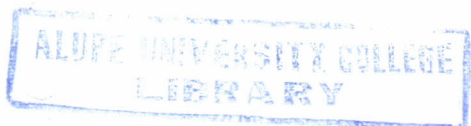


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**ALUPE UNIVERSITY  
COLLEGE**  
*...Bastion of Knowledge...*

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**

## **2018 /2019 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER REGULAR EXAMINATION**

### **FOR THE DEGREE OF BACHELOR OF ARTS IN ECONOMICS**

**COURSE CODE:IRD 101**

**COURSE TITLE: QUANTITATIVE SKILLS**

**DATE: 11/12/2018**

**TIME: 9.00am -12.00 pm**

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#### **INSTRUCTION TO CANDIDATES**

- **SEE INSIDE**

**THIS PAPER CONSISTS OF 4 PRINTED PAGES**

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## IRD 101: QUANTITATIVE SKILLS 1

### INSTRUCTIONS TO CANDIDATES

- i. Answer Question **ONE** and any other **TWO** questions
- ii. Time allowed: 3 hours



### QUESTION ONE

a) In a given survey of 1000 villagers of whom 60% were men it was revealed that; 30% of men surveyed were old and 75% of women were young. For old men 70% were illiterate and 20% of old women were literate. The literacy level among young people was 80% and 60% for men and women respectively. Present the above data in a table. (5 marks)

b) The following data represents lengths of different sampled items in centimeters

138 164 150 132 144 125 149 157 146 158 140 147 136 148 152 144 168 126 138 176 163 119  
154 165 146 173 142 147 135 153 140 135 161 145 145 142 150 156 145 128

Using the information above;

- i) Construct a tally table using the interval of 5 cm (5 marks)
- ii) From the distribution above, compute the modal length. (2 marks)

### QUESTION TWO

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

Retirement benefits	20-30	30 -40	40 -50	50 -60	60 -70	70-80	80 – 90
No of retirees	7	81	192	312	218	82	18

- a) Calculate the mean (3 marks)
- b) Calculate the median and mode (6 marks)
- c) Calculate variance and Standard deviation of your frequency distribution (5 marks)
- d) Calculate geometric mean (3 marks)
- e) Calculate harmonic mean (3 marks)

### QUESTION THREE

There are 54 students in a certain college 30 of them take mathematics 26 economics and 21 geography. The following additional information is provided; 13 students take mathematics and economics, 12 take maths and geography, 11 take geography and economics while 4 take mathematics and geography only.

Reuired

- i. Write the above information in a set notation (2 marks)
- ii. Present the above information in the form of a venn diagramme (3 marks)
- iii. How many students take all the 3 subjects (3marks)
- iv. How many students take none of the 3 subjects (3marks)
- v. How many students take 2 subjects only (3marks)
- vi. How many students take 1 subjects only (3marks)
- vii. How many students do not take geography (3marks)

### QUESTION FOUR

- a) Define statistics and discuss statistical methods (10 marks)
- b) Without using table prove that;
  - i.  $\text{Log}_8 27 = \text{Log}_2 3$  (5 marks)
  - ii.  $\text{Log}_{64} 125 = \text{Log}_4 5$  (5 marks)

### QUESTION FIVE

- a) Discuss the limitation of quantitative techniques (5 marks)
- b) Explain the various principles of table construction (5 marks)
- c) List and explain the various characteristics of a good average (5 marks)
- d) Explain the advantages of using statistical mean (5 marks)

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