

FULL NAME: \_\_\_\_\_

DATE: January 8<sup>th</sup>, 2024

GROUP NUMBER: \_\_\_\_\_

TIME: 90 minutes

20

**ACTIVITY ONE (10 POINTS)**

Tick (✓) the correct answer:

1. If  $\sigma^2$  is 1.35, the population standard deviation is:  
 0.67  
 1.16  
 1.82  
 2.70
2. A bimodal distribution often suggests that the data were collected with:  
 Two distinct data collection instruments  
 Two distinct data analysis methods  
 Two distinct statistical tests  
 Two distinct populations
3. A sampling approach that divides the population into strata and selects participants non-randomly:  
 Stratified sampling  
 Quota sampling  
 Systematic sampling  
 Cluster sampling
4. In the Kolmogorov–Smirnov test,  $P = .500$ , means:  
 The data are normally distributed  
 The data are not normally distributed  
 The data are significant  
 The data are not significant
5. In a word recognition task, the time taken to respond is:  
 Nominal data  
 Ordinal data  
 Interval data  
 Ratio data
6. If  $p = .0501$  in the Levene's test, then:  
 The variances are homogeneous  
 The data are normally distributed  
 The variances are heterogeneous  
 The data are not normally distributed
7. In the dataset (21, 15, 4, 24, 7, 23, 24, 7), the median is:  
 7  
 24  
 18  
 7 and 24
8. Positive correlation between students' talking time and oral fluency suggests that:  
 Increased talking time increases oral fluency  
 Increased talking time is related to increased fluency  
 Increased talking decreases oral fluency  
 Increased talking time is related to decreased fluency
9. The hypothesis "Increased exposure to authentic materials improves phonetic accuracy" is:  
 Null hypothesis  
 Non-directional hypothesis  
 Directional hypothesis  
 None of the above
10. The role of descriptive statistics is:  
 Summarizing the data of a sample  
 Making predictions about a sample  
 All of the above  
 None of the above

**TURN THE PAGE ...**

**ACTIVITY TWO (5 POINTS)**

Summarize the following dataset in the descriptive statistics table including measures of frequency, measures of central tendency, and measures of spread.

**Dataset**

Participants	Pretest	Posttest
Student 1	5.30	5.64
Student 2	6.75	6.78
Student 3	7.19	7.14
Student 4	5.84	5.79
Student 5	6.43	6.40
Student 6	7.26	7.82

**Descriptive statistics table**

TEST	$\Sigma$	$\bar{x}$	$S^2$	S
Pretest	....	....	....	....
Posttest	....	....	....	....

**ACTIVITY THREE (5 POINTS)**

A researcher employed a structured questionnaire to ask eight people about their use of physical libraries versus use of online libraries with the frequency scale bellow. Summarize the dataset in the descriptive statistics table below:

Frequency scale	Never	Rarely	Sometimes	Often	Always
	0	1	2	3	4

**Dataset**

Participant	Gender	Physical library use	Online library use
Subject 1	Male	3	2
Subject 2	Female	1	3
Subject 3	Male	4	4
Subject 4	Male	2	3
Subject 5	Female	3	4
Subject 6	Male	2	3
Subject 7	Female	2	2
Subject 8	Male	1	3

**Descriptive statistics table**

Gender	Physical library use			Online library use		
	$\bar{x}$	$S^2$	S	$\bar{x}$	$S^2$	S
<i>Female</i>	....	....	....	....	....	....
<i>Male</i>	....	....	....	....	....	....
<i>Total</i>	....	....	....	....	....	....