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# DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: III

551/552/252 MA 32 BUSINESS STATISTICS

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) “Statistics is all-pervading”. Elucidate this statement. (10 Marks)
- b) Write a note on the scope and limitations of Statistics. (10 Marks)
2. a) Find the median for the following series using graphical method: (10 Marks)

Class interval	Frequency
0-10	6
10-20	12
20-30	22
30-43	37
40-50	17
50-60	8
60-70	5

- b) Compute Quartile deviation from the following data: (10 Marks)

Class	Frequency
10-20	12
20-30	19
30-40	5
40-50	10
50-60	9
60-70	6
70-80	6

3. a) Explain with details different types of skewness.(10 Marks)

- b) Given the following data, calculate the Karl Pearson's coefficient of skewness: **(10 Marks)**

$$\sum x = 452, \sum x^2 = 24270, \text{Mode} = 43.7, \text{ and } N = 10$$

4. a) Briefly explain scatter diagrams. **(10 Marks)**  
 b) Calculate Karl Pearson's coefficient of correlation from the following data: **(10 Marks)**

x	6	8	12	15	18	20	24	28	31
y	10	12	15	15	18	25	22	26	28

5. a) Explain types of index numbers. **(10 Marks)**  
 b) Compute price index for the following data by applying weighted average of price relatives method using (i) Arithmetic mean and (ii) Geometric mean.

Item	P <sub>0</sub>	Q <sub>1</sub>	P <sub>1</sub>
Wheat	3.0	20kg	4.0
Flour	1.5	40kg	1.6
Milk	1.0	10kg	1.5

**(10 Marks)**

6. a) Define Statistics and its importance in your field of study. **(10 Marks)**  
 b) What are the major limitations of Statistics? Explain with suitable examples. **(10 Marks)**
7. a) The following are the weights of 10 children admitted in a hospital on a particular day. Find the mean deviation about mean, median and their coefficients of mean deviation. 7,4,10,9,15,12,7,9,9,18. **(10 Marks)**  
 b) Calculate the value of quartile deviation and its coefficient from the following data

Roll number	Marks
1	20
2	28
3	40
4	12
5	30
6	15
7	50

**(10 Marks)**

