and firewall, registry checker and cleaner, package installer and explorer. Also, with the help of such system utility programs, users can execute functions that are crucial for smooth running of an operating system.

- File Management Utilities

File management utilities include tools such as data archivers, software backup tools, file compression tools and managers. With the help of these, users can manage their data in the form of files and folders. These utilities help users to sort out, store and categorise files according to the requirement.

- Storage Device Management Utilities

Storage device management utility programs provide solutions for enhancing disk capacity, such as disk clean-up, partition management, formatting, disk space allocation, defragmentation, etc. With the help of this utility program,

users can compartmentalise systems and external drives for efficient management of programs and files that are stored within.

- Miscellaneous Utilities

Apart from these three utility program categories, there are various other programs that help in managing business operations. Some of these programs include data generators, HTML checkers and hex editors, to name a few.

Installation Steps

After downloading installer file, execute the following steps to install the software:

- Double Click the Softaken software icon from desktop or start menu
- Follow the screen instructions
- When the installation process completes message appears on the software installation screen.
- Click the finish button and use for your Software

Uninstallation Steps

Follow few simple steps to Uninstall Softaken Software

- Click Start -> Control Panel. The Control Panel window appears.
- Double-click the Add or Remove Programs icon. A list of the programs installed on your computer appears.
- Select Softaken Software and click the Remove button. A warning message before uninstalling the software will be displayed on the screen.
- Click the Yes button to un-install the software
- Click OK button.

2. What is spreadsheet? Elaborate the purposes served by this?which software are used for spreadsheet development?

What is a Spreadsheet

A spreadsheet is a file that exists of cells in rows and columns and can help arrange, calculate and sort data. Data in a spreadsheet can be numeric values, as well as text, formulas, references and functions.

Purpose

Spreadsheets are an essential business and accounting tool. They can vary in complexity and can be used for various reasons, but their primary purpose is to organize and categorize data into a logical format. Once this data is entered into the spreadsheet, you can use it to help organize and grow your business.

- Business Data Storage
- Accounting and Calculation Uses
- Budgeting and Spending Help
- Assisting with Data Exports
- Generating Reports and Charts
- Business Administrative Tasks

The 8 Best Spreadsheet Apps

- Microsoft Excel for powerful data crunching and large data sets
- Google Sheets for spreadsheet collaboration
- LibreOffice Calc for a free, native spreadsheet app
- Smartsheet for project management and other non-spreadsheet tasks
- Quip for integrating spreadsheets into shared documents
- Zoho Sheet for a free, feature-rich solution
- EtherCalc for creating a collaborative spreadsheet without an account
- Airtable for database management

3. Explain different components of Multimedia with the help of suitable examples.

Answer

Components of Multimedia The following are the different components used in multimedia system:

• Text: It is the primary component of multimedia. Most of the information can be presented with the help of text. We can be emphasized the text by using different fonts, colors, styles etc.

• Graphic: A digital representation of non-text information such as drawing, photographs etc are known as graphics. The graphic medium can be used with text medium.

• Audio: Audio is one of the important components of multimedia. It is music, speech or any other sound. It is normally combined with animation medium.

• Video: The effective medium for presenting information is video. It presents the moving images. It displayed the sequence of slightly varied pictures at the speed of 15-30 frames per second.

• Animation: The animation medium presents the sequence of still images of artwork at a rapid speed that looks like the image is moving.

Question No 3

1.Identify basic elements of a communication system. Explain with examples.

Answer

The basic components of a communication system are information source, input transducer, transmitter, communication channel, receiver, output transducer, and destination.

Information Source

As we know that the communication system establishes the communication bridge between the sender (transmitter) and receiver. To establish this communication bridge between the sender and receiver, first, we need an information to send.

Input Transducer

If you want to talk (communicate) with your friend who is sitting beside you, then you can directly talk with him by using voice signals (sound signals).

Transmitter

The transmitter is a device which converts the signal produced by the source into a form that is suitable for transmission over a given channel or medium.

Communication Channel

The communication channel is a medium through which the signal travels.

Noise

Noise is an unwanted signal that enters the communication system via the communication channel and interferes with the transmitted signal. The noise signal (unwanted signal) degrades the transmitted signal (signal containing information).

Receiver

The receiver is a device that receives the signal (electrical signal) from the channel and converts the signal (electrical signal) back to its original form (light and sound) which is understandable by humans at the destination.

2. What are the main types of programming languages? Discuss any three languages in detail.

Answer

Types of Programming Languages

The different types of programming languages are discussed below.

1. **Procedural Programming Language**
2. **Functional Programming Language**
3. **Object-oriented Programming Language**

This programming language views the world as a group of objects that have internal data and external accessing parts of that data. The aim this programming language is to think about the fault by separating it into a collection of objects that offer services which can be used to solve a specific problem. One of the main principle of object oriented programming language is encapsulation that everything an object will need must be inside of the object.

4. **Scripting Programming Language**

These programming languages are often procedural and may comprise object-oriented language elements, but they fall into their own category as they are normally not full-fledged programming languages with support for development of large systems. For example, they may not have compile-time type checking.

5. **Logic Programming Language**

These types of languages let programmers make declarative statements and then allow the machine to reason about the consequences of those statements.

3. Write down the advantages and disadvantages of "Information and Communication Technologies".

Benefits/Advantages of ICT

General benefits

- Greater efficiency throughout the school.
- Communication channels are increased through email, discussion groups and chat rooms

- Regular use of ICT across different curriculum subjects can have a beneficial motivational influence on students' learning.
- Improved access to education, e.g. distance learning and on-line tutorials. New ways of learning, e.g. interactive multi-media and virtual reality.

Disadvantages

- Job loss: One of the largest negative effects of ICT can be the loss of a person's job. This has both economic consequences, loss of income, and social consequences, loss of status and self esteem. Job losses may occur for several reasons, including: Manual operations being replaced by automation.
- Reduced personal interaction: Being able to work from home is usually regarded as being a positive effect of using ICT, but there can be negative aspects as well.

4.Name at least 10 famous windows operating system. Explain at least 02 of these operating systems in detail.

Answer

#1) MS-Windows
#2) Ubuntu
#3) Mac OS
#4) Fedora
#5) Solaris
#6) Free BSD
#7) Chrome OS
#8) CentOS
#9) Debian
#10) Deepin

Windows

Windows is the most popular and familiar operating system on this list. From Windows 95, all the way to the Windows 10, it has been the go-to operating software that is fueling the computing systems worldwide.

Features

- A robust User Interface which helps in easier navigation, with a start menu on the left side by listing out options and representing applications.
- The Task View feature lets the users switch between multiple workspaces at once, by displaying all the open Windows.
- Two separate user interfaces, one for mouse and keyboard, and the 'Tablet Mode' designed for touchscreens.
- Multifactor authentication technology for higher security like BIN, PIN, Fingerprint recognition, etc.

Ubuntu

Ubuntu is a Linux based OS that comes with everything that you are looking for in an operating system. It is perfect for organizations, schools, and home use. It is free to download, use, and share and that alone should be worth checking this app out.

Features

- Ubuntu is an Open Source software, which allows it to be freely downloaded, used and shared by its users.
- You get five years of security patches and updates.
- Ubuntu is fully translated into 50 different languages.
- It works and is compatible with all the latest laptops, desktops and touch screen devices.