Statistics

Definition of Statistics:

1 **:** a branch of mathematics dealing with the collection, analysis, interpretation, and presentation of masses of numerical data

2 **:** a collection of quantitative data

Applications of statistics

The **application of statistics** is extensive, so let us discuss the fields where the subject methods are commonly implemented:

### 1. Mathematics

The formulas used in math are reliable, but to get more precision and exactness, statistics methods are important. In fact, it is called the branch of applied math. There are common techniques that both the fields have adopted from each other such as statistical methods, namely probability, dispersion, etc., used in math and mathematical concepts like integration and algebra are used in former.

### 2. Business

Business students must be aware of the importance of statistics in the field. There are times when a businessman has to make quick decisions, and this can be done by using its concepts which make the decision-making easy. He strategizes the marketing, finance, production, resource through it. What are the tastes and preferences of consumers? What should be the quality? What should be the target market? All these questions are answered using statistical tools.

### 3. Economics

There are so many concepts of economics that are completely dependent on statistics. All the data collected to find out the national income, employment, inflation, etc., are interpreted through it. In fact, theory of demand and supply, relationship between exports and imports are studied through this subject. The perfect example of this is census; the bureau uses its formulas for calculating a country’s population.

### 4. Country’s Administration

Many national policies are decided using statistical methods, and administrative decisions are taken based on its data. Statistics provides most accurate data which helps government to make budgets and estimate expenditures and revenues. It is also used to revise the pay scale of employees in case cost of living is rising.

### 5. Astronomy

When scientists measured the distance between sun and earth, or moon and earth, they did not use any measurement scale or ruler for that. It was these statistical methods that helped them to find out the best answers and estimates that are possible. It is difficult to measure the mass, size, distance, density of objects in the universe without any error, but statistics formulas do this with the best probability.

### 6. Banking

When someone deposits his money in banks, the idea is that he will not withdraw the amount in the near future. So, banks lend this money to other customers to earn profit in the form of interest. They use statistical approach for this service. They compare the number of people making deposits against the number of people requesting loans and at the same time ascertaining the estimated day for the claim.

### 7. Accounting and Auditing

Although accounting needs exactness in calculating the profit and loss of the business, certain decisions can be taken according to approximation which is done through statistics. For example, sampling may be used to find out the current trends in the market as it does not require any precision.

### 8. Natural and Social Science

Almost all fields of science such as biology, chemistry, physics, etc., use statistical methods for experimenting and analyzing their results. In biology, it is used in biostatistics, biometrics, which includes investigating about medicines, pharmacy, agriculture, fishery, etc.