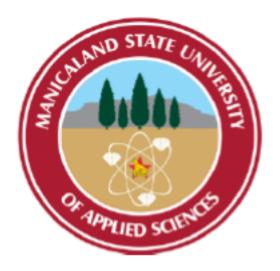MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF APPLIED SCIENCES & TECHNOLOGY

DEPARTMENT OF APPLIED STATISTICS

ASTA 212 - OFFICIAL AND ECONOMIC STATISTICS

April 2023

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATE

1.   Answer **ALL** Questions in Section A and any **THREE** Questions from Section B.

2.   Start each question on a fresh page.

3.   Show **All** your working.

SECTION A   [40 marks]

Answer **ALL** Questions being careful to number them A1 to A4.

A1. Define the following terms;

    (a) Consumer Price Index,   [2]

    (b) Official statistics,   [2]

    (c) Sustainable development,   [2]

    (d) Vulnerability, and   [2]

    (e) Inflation.   [2]

A2. (a) Distinguish between a census and a survey.   [3]

    (b) List three types of Inflation.   [3]

    (c) List four indicators useful for assessing HIV/AIDS.   [4]

A3. (a) Define the Gross Domestic Product (GDP).   [2]

    (b) State and explain three approaches used in its calculation (GDP), highlighting the Zimbabwe's approach.   [7]

A4. (a) Define poverty .   [2]

    (b) It takes time, energy and money to measure poverty. Why is poverty measured? [6]

    (c) Why is the Head Count Index unsuitable for measuring depth of poverty?   [3]

SECTION B [60 marks]

Answer any **THREE** Questions being careful to number them B5 to B8.

B5. The following data show the sales of three products at a certain company in Harare in 2012 and 2013.

Product	2012 sales (thousands)	2013 sales (thousands)	Price Relatives (2012 based on 2013)
Bar soap	82	104	116.2
Vaseline	16	21	109.7
Lotion	22	36	112.4

Calculate the following price indices for 2013 using 2012 as base year, commenting on your answers.

(a) Lasperyes,   [4]

(b) Paasche,   [4]

(c) Fisher,   [4]

(d) Geometric Lasperyes, and   [4]

(e) Tornqvist.   [4]

B6. A study was conducted to determine poverty levels in a certain community. The following figures are total income levels of different households in the community.

$$240 \quad 120 \quad 528 \quad 298 \quad 472 \quad 498 \quad 148 \quad 349 \quad 172 \quad 448$$
$$325 \quad 191 \quad 654 \quad 556 \quad 144 \quad 213 \quad 423 \quad 104 \quad 50 \quad 205$$

Assuming that the poverty line is $425, calculate the;

(a) Head Count Index and comment,   [5]

(b) Poverty Gap Index and comment,   [5]

(c) Squared Gap Index and comment,   [5]

(d) Watts Index,   [5]

B7. (a) What is Consumer Price Index (CPI)? Give five main uses of CPI.   [7]

(b) The Consumer Price Index (CPI) is an important economic indicator. Describe how CPI is derived in Zimbabwe.   [8]

(c) What is inflation? Give three methods of minimizing inflation.   [2,3]

B8. (a) Give an account of the Zimbabwe economy since 1980, mentioning major economic policies. [10]

(b) In Zimbabwe, the Zimbabwe National Statistical Agency (ZIMSTAT) is the main statis- tical agency that was created by the passing of Census and Statistics Act [Chapter 10.29] No.1/2007.

   (i) List five functions of ZIMSTAT. [5]
   (ii) What do you understand by 'National Statistics System'?. [5]

END OF EXAMINATION PAPER