ONLINE
SUPPROT SERVICES

CERTIFICATE IN
INFORMATION TECHNOLOGY

IGNOU SC-2281

Jakhepal-Ghasiwala Road, Sunam

For more information visit us at: nirmancampus.co.in

Call us at: 9815098210, 9256278000

APPLICATIONS OF INFORMATION TECHNOLOGY

We can simply define Information Technology as: *"Any technology through which we get information is called **Information Technology"**.* The term Information Technology is always referred to computers & computer networks. But, it also includes Telephones, Television and other communication devices etc. Information technology has become an important part of modern life. Computers are used in many fields of our daily life. Computers have made our life easier. Specially, it has become an important part in the fields of business, science, engineering, education, entertainment etc. The use of IT in various fields is explained below:

Application of IT in Business & **Commerce**:

One of largest use of IT is in the field of Business and Commerce. It is helpful to keep and manage business records. Companies keep their workers information in the databases. These databases are managed by computer programs. Many different types of program are used to perform business related functions. For example: billing information, payments received, expenditures, items produced and sold etc. All these business related functions are managed by the computers.

All the financial transactions are also done using the IT. Online financial transactions are possible due to internet banking. Newer technologies like m-commerce etc are growing rapidly. These technologies are very helpful in various business related functions.

Computers also help them to reduce the overall cost of their business. In Business, IT is also helpful in marketing and stock exchange

Application of IT in Science and Engineering:

Scientific and engineering fields are entirely dependent on computers. Microprocessor-controlled devices are heavily used in the field of biotechnology. Supercomputers are used to process a large amount of data in the science. They can be used to predict future weather. Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM) programs have improved products in many fields. These softwares are specially used for creating complex designs. To analyze complex designs structures, engineers use computers. For example: to analyze power plants, space stations etc scientists and engineers use many types of programs.

Application of IT in Education:

Information Technology has changed the meaning of the term "literate". Computer literacy has become an important part of life. Computer education is provided as essential course at schools levels. Students are relying on electronic sources of information. Instruction methodology has also changed. Many audio visual aids are used in education for teaching. A new concept of e-learning has developed due to information technology. People can find any type of information on the internet. Educational websites are available to download books, tutorials etc.

Computer Based Tutorials (CBT) programs are used for teaching. These programs include text, graphics and sound. Audio and Video lectures are recorded on the CDs. CBT is a low cost solution for educating people. We can train a large number of people easily.

Application of IT in Entertainment:

IT has changed our lifestyle. IT is heavily being used for various types of entertainment. Internet is most widely used for entertainment. We can watch movies, listen to songs, and watch videos using internet. People can chat with friends and family on the internet. We can interact with friends over social media websites like Facebook, Twitter etc. We can also share photos and videos with friends using internet.

Multimedia applications are also an important source of entertainment. IT provides many other options for entertainment. These options include games, music and video, digital tv broadcasts, satellite radio, animated movies etc.

CURRENTTRENDS IN IT APPLICATION

Virtual reality (VR)

It is a term that applies to computer-simulated environments. It can simulate (imitate/copy) physical presence. Most current virtual reality environments are primarily visual experiences. The simulated environment can be similar to the real world. Simulation provides a lifelike experience. For example, for pilot, simulation provides battle training.

Artificial intelligence (AI)

It is the intelligence of machines. It is the branch of computer science. John McCarthy coined this term in 1955. He defines AI as "the science and engineering of making intelligent machines."

AI is deeply divided into subfields. The central problems of AI include reasoning, knowledge, planning, learning, communication, perception and the ability to move and manipulate objects.

Robotics

A robot is a mechanical or virtual artificial agent. It is usually an electro-mechanical machine. It is guided by a computer program . Robots can be autonomous (self-directed), semi-autonomous or remotely controlled. The branch of technology that deals with robots is called robotics.

This machinery was initially used for repetitive functions. With technological advancements, more complex machines were developed.

Robots have replaced humans in many application areas. They are used for performing those repetitive and dangerous tasks which humans do not prefer to do.

Speech Recognition

In computer science, speech recognition (SR) is the translation of spoken words into text. It is one of the newest input techniques. Speech recognition / Voice recognition is a computer software program or hardware device. It has the ability to decode the human voice. The user can input data by speaking. Microphone is used to input sound into computer system. A Microphone receives human voice.

Voice recognition is commonly used to operate a device. It can be used to perform commands. It can also be used to write without a keyboard. These systems work by matching input voice with set of words. These systems are mostly user dependent. Only those users are recognized by the system who gets the training with the system by speaking.

Advantages:

- These are more efficient input device
- These are easy to use
- Unauthorized speakers can be identified.
- Gift for blind and handicapped people

Disadvantages:

- These systems have very limited vocabulary.
- These systems are specific user-dependent.

Multimedia Technology

Multimedia is the integration of multiple forms of media. This includes text, graphics, audio, video, and animation. For example, a presentation involving audio and video clips is called "multimedia presentation". Educational software that involves animations, sound, and text is called "multimedia software". Multimedia can be accessed through computers or electronic devices. Animated movies, computer based learning (CAL) CDs are the good examples of multimedia contents.