



The Islamia University Of Bahawalpur,

BAHAWALNAGAR CAMPUS DEPARTMENT OF APPLIED PSYCHOLOGY FINAL TERM EXAMINATION

Subject: Statistics in Psychology

Course Code: PSY-01105

Semester: 5th

Session:

Program BS Applied Psychology

Teacher: Dr. Rafaquat Ali

Student Name	Roll No	Signature
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Part First (Time 30 Minutes)

Marks=20

Q No. 1: Circle the appropriate option from provided options against each question/statement.

- If scale of measurement is nominal, it is preferred to use ----- measure of central tendency.
 - mean
 - median
 - mode
 - none of a, b & c
- The difference between the highest and lowest scores in a data set is called -----.
 - variance
 - range
 - mean deviation
 - standard error
- In statistics, the normal curve is ----- shaped.
 - bell
 - skewed
 - square
 - circular
- The arithmetic mean of the deviations of the scores from the mean or the median is called-----.
 - variance
 - range
 - standard deviation
 - mean deviation
- The mean, median and mode are equal or same in -----shaped frequency.
 - normal
 - skewed
 - negative skewed
 - square
- There will be no ----- if there is no common value in the data.
 - mean
 - median
 - mode
 - range
- A ----- error occurs when a researcher rejects a null hypothesis that is actually true.
 - type II
 - type III
 - type IV
 - type I
- If it is preferred to use -----if the nature of the population distribution from which samples are drawn is not known to be normal.
 - t-test
 - Chi square
 - ANOVA
 - none of a, b & c
- A ----- statistic is used to calculate the relationship between two categorical (non-numerical) variables,
 - t-test
 - Chi square
 - ANOVA
 - none of a, b & c
- If we have one independent (grouping) variable which has three or more levels (groups), and there is one dependent continuous variable, then we will use ----- test.
 - t-test
 - Chi square
 - ANOVA
 - none of a, b & c
- The ----- test which is a non-parametric test is used to fit one categorical variable to a distribution.
 - t-test
 - chi-square test for independence
 - ANOVA
 - chi-square goodness of fit
- Generally, a p-value (significance level) of ----- is needed to reject the null hypothesis.

- a. less than 5% ($p < .05$)
 c. less than 20% ($p < .2$)
- b. greater than 5% ($p < .05$)
 d. none of a, b & c
13. The ----- assumption assumes that the distribution in the population have the same shapes, means, and variances.
- a. Homogeneity of Variance
 c. independence
- b. Normality
 d. none of a, b & c
14. The ----- measures the relationship between variables measured on an ordinal scale of measurement.
- a. Lassen correlation
 c. f-correlation
- b. Pearson correlation
 d. Spearman correlation
15. Which of the following values indicates the highest possible correlation between variables?
- a. +0.5
 c. +4
- b. +1
 d. +7
16. ----- is used to compare changes in the scores of the same group tested at two different occasions.
- a. Independent sample t-test
 c. Paired sample t-test
- b. Converged sample t-test
 d. Both a & c
17. ----- tells us about the amount and direction of the variation of the data set.
- a. Skewness
 c. ANOVA
- b. Kurtosis
 d. Chi-square
18. Fifty percent of the scores are above the mean, and 50% are below the mean in ----- distribution.
- a. positive skewed
 c. negative skewed
- b. normal
 d. none of a, b & c
19. ----- is most effected by extreme values in the data set.
- a. Median
 c. Mode
- b. Mean
 d. none of a, b & c
20. If we have one independent (grouping) variable which has three or more levels (groups), and there is one dependent continuous variable, then we will use ----- test.
- a. t-test
 c. ANOVA
- b. Chi square
 d. none of a, b & c



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Part Second (Time 35 Minutes)

Marks=14

Q No. 2: Answer the following questions briefly

Marks 14

- Define the term inferential statistics.
- What are the underlying assumptions for ANOVA?
- What is range?
- What is variance?
- What are the underlying requirements for not applying parametric tests?
- What are the advantages of ANOVA?
- What is the difference between Pearson and spearman correlation?

Part Third (Time 55 Minutes)

Marks=16

Q NO. 3: What is chi-square distribution? Discuss types and uses of chi-square test in detail. 8

Q No. 4: what is hypothesis testing? Discuss different steps involved in hypothesis testing in detail. 8