STATISTICS WORKSHEET-8 - submitted by Sukhpal Singh Int 34

1. B
2. B
3. D
4. B
5. B
6. D
7. B
8. A
9. D
10. A
11. A
12. A

13. ANOVA is a statistical technique that is used to compare the means of multiple groups. This method helps us find out if there are any significant differences between the averages of three or more independent groups. In SPSS, ANOVA can be done through the Analyze menu and then by selecting One-Way ANOVA under Compare Means. There are options available in SPSS to personalize ANOVA analysis, such as post-hoc tests and effect size measures. ANOVA is widely used in experimental research and is a crucial statistical analysis tool.

14. The assumptions of ANOVA (Analysis of Variance) are:

    a)Normality: The dependent variable should be normally distributed in each group of the independent variable.

    b)Homogeneity of Variance: The variance of the dependent variable should be equal across all groups of the independent variable.

    c)Independence: The observations in each group should be independent of each other.

    d)If these assumptions are not met, the results of ANOVA may not be reliable.

15. One-way ANOVA is used when we want to compare the means of three or more groups that are independent of each other. It involves only one independent variable, which divides the sample into groups. In contrast, two-way ANOVA is used when we want to study the effects of two independent variables on a dependent variable. It is used to

determine whether there is an interaction between the two independent variables on the dependent variable or if either variable has a significant main effect on the dependent variable. In summary, one-way ANOVA involves one independent variable, while two-way ANOVA involves two independent variables.