STATISTICS WORKSHEET-2

ANS.NO.1=(C)

ANS.NO.2= (B)

ANS.NO.3= (B)

ANS.NO.4 = (B)

ANS.NO.5= (C)

ANS.NO.6= (A)

ANS.NO.7=(C)

ANS.NO.8= (B)

ANS.NO.9= (C)

ANS.NO.10=(C)

ANS.NO.11= (A)

SUBJECTIVE ANSWER.

Question no.13

ANS.13

T –DISTRIBUTION: - The T distribution will approximate a normal distribution in the same way that a statistics approximates a normal distribution is determined by degree of freedom. The greater the sample size (n).Is the larger the degree of freedom (n-1) are the better the t-distribution approximates the normal distribution. The exact shape of a T-distribution changes with df.as gets very large. The T-

distribution gets closer in shape to a normal z-score distribution.

Z-distribution: - The Z- distribution is a special case of the normal distribution with a mean of 0 and standard deviation of 1.The T-distribution is similar to the Z-distribution, but is sensitive to sample size and is used for small or moderate samples when the population standard deviation is unknown. At large samples, the Z and T samples are very similar.

The T-statistic is used to test hypothesis about an unknown population mean (u) when the value of is unknown. The formula for the T statistic has the same structure as the Z-score formula, the t-statistics is used.

$$Z = \frac{X - \mu}{\sigma}$$

QUESTION NO.14.

ANS.NO.14

1) Is the T-distribution normal yes T-distribution is normal.
2) The T-distribution is used as an alternative to the normal distribution when sample sizes are small in order to estimate confidence or determine critical values that an observation is a given distance from the mean.
3) It is a consequence of the sample standard deviation being a biased or underestimate of the population standard deviation.

4) The probability distribution function of the T-distribution for varying degrees of freedom is illustrated.
5) The T-distribution do superficially appear quite similar to the normal distribution once v is greater than 5.
6) The proportion of measurements within 1.96 standard deviations on either side of the mean.

QUESTION.NO.15

ANS.NO.15.

1) The T-distribution is a hypothetical probability distribution.
2) It is also known as the T-distribution and used to make presumptions about a mean when the standard deviation is not known to us.
3) It is symmetrical bell-shape distribution similar to the standard normal curve.
4) As high as the degrees of freedom (df) the closer this distribution will approximate a standard normal distribution with a mean of 0 and standard deviation of 1.
5) Tail heaviness is determined by a parameter of the T-distribution called degrees of freedom.
6) Smaller value giving heavier tails, and with higher value making the T-distribution resemble a standard normal distribution with a mean of 0 and standard deviation of 1.
7) The T-distribution can be formed by taking many samples.

8) The T-distribution and the centre limited theorem give us knowledge about the relationship between sample means and population means that allows us to make inferences about the population mean.

9) The sample will vary some being highly representative of the population most being fairly representative a few not being very representative at all.

10)   T-distribution can be formed by taking many samples of the same size from a normal population.