

OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE

FACULTY OF EDUCATION

DEPARTMENT OF SPECIAL EDUCATION AND CURRICULUM STUDIES

M.A. Ed, M. Ed and Ph. D Degree Examination

2011/2012 Harmattan Semester Examination August 2012

Course Code: SEC603/SEC625

Course Title: Educational Statistics I & II

Time allowed: 2 hours

INSTRUCTION: All M. Ed, M.A. Ed candidates answer question 1 and any other 4 questions, Ph. D candidates answer all questions.

1. Give a **one** word or **one** sentence answer. Anything besides this will be scored zero.
 - a. A researcher reports that 28% of T.V audience that watches football are adults. Do you think this proportion is a parameter or statistic? Give reason for your answer,
 - b. Using appropriate statistical symbols only, write out the standard deviation of population when $n < 10$
 - c. Using appropriate statistical symbols only, write out the estimate of population standard deviation based on sample data; when $n < 10$
 - d. The following represent the number of cars sold by a company in five months
100,100,300,400,600 compute the μ and σ for the recorded sale of cars.
 - e. In an experiment, what is the name given to the distribution of a statistic?
 - f. What is the name given to the assumption that experimental results are due to chance alone?
 - g. In an experiment, your alternative hypothesis that will be confirmed if you reject the null hypothesis is also known as your _____
 - h. What is the name given to the experimental results that have not occurred by chance alone?
 - i. An experimenter obtained an approximate normal curve. When she graphed her data she marked off the area of critical region on the graph. The probability of her obtaining results in this critical region by chance is called _____
 - j. As you can recall, $\sigma_{\bar{x}} = \sigma/\sqrt{n}$. Since there is no way of knowing the value of σ in this case, what is the best estimate of solving the problem? (Rewrite the equation appropriately before explaining the solution in a sentence)
2.
 - a. Mention **two** most important of the several questions that frequency distribution can answer.
 - b. Explain why the mean is the preferred measure of central tendency.
 - c. What does a measure of variability simply indicate?
 - d. How do you refer to similar scores with low variability?
 - e. What are the **three** forms in which an author can present the results of his/her statistical analysis?

- f. What can you say about the figure of an approximately normal distribution?
- g. What is $\sqrt{\sum X - \sum \sqrt{X}}$ of the following set of scores:
50,60, 80, 80, 90,90,90,90,100,110,120,120 ?

3. Copy and complete the following tables with appropriate headings and subheadings.

Table 1

	**	**	**	**	Sig.
Regression	6988.208	1	**	**	0.000.
Residual	**	**	**		
Total	11050.500	49			

Table 2

	**	**	**	**	Sig.
Between groups	7078.619	3	**	**	0.006.
Within groups	**	**	**		
Total	344344.8	604			

- 4.
- On a positive XY quadrant, show clearly the graphs of normal distributions with equal means but different standard deviations.
 - As in **(a)** above, show clearly the graphs of normal distributions with standard deviations equal but with different means.
 - On a scattergram show a graph of strong curvilinear relationship among the distribution.
 - Draw the graph of a distribution with extreme scores to the left. What is the name? Label the graph's $\bar{X}$, M_o and M_{dn} .
 - Draw the graph of a distribution with extreme scores to the right. What is the name? Label the graph's $\bar{X}$, M_o and M_{dn} .
 - For a large sample confidence interval for P, the formular is $P = \bar{p} \pm Z_p \cdot \frac{\sqrt{\bar{p}q}}{\sqrt{n}}$,
Compute the **two** values of the range of P if
 $\bar{p} = 0.20$, $Z_p = 2.58$, $q = 0.80$, $n = 144$

5. Consider the following scores obtained by a set of students in a mathematics test.

84	82	78	85	75
79	90	95	90	86
88	83	73	81	94
98	88	88	75	87
83	94	88	91	89

- Using $i = 4$, display the frequency distribution of the test scores.
- On the same table, display the midpoint scores.
- Compute $\sum f x$ and hence the means score.
- Mention **three** measures of variability and compute them from the data

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