**SECTION – IV**

1. Hypothesis testing is a statistical method that is basically used for making statistical decisions using experimental data and it is basically an assumption that we make about the population parameter.

TYPES OF HYPOTHESIS TESTING: Null, simple, complex, empirical, alternative, logical and statistical hypothesis.

Hypothesis testing is used to verify, analyze and determine whether the hypothesis can be accepted or not.

1. Correlation is the relationship between two variables which can reveal whether the change in one variable would cause change in the other or not. Such relationship between the two sets of characters or variables can be expressed quantitatively by the degree of relationship , called correlation coefficient.

Example: 1. different concentration of pesticide and their effect on germination, panicle length and number of grains.

2. The weight of human body increases with increase in height and age

1. The various methods of computing correlation are Graphic method, scatter diagram method, Karl Pearson’s method, Spearman’s ranking method.
2. The p-value is the level of marginal significance within a statistical hypothesis test representing the probability of occurrence of a given event. The P-values are calculated using p-value tables or statistical software .
3. a) Mean =45.65

Variance =57.86

Standard deviation= 7.6

The EDF values are 0.2174, 0.3913, 0.4348, 0.5652, 0.7391, 0.8261, 0.9131, 1

b. median of given data = 49

The 25%, 50% & 75% quantiles of given data are 39, 47 & 52 respectively.

1. i) estimate of mean = 45.65

estimate of variance = 57.86

ii) 95% confidence level is 163.6