



# UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program / Sixth Semester – 2020

Paper: Data Analysis Using SPSS

Course Code: APSY-366 Part – I (Compulsory)

Time: 15 Min. Marks: 10

Roll No. in Fig. ....

Roll No. in Words. ....

Signature of Supdt.: .....

**ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.**

**Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

**Q.1. Encircle the correct choice.**

**(10x1=10)**

1) With SPSS Statistics you can assign one of three levels of measurement to a variable.

Which is the correct list of all three levels?

- a) Nominal - Ordinal - Interval
- b) Categorical - Interval - Ratio
- c) Nominal - Ordinal - Scale
- d) Nominal - Interval – Scale

2) A paired samples t-test is different from an independent sample t-test because it

- a) Assesses each person twice.
- b) Compares groups on correlations.
- c) Compares groups on means.
- d) Compares groups on variances.

3) What type of graph would you use to see the distribution of a scale variable?

- a) Bar chart
- b) Pie chart
- c) Histogram
- d) Scatter plot

4) To generate a Spearman's *rho* test, which set of instructions should you give SPSS?

- a) Analyze>>> Crosstabs>>>Descriptive Statistics >>> Spearman>>>OK
- b) Graphs>>>Frequencies>>>Select Variable>>>Spearman>>>OK
- c) Analyze>>>Compare means>>>ANOVA>>>Spearman >>>OK
- d) Analyze>>>Correlation>>>Bivariate>>>Spearman>>>OK

5) For which of these situations we would use one-way analysis of variance (ANOVA)

- a) The relationship between gender (male or female) and opinion about the death penalty
- b) The relationship between weight and height for 12-year old girls
- c) A comparison of four different age groups with regard to mean hours of watching TV per day
- d) A comparison of four different age groups with regard to proportion of watching TV per day

6) Which of the following format is correct for reporting an independent samples t-test in APA

- a)  $t(52) = 4.8, p < .001.$
- b)  $t(52, 50) = 4.8, p < .001.$
- c)  $t = 4.8, p < .001.$
- d)  $t = 4.8(52), p < .001.$

7) An independent t-test can be used to assess which of the following?

- a) difference between scores obtained on two separate occasions from same participant
- b) It assesses difference between two different groups of participants
- c) it assess goodness of fit
- d) All of the above

8) In which of the following cases could you use a paired-samples t-test?

- a) When assessing relationship between two variables
- b) When comparing two separate groups
- c) comparing the same participants performance before and after training
- d) When comparing two separate groups

9) A result is called statistically significant whenever

- a) the null hypothesis is true.
- b) the alternative hypothesis is true.
- c) the p-value is less or equal to the significance level.
- d) the p-value is larger than the significance level

10) Researchers want to see if men have a higher blood pressure than women do. A study is planned in which the blood pressures of 50 men and 50 women will be measured. What's the most appropriate alternative hypothesis about the means of the men and women?

- a) The sample means are the same.
- b) The sample mean will be higher for men
- c) The population means are the same.
- d) The population mean is higher for men than for women



**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**Part II: Short Answers.**

**Marks-20**

Note: Attempt all questions. Each question carries equal marks

1. What is difference between Pearson and Spearman rank-order correlation? write symbols to denote both and path ways to calculate both in SPSS.
2. Describe difference between parametric test and nonparametric tests, give examples.
3. Define Cohen’s D, when we use it and why its so important to report?
4. Define p value, and discuss it in terms of confidence interval and hypothesis testing
5. Define following terms in regression analysis, briefly.
  - a) R
  - b) R square
  - c) Adjusted R-square

**Part III: Viva Voice exam.**

**Marks – 30**

A student wanted to test whether there was a difference in the mean daily hours of study for students living in THREE different hostels. She selected a random sample of 5 students from each of the Three hostels.

Hostel 1	Hostel 2	Hostel 3
1	4	3
2	2	8
9	3	10
3	6	9
6	4	12

- a) Enter the data into SPSS of all three groups (you will enter all data (hours they studied) in one column and group (hostel 1,2,3 in second column)
- b) Write null and alternative Hypothesis
- c) Run One Way ANOVA using SPSS
- d) Report results as per APA format (with ANOVA table)
- e) Draw your conclusion (as per p value)