STRATHMORE UNIVERSITY

ORGANISING AND CONDENSING DATA

HOME- WORK (30 MARKS)

1. Every week the number of missed calls was recorded in a certain company switchboard. This was done for 50 weeks and the observations were tabulated as shown below;

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of missed calls** | 11-15 | 16-20 | 21-25 | 26-30 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 |
| **Number of weeks** | 2 | 3 | 4 | 11 | 14 | 6 | 7 | 2 | 1 |

Plot an ogive for the above data [4 marks]

1. The examination marks in a statistics test, for 72 students were as follows:

36 62 15 28 60 30 25 35 75 14 16 33 58 72 80 92 44 57 55 56 70 34 40 18 15 28 32 60 57 68 83 30 32 40 38 45 48 52 58 62 65 75 84 63 58 47 55 60 38 25 18 29 15 32 35 38 45 43 46 53 58 64 68 54 59 60 61 64 65 70 78 90

Using a class interval of 10, that is 10 – 19; 20 – 29… make a frequency distribution table. [3 marks]

1. The number of people who attended an agricultural show in one day was 510 men, 1080 women and some children. When the information was represented on a pie chart, the combined angle for the men and children was 2160. Find the angle representing the children. [3 marks]
2. You have conducted a market survey with a sample size of 50 regarding the acceptability of a new product which your company wants to launch. The scores of the respondents on the appropriate scale are as follows:

40 45 41 45 45 30 39 8 48 25 26 9 23 24 26 29 8 40 41 42 39 35 18 25 35 40 42 43 44 36 27 32 28 27 25 26 38 37 36 35 32 28 40 41 43 44 45 40 39 41

Prepare a Stem – and – leaf plot of the distribution. [4 marks]

1. Plot a frequency polygon for the data below. [4 marks]

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 5 - 9 | 10 – 14 | 15 – 19 | 20 - 24 | 25 – 29 | 30 – 34 | 35 - 39 | 40 – 44 |
| F | 2 | 5 | 3 | 7 | 12 | 10 | 6 | 4 |

1. A sample consists of 34 observations recorded corredt to the nearest integer, ranging in value from 201 to 337. If it is decided to use seven classes of width 20 integers and to begin the first class limit at 199.5, find the class limits and the class mid – points of the seven classes. [4 marks]
2. In a sample study about coffee habit in two towns, the following information was received:

Town A: Females were 40%; Total coffee drinkers were 45% and male non – coffee drinkers were 20%.

Town B: Males were 55%; Male non – coffee drinkers were 30% and female coffee drinkers were 15%.

Represent the above data in tabular form. [4 marks]

1. Represent the following data by meas of a histogram [4 marks]

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weekly wages(in 00Ksh) | 10 – 15 | 15 – 20 | 20 – 25 | 25 – 30 | 30 – 40 | 40 – 60 | 60 – 80 |
| No. of workers | 7 | 19 | 27 | 15 | 12 | 12 | 8 |