

**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2015/2016 ACADEMIC YEAR**

**SECOND YEAR FIRST EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF ARTS (ECONOMICS)**

**COURSE CODE: ECO 212**

**COURSE TITLE: INTRODUCTION TO STATISTICS 1**

**INSTRUCTIONS:**

Answer question **ONE** and other **THREE** questions. Answer each question on a New Page.

**QUESTION ONE (25 MARKS)**

1. Define statistics. (1 marks)
2. Explain any FIVE importance of studying statistics in the field of business. (5 marks)
3. Explain what is meant by the following terms as used in sampling: (3 marks)
4. Simple Random Sampling
5. Systematic Sampling
6. Stratified Sampling
7. The following report was prepared by an Examiner Officer on the performance of Mwei District in a National Examination.

Out of 3,500 male candidates below 20 years of age, 500 passed and 300 failed. Of the 1100 male candidates 20 years old and over, 200 passed and 900 failed.

As regards the female candidates, out of 500, below 20 years of age, 100 passed and 400 failed. Of these 340 females 20 years old and over, 80 passed and 260 failed.

Required: Present the above information in a tabular form. (5 marks)

1. From the following information, construct a pie chart.

Product Sales (000, s)

A 200

B 150

C 100

D 150 (4 marks)

1. The following figures were taken from a survey on a certain business firm.

Goods sold

No. of establishments Net Output (000, s)

23 104

25 250

26 850

20 1400

15 2200

7 3100

Using the above information, draw a Lorenze Curve and interpret. (7 marks)

**QUESTION TWO (15 MARKS)**

1. The following distribution shows daily wages of 100 employees.

Wages (sh) No. of employees

0 – 30 20

30 – 60 35

60 – 90 30

90 – 120 15

Required: Draw the following from the above

1. Ogive curve
2. Percentage ogive curve
3. Histogram
4. Frequency polygon
5. Frequency curve . (10 marks)
6. Calculate the arithmetic mean from the following data using an assumed mean of 25 by short cut method. (5 marks)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Values | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| Frequency | 20 | 43 | 75 | 67 | 70 | 45 | 40 | 10 | 8 | 6 |

**QUESTION THREE (15 MARKS)**

1. State three important methods of studying correlation. (3 marks)
2. Calculate the Karl Pearson’s coefficient of correlation between X and Y given.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 23 | 27 | 28 | 28 | 28 | 30 | 30 | 33 | 35 | 38 |
| Y | 18 | 20 | 22 | 27 | 21 | 29 | 27 | 29 | 28 | 29 |

(12 marks)

**QUESTION FOUR (15 MARKS)**

A shopper looks at the price of minced beef in various butcher’s shops and finds the following prices (in pence) per half – kg.

100, 130, 96, 146, 118, 144, 126, 130, 120, 126, 88, 158, 126, 122, 132, 128, 116, 126

Find:

1. The mean price. (4 marks)
2. The range. (3 marks)
3. The quartile deviation. (4 marks)
4. The mean deviation. (4 marks)

**QUESTION FIVE**

1. Outline four methods of collecting primary data. (4 marks)
2. Calculate the Regression Equation of X and Y from the following data. (11 marks)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 1 | 2 | 3 | 4 | 5 |
| Y | 2 | 5 | 3 | 8 | 7 |