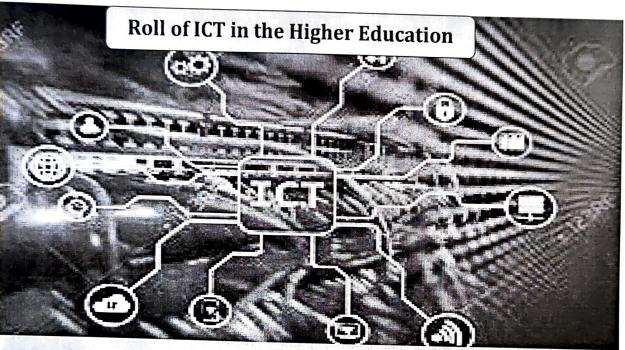
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Comparative Studies on Conventional and Recent Trends in Plant Sciences

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Abstract:

Botany – study of plants developed as herbalism, deals with study of plants for their medicinal uses. The botanical knowledge is the oldest stream of science. Botany originated in prehistoric period, the Holocene period far back as 10,000 years ago. Early plant exploration have been started in ancient text back to 1100 B.C. in India. In 19th and 20th centuries new techniques were developed for study of plants, including methods of optical microscopy electron microscopy, chromosomal analysis, plant chemistry structure and functions of basic bio molecules. in last two decades of 20th century botanists exploited the techniques of molecular genetics and DNA sequences to classify the plants.

Key words: systematic, herbalism genomics, botanical gardens

Introduction:

Botany, phytology, is the science of plant life and a branch of biology. The term botany" comes from the Ancient Greek word Botane - meaning grass", or "fodder"; the term Botany is derived from Boskein, "to feed" or "to graze". Botanical studies traces its root back in ancient Greece specifically Theophrastus (371 287 BC) he describe many plants considering their habitate and is widely regarded as "Father Of Botany". His major work constitute the most important contribution to botanical sciences. Almost seventeen centuries later another great work was contributed by Greek physician and pharmacologist Pedanius Dioscorides, describe plants as source of medicines. The five valume encyclopedia De Materia Medica about herbal medicine written in the first century. In the mid of 16th century medicinal plants were collected and grown in protected region to explore the population. These places are then progressed as Botanical Gardens. Initially botanical gardens were founded in the Italian universities- The Padua Botanical Garden (1545)is consider to be the first, still present in its original location..Botanical gardens get established much later to northern Europe. Through out this period, botany firmly remained retainer to medicine and medicinal plants. Since from mid 1960s advances in understanding the physiological processes of plants occurred. These developments, coupled with new methods for measuring stomatal aperatures, statistical analysis, rational experimental design and data analysis in botanical research.

During 20th century development in plant biochemistry have been driven by modern techniques such as spectroscopy, chromatography electrophoresis etc. With the invention of molecular scale biological approaches of genomics, proteomics and metabolomics functions of plants can be subjected to detailed experimental analysis. These technologies enables the use of plant cell and microorganisms to synthesize pesticides, antibiotics and other valuable product. Similarly producing genetically modified crop plants to improved yield can be achieved. Identification of plants and some economical important plants by DNA barcoding is the recent trend in plant research. The study of plants is very important and vital because they are basic platform for sustenance of life on the Earth.

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Conclusion:

Botanists examine anatomical as well as morphological characters. Botany also deals with functions and processes within plant cells, organelles, parts whole plant body. At every steps a botanist concern with collection, identification, classification physiological analysis, phytochemical screening and ethnobotanical study etc. If there is appropriate combination of conventional Knowledge and advance techniques we can mate many basic problems of human beings and uplift their life style.

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