

**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2017/2018 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER EXAMINATION**

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

**COURSE CODE: BBM 204R**

**COURSE TITLE: BUSINESS STATISTICS**

**DATE: 5TH FEBRUARY, 2018**

**TIME: 9.00 A.M-12.00 NOON**

**INSTRUCTIONS TO CANDIDATES**

Answer **ALL** the questions in section A and any **THREE** questions in section B.

**Section A (compulsory)**

**Question one**

1. Define the following terms:
2. Statistics. (2 marks)
3. Measure of central tendency. (2 marks)
4. Probability. (2 marks)
5. Find the mean deviation from the mean of the numbers 2, 3, 5, 6, 7, 9, 10, 12. (3 marks)
6. Under what conditions might secondary data be used and what are its possible disadvantages compared with the use of primary data. (5 marks)
7. Highlight four considerations in the design of a questionnaire. (4 marks)
8. The following frequency distribution shows the ages of new car buyers at the Koech Automobile Agency.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age of buyers (years) | 20-30 | 30-40 | 40-50 | 50-60 |
| No. of customers | 116 | 248 | 234 | 112 |

Use the data to evaluate the;

1. Standard deviations. (5 marks)
2. Co-efficient of variation. (2 marks)

**Section B (answer any three questions)**

**Question two (15 marks)**

1. The following data reflects the traffic density and accident rate in some roads.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Traffic density | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 |
| Accident rate | 2 | 4 | 5 | 5 | 8 | 15 | 24 | 30 | 32 |

Use the data to;

1. Evaluate correlation co-efficient. (6 marks)
2. Comment on your results. (2 marks)
3. Two managers are asked to rank a group of employees in order of potential for eventually becoming top managers. The ranking are as follows.

|  |  |  |
| --- | --- | --- |
| Employee | Rank by manager 1 | Rank by manager 2 |
| A | 10 | 9 |
| B | 2 | 4 |
| C | 1 | 2 |
| D | 4 | 3 |
| E | 3 | 1 |
| F | 6 | 5 |
| G | 5 | 6 |
| H | 8 | 8 |
| I | 7 | 7 |
| J | 9 | 10 |

Use the data to compute;

1. Coefficient of rank correlation. (6 marks)
2. Comment on the value in (i) above. (1 mark)

**Question three (15 marks)**

1. Highlight any four factors involved in determining the size of a sample. (4 marks)
2. State three methods of sampling. (3 marks)
3. Discuss any four importance of statistics. (8 marks)

**Question four (15 marks)**

1. The probability of a certain operation being successful is 0.6. what is the probability of three consecutive operations being failures? (3 marks)
2. A firm is independently working on two separate jobs. There is a probability of only 0.4 that either of the jobs will be finished on time. Find the probability that;
3. Both of the jobs finished on time. (3 marks)
4. Neither of the jobs finished on time. (3 marks)
5. Just one of the jobs finished on time. (3 marks)
6. At least one of the jobs is finished on time. (3 marks)

**Question five (15 marks)**

1. State any three measures of dispersion. (3 marks)
2. Distinguish between the following terms;
3. Discrete variables and continuous variables. (2 marks)
4. Quantitative data and qualitative data. (2 marks)
5. Quantiles and quartiles. (2 marks)
6. Explain the advantages of collecting information by personal interview. (6 marks)