GARISSA UNIVERSITY

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BUSINESS MANAGEMENT

CERTIFICATE IN BUSINESS MANAGEMENT

UNIT CBM 12: BASIC MATHEMATICS II

May - august 2021

**QUESTION ONE**

1. Calculate the mean, median and the mode from the following frequency table. (10mks)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| grade | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 |
| frequence | 7 | 81 | 192 | 312 | 218 | 82 | 18 |

1. Differentiate between correlation and regression (2mks)
2. State four characteristic of normal distribution (4mks
3. Calculate the harmonic mean from the following data.

5.3, 17, 2, 2.3, 8, 11, 15, 20.8, 11 (4mks)

f) Highlight five qualities of good measure of central tendency (5mks

1. Define the term correlation (2mks)
2. State the three types of correlation (3mks

**QUESTION TWO**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| MARKS | 0-10 | 11-20 | 21-30 | 31-40 | 41-50 |
| NO. OF STUDENTS | 12 | 9 | 15 | 11 | 8 |

1. Using an assumed mean of 25.7.calculate
2. mean (3mks)
3. median (3mks)
4. modal class (1mk)
5. standard deviation (3mks)
6. Discuss three methods of data collection. (6mks)
7. Highlight any four sources of secondary data (4mks)

**QUESTION THREE**

2006 2007

Price Qty price Qty

Commodity;

A 2 8 4 6

B 5 10 6 5

C 4 14 5 10

D 2 19 2 13

1. Calculate
2. Laspeyres index number (3mks)
3. Paasche index number ( 3mks)
4. Dorbish index number (3mks)

iv. Fishers index number (3mks)

v. Marshall index number (3mks)

1. I. Define the term correlation (2mks)

ii. State the three types of correlation (3mks

**QUESTION FOUR**

1. The following represents qualitative analysis and financial accounting for a given students. The ranking was given as below.

|  |  |  |
| --- | --- | --- |
| student | Qualitative ranking | Financial ranking |
| A | 2 | 3 |
| B | 7 | 6 |
| C | 6 | 4 |
| D | 1 | 2 |
| E | 4 | 5 |
| F | 3 | 1 |
| G | 5 | 7 |

Required;

1. Calculate Rank correlation coefficient (10mks)
2. Explain three characteristics of binomial distribution (6mks)
3. Calculate the arithmetic mean from the following data. (4mks)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 20 | 43 | 75 | 67 | 72 | 49 | 37 | 9 | 8 | 6 |

**QUESTION FIVE**

1. Write short notes on the following concepts
2. spatial classification (3mks)
3. manifold classification (3mks)
4. Qualitative classification (3mks)
5. Temporal classification (3mks)
6. Quantitative classification (3mks)
7. Using the data below calculate quartile deviation and its coefficient. (5mks)

20, 32, 26, 45, 51, 34, 49, 47, 34, 27