

BOWEN UNIVERSITY
COLLEGE OF MANAGEMENT AND SOCIAL SCIENCES
ECONOMICS PROGRAMME
B.Sc. DEGREE EXAMINATION 2021/2022 ACADEMIC SESSION
FIRST SEMESTER

Course Title: Introductory Statistics I

Course credit: 2

Course code: ECN 105

Time Allowed: 2 hours

Date: March 2022

Instruction: Provide your answers clearly and show your workings step by step.

SECTION A: You are required to attempt all questions. Each question award 2 marks

1. A graph shows the of the distribution of a set of data
a. size b. shape c. range d. image
2. The observation which occurs most frequently in a sample is the
a. Median b. Mean deviation c. Standard deviation d. mode
3. Decile refers to division of series into
a. Two parts b. Four parts c. Ten parts d. Hundred parts
4. Arrangement of data in the given series is required while computing
a. Mean b. Median c. Mode d. Percentile
5. Lower limit of first group and upper limit of last group are undefined in an
a. Open-ended classes b. close-end classes c. inclusive d. exclusive
6. The accepted value is 75.63. Which of the following correctly describes this student experimental data? Trials 1: measurement 75.92; Trial 2: measurement 76.00; Trial 3: measurement 75.96.
a. Accurate but not precise
b. Precise but not accurate
c. Both precise and accurate
d. Neither accurate nor precise
7. The accepted value is 1.43. Which of the following correctly describes this student experimental data? Trial 1: measurement 1.92; Trial 2: measurement 1.88; Trial 3: measurement 1.29.
a. Accurate but not precise
b. Precise but not accurate
c. Both precise and accurate
d. Neither accurate nor precise
8. The accepted value is 5.00. Which of the following correctly describes this student experimental data? Trial 1: measurement 5.02; Trial 2: measurement 5.03; Trial 3: measurement 5.00.
a. Accurate but not precise
b. Precise but not accurate
c. Both precise and accurate
d. Neither accurate nor precise
9. A frequency polygon is a line graph of the class frequency plotted against the
10. is the difference between the upper and lower boundaries of any class.

11. Tabular presentation is an orderly and precise arrangement of numerical information into and
12. The data point 2 is considered as a/an in the following set of values: 202, 158, 169, 2, 325 and 189.
13. The dependent variable is a variable whose variation depend onvariable.
14. is an arrangement of raw numerical data in ascending and descending order.
15. Distributions are when scores pile up on one side of the distribution, leaving a "tail" of a few extreme values on the other side.

Indicate whether the following statement is true or false.

16. In statistics, certainty is guaranteed.
17. Range can be calculated by observing the difference between the smallest and the largest observation in a group data.
18. Population of any object of interest may be animate or inanimate.
19. A frequency table has more than two components
20. Raw data are usually large and organised in ascending and descending order.

(40 marks)

Section B: Answer two questions. Number one is compulsory and any other one [30 marks]

1. The table below shows the frequency distribution of monthly expenditure on feeding for some selected household.

| Expenditure on feeding (\$) | No of households |
|-----------------------------|------------------|
| 15-19 | 120 |
| 20-24 | 150 |
| 25-29 | 240 |
| 30-34 | 150 |
| 35-39 | 240 |
| 40-44 | 180 |
| 45-49 | 120 |

You are required to

- i. Compute the mean, median, standard deviation 5 marks
- ii. Compute the class mark, class boundary, cumulative frequency of the distribution, relative frequency and the relative cumulative frequency. 10 marks

2. Distinguish between the following terms

a. i. Qualitative and Quantitative data

4 marks

ii. Discrete and Continuous variable

4 marks

iii. Dependent and independent variable

4 marks

b. As a researcher, describe the basic steps on how to quantify a qualitative data. 3 marks

3. Evaluate the following sum

i. $\sum_{k=1}^6 2k - 2$

ii. $\sum_{m=1}^4 m^3 + 3$

iii. $\sum_{l=1}^5 l^2$

15 marks