



GRETSA UNIVERSITY - THIKA

**UNIVERSITY EXAMINATIONS
MAY - AUGUST 2018 SEMESTER**

**CERTIFICATE IN ENVIRONMENTAL/ COMMUNITY
HEALTH/ COMMUNITY NUTRITION AND DIETETICS**

COURSE CODE: CIEH 020

COURSE TITLE: HEALTH STATISTICS

DATE: 8 AUGUST 2018

TIME: 8.00 AM – 11.00 AM

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

SECTION A [ANSWER ALL QUESTIONS IN THIS SECTION]

MULTIPLE CHOICE QUESTIONS [1-5] [ONE MARK EACH]

1. The middle value of an ordered array of data is
 - A. Mean
 - B. Mode
 - C. Midpoint
 - D. Median

2. In statistics, a population consists of:
 - A. All People living in a country
 - B. All People living in the are under study
 - C. All subjects or objects whose characteristics are being studied
 - D. None of the above

3. Which of the following methods of data collection is best suited to collect behavioral data?
 - A. Postal questionnaire
 - B. Interview method
 - C. Observation method
 - D. Sampling
 - E. All of the above

4. Which of the following measures best describe a distribution that has its data arranged in descending order?
 - A. Frequency
 - B. Array
 - C. Mode
 - D. Ungrouped frequency distribution
 - E. Grouped frequency distribution

5. From the following statements, pick the one that is not a use of statistics
 - A. Routine administration
 - B. Student entertainment
 - C. Political planning
 - D. Market research

SHORT ANSWER QUESTIONS: (ANSWER ALL QUESTIONS IN THIS SECTION)

1. Define the following terms used in statistics [5 marks]
 - a) Measurement
 - b) Probability
 - c) Discrete data
 - d) Ordinal - categorical
 - e) Scale

2. Outline five ways through which statistics is applicable in health [5 marks]

3. State 5 advantages of questionnaire as a data collection tool [5 marks]

4. In a basket there are 20 yellow balls, 22 orange, 18 purple, 24 white and 21 red balls. A ball is picked at random. What is the probability that:
 - a) A purple ball is picked? [2 marks]

 - b) A white ball is picked? [2 marks]

5. Outline 6 methods of data collection [6 marks]

6. Explain any 3 branches of statistics [6 marks]

7. Outline 5 methods of representing data in statistics [5 marks]

SECTION B**[CHOOSE ANY THREE QUESTIONS]**

1. A research was done in various parts of Nairobi County for the treatment common worms. The survey was done to find the age group had adopted regular treatment. use the data obtained below to answer the questions that follow.

Age category	11-15	16-20	21-25	26-30	31-35	36-40
Frequency	8	18	22	28	20	15

Calculate:

- a) Mean [4 marks]
 - b) Median [4 marks]
 - c) mode [4 marks]
 - d) Standard deviation [4 marks]
 - e) variance [4 marks]
- 2.
- a) Discuss any 5 types scales of measurement used in statistics [10 marks]
 - b) Explain any 5 properties a measurement scale must satisfy to be considered appropriate in statistics [10 marks]
- 3.
- a) Discuss five types of data used in statistics [10 marks]
 - b) Discuss any 5 data quality indicators [10 marks]
- 4.
- a) Explain any 4 Applications of health statistics [8 marks]
 - b) Explain 3 advantages of interviews as a method of collecting data [6 marks]
 - c) Discuss any 3 data quality indicators [6 marks]