UNIT 5

PART A

1. Define Analysis of variance.

ANS : Analysis of variance is a technique that will enable us to test for the significance of the difference among more than two sample means.

2. What are the basic steps in ANOVA?

ANS : i) One estimates of the population variance from the variance among the sample means.

ii) Determine a second estimate of the population variance from the variance within the sample.

iii) Compare these two estimates if they are approximately equal in value, accept the null hypothesis.

3. State the uses of ANOVA.

ANS: Analysis of variance is useful, for determining i) which of various training methods produces the fastest learning record. ii) Whether the effects of some fertilizers on the yields are significantly different.

4. Define replication.

ANS: To estimate the magnitude of an effect in an experiment the principle of randomization and replication are applied randomization by itself is not necessarily sufficient to yields a valid experiment.

5. Why a 2x2 Latin square is not possible? Explain

ANS : In Latin square, the formula for degrees of freedom for residual is d.f $= (n-1)(n-2)$

Substituting n=2, d.f $= 0$, MSE $= \infty$

2x2 Latin square is not possible.