

A TEXT BOOK ON AGRI-INFORMATICS



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KALYANI

A Text Book on Agri-Informatics

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Preface

Information technology is a tool that both directly increases agricultural output and indirectly gives farmers the ability to make smart decisions that will improve the way that agriculture and related activities are conducted. Agri-informatics is the application of cutting-edge concepts, methods, and scientific understanding to agriculture to broaden the scope of computer science and information technology. In other terms, it refers to the management and analysis of agricultural data using information technology. It covers a wide range of topics, including artificial intelligence, decision support systems, social information systems, agro expert systems, global positioning systems, geographic information systems, remote sensing, and agricultural information systems.

The book "A Textbook on Agri-Informatics" is prepared to meet the needs of degree candidates at the nation's agricultural universities. The book is also helpful for CET and JRF test preparation. This book is written in accordance with the suggestions of the Vth Deans Committee for the B.Sc. Hons. (Agriculture), B.Sc. Hons. (Horticulture), and B.Sc. Hons. (Forestry). The contents in the book have been covered in accordance with the ICAR's confirmed syllabus. Wherever appropriate, the material is effectively reinforced by the illustrations. The authors received helpful comments from their separate Heads of Department as they were drafting the book's manuscript.

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Introduction to Computers

In the modern era, computers are an essential part of our everyday existence. That means computers are present in almost every field, making our day-to-day tasks easier and faster. Nowadays, computers can be seen in banks, shops, schools, hospitals, railways, and many more places, including our homes. As they are such an essential part of our lives, we must know about the basic computer introduction. Let us start with defining the computer first. The straightforward meaning of a computer is a machine that can calculate. However, modern computers are not just a calculating device anymore (Figure 1.1).

According to the definition, *"A computer is a programmable electronic device that takes data, perform instructed arithmetic and logical operations, and gives the output."*

Whatever is given to the computer as input is called 'data', while the output received after processing is called 'information'.

Functionalities of a Computer

- Take data as Input.
- Store the data/instructions in its memory and use them when required.
- Process the data and converts it into useful information.
- Generate the output.
- Controls all the above four steps.

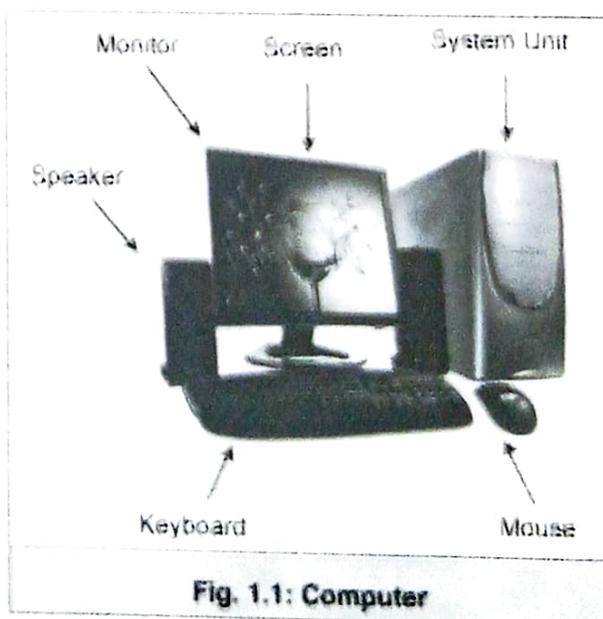


Fig. 1.1: Computer