Ans.1→ option (A)

Ans.2→option(A)

Ans.3→option(B)

Ans.4→option(D)

Ans.5→option(C)

Ans.6→option(B)

Ans.7→option(B)

Ans.8→option(A)

Ans.9→option(C)

**Ans.10**→Normal distribution is used to represent continuous random variable with approximation or exact value. In normal distribution mean is zero or standard deviation is 1. Normal distribution is symmetrical , but no all symmetrical distribution are normal.

Normal distributions are closely associated with many things such as:

- Marks scored on the test
- Height of different person
- Size of objects produced by the machine
- Blood pressure and so on.

## Normal Distribution Properties

Some of the important properties of the normal distribution are listed below:

- In a normal distribution , the mean, median and mode are equal.

The total area under the curve should be 1.

- The normally distributed curve should be symmetric at the center.
- There should be exactly half of the values are to the right of the centre and exactly half of the values are to the left of the centre.
- The normal distribution table must have only one peak.
- The curve approaches the x-axis, but it never touches, and it extends farther away from the mean.

**Ans.11**→If data missing at random: deletion has no bias effect, but decreases the power of the analysis by decreasing the effective sample size

Recommended: Knn imputation, Gaussian mixture imputation

Source.

**Ans.12**→A/B testing (also known as bucket testing or split-run testing) is a user experience research methodology.[1] A/B tests consist of a randomized experiment with two variants, A and B. A/B testing is a way to compare two versions of a single variable, typically by testing a subject's response to variant A against variant B, and determining which of the two variants is more effective.

**Ans.13**→Mean Imputation: the missing value is replaced for the mean of all data formed within a specific cell or class. This technique isn't a good idea because the mean is sensitive to data noise like outliers.

**Ans.14**→Linear regression is a basic and commonly used type of predictive analysis.It is the next step up after correlation.

Three major uses for regression analysis are:

(1) determining the strength of predictors

(2) forecasting an effect

(3) trend forecasting.

**Ans.15**→There are so many branches of statistics. I once thought that every science, every decision making, and every analysis should integrate with the right statistics.

But at least, there are eight branches of statistics that are favorites in the world of knowledge.

1.Econometric

Econometric is one of the branches of statistics where it takes parts to resolve economic models and problem.

2.Actuarial

Actuarial is another applied statistical branch that focuses on studying and analyzing risk in finance and insurance.

3.Psycometric

Psychometrics is another interesting branch of statistics. This one focus one studying measurement technique and analyzing in the education world and psychology. This thing included attitude, personality, emotion, and many others.

4.Physics Statistics

Physics statistics is one of the statistical branches that focuses on solving physic science. Usually, statistics take part in measurement and calculation with particle.

5.Population Statistics

The population of statistics is one of the most useful branches that study about many things related to society. It has many connections with another aspect of our life, such as health, education, migration, and so on.

6.Official Statistics

Official Statistics is very interesting. With this kind of branch, it will make statistics more developed and grow as the world needed. In this digital era, statistics has become a useful weapon to make development planning and evaluation.

7.Biostatistics

Biology statistics or more popular with names Biostatistics is another branch of statistics that used to resolve many statistical problems in biology. Actually, it's not just for biology. Biostatistics is also applied to many problems in the medical world, such as vaccine making, medicine quality control, and others. It's also often used to analyze some disease factors, medical risk, etc.

8.Industrial Statistics

In Industrial Statistics, we learn and study how to resolve an industrial problem such as quality control, queuing theory, optimizing variable, etc. It is very useful especially for them who work in manufacture or company management.

9.Computing statistics

Computing statistics is a branch of statistics that focuses on the use of information technology in producing more powerful statistics.

These are the branches of statistics that very popular in the world. Almost every subject, every discipline of science, need to involve statistics to make better and sharper.