

**ALUPE UNIVERSITY  
COLLEGE**

*... Bastion of Knowledge...*

P. O.Box 845-50400 Busia(K)

principal@auc.ac.ke

Tel: +254 741 217 185

+254 736 044 469

off Busia-Malaba road

**OFFICE OF THE DEPUTY PRINCIPAL  
ACADEMICS, RESEARCH AND STUDENTS' AFFAIRS**

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**UNIVERSITY EXAMINATIONS  
2019 /2020 ACADEMIC YEAR**

**...2.... YEAR .....1... SEMESTER REGULAR EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF BUSINESS  
MANAGEMENT**

**COURSE CODE: BBM 211**

**COURSE TITLE: BUSINESS STATISTICS (MAIN EXAM)**

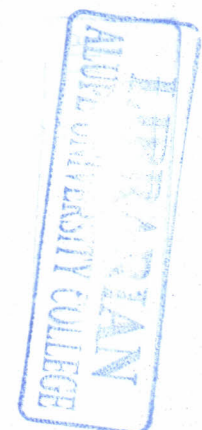
**DATE: 11/ DEC/ 2019**

**TIME: 9.00-12.00**

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**INSTRUCTION TO CANDIDATES**

- Answer Question **ONE** and any other **TWO** questions
- Question **ONE** carries 30 marks



### QUESTION ONE

The data below on retirement benefits and number of retirees relates to Neflits Company;

|                     |       |        |        |        |        |       |         |
|---------------------|-------|--------|--------|--------|--------|-------|---------|
| Retirement benefits | 10-20 | 20 -30 | 30 -40 | 40 -50 | 50 -60 | 60-70 | 70 – 80 |
| No of retirees      | 10    | 13     | 15     | 17     | 14     | 12    | 9       |

- a) Calculate the mean **(3marks)**
- b) Calculate the median and mode **(6marks)**
- c) Calculate variance and Standard deviation of your frequency distribution **(6 marks)**
- d) Calculate geometric mean **(4 marks)**
- e) Calculate harmonic mean **(4 marks)**
- f) Explain the uses of probability in the modern business environment **(4 marks)**
- g) Discuss the uses of regression analysis **(4 marks)**

### QUESTION TWO

- a) Discuss three instruments of data collection **(6 marks)**
- b) Discuss five limitations of statistics **(5 marks)**
- c) From the data below calculate the product moment coefficient of correlation stating the relationship portrayed **(9 marks)**

|   |    |    |    |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|----|----|----|
| X | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 65 | 70 | 75 |
| Y | 38 | 45 | 50 | 35 | 42 | 46 | 28 | 20 | 22 | 34 |

### QUESTION THREE

- a) Discuss four limitations of computing index numbers **(4 marks)**
- b) The data given below indicates the prices and production of some horticultural products in Central Territory:

| Produce  | Production   |      | Price per box (Shs) |      |
|----------|--------------|------|---------------------|------|
|          | (1000 boxes) |      |                     |      |
|          | 1980         | 1990 | 1980                | 1990 |
| Cabbages | 486          | 620  | 10                  | 15   |
| Tomatoes | 220          | 374  | 22                  | 31   |
| Onions   | 470          | 614  | 18                  | 20   |
| Spinach  | 431          | 557  | 13                  | 17   |

**Required:**

Calculate the increase or decrease in prices from 1980 on the basis of the following indices:

- a) Laspeyres index (4 marks)
- b) Paasche index (4 marks)
- c) Marshall – Hedge worth index (4 marks)
- d) Fisher's index. (4 marks)

**QUESTION FOUR**

- a) Distinguish between correlation and regression analysis (4 marks)
- b) Define dispersion and explain the qualities of a good average (3 marks)
- c) Explain the various statistical methods (5 marks)
- d) Draw diagrams showing positive and negative skewness. (4 marks)
- e) Distinguish between classification and tabulation (4 marks)

**QUESTION FIVE**

- a) Using the least square method, calculate the regression equations of y on x from the following data:

x     10     20     30     40     50

y     20     50     30     80     70

(12 Marks)

- b) Define the term classification and discuss its main object

(8 Marks)