



OSUN STATE UNIVERSITY, OSOGBO, NIGERIA
College of Science, Engineering and Technology
DEPARTMENT OF STATISTICS
2024/2025 Harmattan Semester Examination.
Descriptive Statistics; STA 111

Instruction: Answer ALL Questions. Duration: 1½ Hours. UNITS: 3 Units

1. A lecturer from statistics department asked students in a class their ages. On the basis of this information, the lecturer states that the average age of the students based on the number present in his class that day is 21 years. This is an example of
 - a. a census
 - b. descriptive statistics
 - c. parameter
 - d. statistic
 - e. None of the above answers is correct.
2. A tabular summary of a set of data showing the fraction of the total number of items in several classes is a
 - a. frequency distribution
 - b. relative frequency
 - c. frequency
 - d. cumulative frequency distribution
 - e. None of the answers is correct.
3. The standard deviation of a sample of 100 observations equals 64. The variance of the sample equals
 - a. 8
 - b. 10
 - c. 6,400
 - d. 4,096
 - e. None of the above answers is correct.
4. The standard deviation of a sample of 100 observations equals 64. The variance of the sample equals
 - a. 8
 - b. 10
 - c. 6.4
 - d. 4,096
 - e. None of the above answers is correct.

Table 1.2: A researcher has collected the following sample data.

Values	5	12	6	8	5	
	30	84	30	96	20	34
Frequency	6	7	5	12	4	

5. Refer to Table 1.2, The median is
 - a. 5
 - b. 6
 - c. 7
 - d. 8
 - e. None of the above answers is correct.
6. Refer to Table 1.2, The mode is
 - a. 5
 - b. 6
 - c. 7
 - d. 8
 - e. None of the above answers is correct.
7. Refer to Table 1.2, The mean is
 - a. 5
 - b. 6
 - c. 7.6
 - d. 8.2
 - e. None of the above answers is correct.

$$\frac{\sum fx}{\sum f} = \frac{260}{34}$$

Table 1.3: A researcher has collected the following sample data. The mean of the sample is 5.

3	5	12	3	2
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$$\frac{\sum (x - \bar{x})^2}{n}$$

8. Refer to Table 1.3. The variance is
 - a. 80
 - b. 4.062
 - c. 13.2
 - d. 16.5
 - e. None of the above answers is correct.
9. Refer to Exhibit 1.3. The standard deviation is
 - a. 8.944
 - b. 4.062
 - c. 13.2
 - d. 16.5
 - e. None of the above answers is correct.
10. Refer to Table 1.3. The coefficient of variation is
 - a. 72.66%
 - b. 81.24%
 - c. 264%
 - d. 330%
 - e. None of the above answers is correct.

x	x - \bar{x}	
3	3 - 5	-2
5	5 - 5	0
12	12 - 5	7
3	3 - 5	-2
2	2 - 5	-3

11. Refer to Table 1.3. The range is
 a. 1 b. 2 c. 10 d. 12
 e. None of the above answers is correct.
12. The aggregate of all units in a target universe is called
 a. Sample b. Population c. Sampling frame d. Stratum
 e. Sampling
13. Cost of living index (CLI) numbers are also used to find the real wages by the process of
 a. Deflating of index number b. Splicing of index number
 c. Base shifting d. None of the above
14. The sampling method used to detect errors in invoice is
 a. Simple Random Sampling b. Stratified sampling
 c. Multistage sampling d. Systematic sampling e. Cluster
15. What is the standard error of a sample from daily sales for a year whose variance is 144 and the sample size is 100.
 a. 1.0 b. 1.3 c. 1.2 d. 1.4 e. 1.6
16. Statistic is to _____ as Parameter is to _____
 (a) Population and Demography (b) Population and Statistics
 (c) Demography and Statistics (d) Sample and Population (e) Sampling and Census
17. Arithmetic Mean of 98 items is 50. Two items 60 and 70 were left out at the time of calculations. What is the correct mean of all items?
 (a) 50.00 (b) 50.70 (c) 49.20 (d) 50.30 (e) 48.90
18. The mean of 100 items is 50 and their standard deviation is 4. Find the sum of squares of all the items
 (a) 250,000 (b) 251,000 (c) 251,600 (d) 249,000 (e) 250,600
19. The degree at which a distribution depart from symmetry is known as _____
 (a) Correlation (b) Skewness (c) Kurtosis (d) Regression
 (e) Regression
20. The degree of Peakedness of a distribution is measure by its _____
 (a) skewness (b) Kurtosis (c) Arithmetic mean (d) Correlation
 (e) Regression
21. In a moderately asymmetrical distribution, the mode and median are 32.1 and 35.4 respectively, calculate the mean.
 (a) 27.1 (b) 34.3 (c) 32.3 (d) 30.3 (e) 37.05
22. In a moderately skewed distribution, the mean and the median are 25.6 and 26.1 inches respectively. What is the mode of the distribution?
 (a) 27.1 (b) 34.3 (c) 32.3 (d) 30.3 (e) 28.7
23. If the mode and median of a moderately asymmetrical series are 16" and 17" respectively. What would be its most probable mean?
 (a) 15.5 (b) 16.55 (c) 14.55 (d) 13.65 (e) 17.5
24. The two (2) aspects of statistics are:
 (a) Descriptive and Inferential (b) Descriptive and Parameter
 (c) Inferential and Statistics (d) Statistics and Parameter
 (e) Regression and Correlation
25. An example of quantitative variable is _____
 (a) Wages and Salaries (b) Sex (c) Colour of skin
 (d) Type of building (e) Beauty
26. Most widely used weighted index number is
 a. Laspyres index b. Paasche's index

$$\bar{x} = \frac{A + \frac{EFd}{EF}}{EF}$$

$$98 + \frac{46}{98}$$

$$d = (C - A)$$

$$A = 98$$

$$C = 50$$

- c. Fisher's Ideal index d. Marshall-Edgeworth
27. Methods of data collection does not include
 (a) Personal investigation (b) Teams of investigation (c) Questionnaire
 (d) Goal getting (e) Telephone Interview
28. Consumer price index is equal to
 a. Laspyres price index b. Paasche's price index
 c. Fisher's ideal price index d. Bowley's (Marshall Edgeworth) price index
29. What is the nature of the distribution whose mean is 30.75, median is 43.65 and Standard deviation is 20.76?
 (a) Positively skewed distribution (b) Negatively skewed distribution
 (c) Normal distribution (d) Poisson distribution (e) Spatial distribution
30. Which of the following would be most likely to produce selection bias in a survey?
 (a) Using questions with biased wording
 (b) Only receiving responses from half of the people in the sample
 (c) Conducting interviews by telephone instead of in person
 (d) Using a random sample of students at a University to estimate the proportion of people who think the legal drinking age should be lowered.
 (e) getting responses through mail questionnaire instead of contact distribution
31. Fisher's Index number is based on
 a. Arithmetic mean of Laspyres and Paasche's index
 b. Geometric mean of Laspyres and Paasche's index
 c. Harmonic mean of Laspyres and Paasche's index
 d. None of the above
32. An example of discrete data is _____
 (a) Number of students in a class (b) Scores in the examination
 (c) Age (d) Height

Use Figure 1.1 to answer questions 33 to 37.

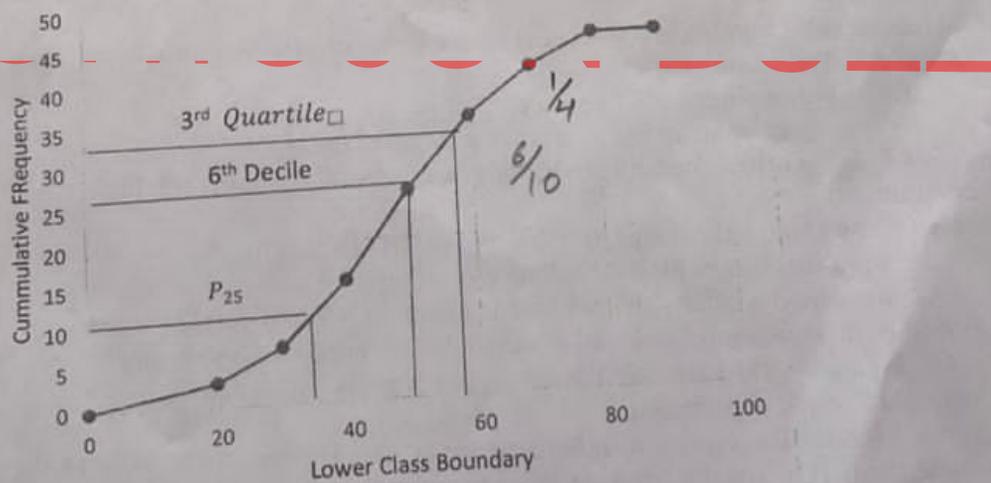


Fig. 1.1: Graph of a Total Frequency of 45

33. What is the name of the graph presented in Fig 1.1?
 (a) Cumulative frequency polygon (b) Goof
 (c) Ogive (d) Histogram
34. The value of the median is _____
 (a) 54.3 (b) 59.3 (c) 20.3 (d) 80.3

35. The value of the 3rd Quartiles (Q_3) is -----
 (a) 57.1 (b) 76.1 (c) 21.1 (d) 92.1
36. The value of the 6th Deciles (D_6) is -----
 (a) 57.1 (b) 76.1 (c) 21.1 (d) 92.1
37. The value of the 25th Percentile is -----
 (a) 37.1 (b) 76.1 (c) 21.1 (d) 92.1
38. A relative frequency distribution presents frequencies in terms of -----
 (a) Fractions (b) Percentage (c) Whole numbers (d) Integers
39. A statistic which is not measurable is called
 (a) A constant (b) An attribute (c) A variable (d) A parameter
40. If \bar{x} is 4 and the distribution is 2, 3, 4, 5, 6, the sum of squared deviations from the \bar{x} will be
 (a) 8 (b) 10 (c) 6 (d) Zero
41. Which of the following is not a major method of data collection?
 (a) Questionnaire (b) Focus Group (c) Correlational method (d) Interview method
42. One of the following is not a quality of good questionnaire design.
 (a) It must be brief (b) Questions should fall in logical sequence
 (c) Yes/No answers are preferred (d) Calculation questions are preferred
 (e) ambiguous questions are not allowed.
43. Which of the sampling method is used for heterogeneous population?
 a. Simple Random Sampling b. Cluster sampling
 c. Stratified sampling d. Multistage sampling e. Systematic sampling
44. The two main sources of statistical data are _____ and _____
 (a) Discrete and Continuous (b) Primary and Secondary
 (c) Qualitative and Quantitative (d) Sample and Population (e) Field and Newspapers
45. When an index number is constructed from a group of variables measured in the same unit, it is considered
 a. Aggregate index b. Consumers' index
 c. Value index d. None of the above
46. ----- is the difference between the largest observation and the smallest observation
 (A.) Class Mark (B) Range (C). Midpoint (D.) Class Interval
47. is a measure of how spread out a distribution.
 (A.) Standard deviation (B) Arithmetic Mean (C) Variance (D.) Variation
48. Which of these measures of location cannot be calculated arithmetically?
 (A) Median (B) Mode (C) Mean (D) Standard deviation
49. In a right-skewed distribution
 (A) The median equals the arithmetic mean (B) The median is less than the arithmetic mean (C). The median is larger than the arithmetic mean (D). None of the above
50. When the distribution has more than one mode, it is called.....
 (A.) Double Mode (B) Bimodal (C) Multi-modal (D) Modal Mean