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MAIN EXAMINATION

JANUARY-APRIL 2024

SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING AND FINANCE

ORDINARY DIPLOMA IN BUSINESS MANAGEMENT

CID 073: INTRODUCTION TO BUSINESS STATISTICS

DATE: APRIL 2024	Duration: 2 Hours
INSTRUCTIONS: Answer Question ONE and any other TWO Questions	

Q4.

(a) Distinguish between descriptive and inferential statistics.   **(2 Marks)**

(b) Highlight four uses of statistics in industry and commerce   **(4 Marks)**

(c) Mention and give a brief explanation of any three methods used to collect primary data

(3 Marks)

(d) What are the advantages and disadvantages of secondary data   **(4 Marks)**

(e) The price of a carton of water was Shs. 10,000 in 2009 while in 2011 the price was Shs. 10200.

Required:
i)   Using the 2009 price as the base period, calculate the price index.   **(1 Mark)**
ii)   Interpret the price index   **(1 Mark)**

(f) The following is the data on weights of 50 cartons of cooking fat:

41	64	53	43	76	47	86	55	66	46
63	31	35	36	13	63	72	29	56	40
19	50	80	25	61	56	26	69	83	57
52	17	57	44	23	42	38	33	46	45
22	45	38	65	78	58	55	32	52	48

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Required:

    i)   Create a suitable grouped frequency distribution table (Starting with the 11-20, 21-30, etc.) **(5 Marks)**

    ii)   Using (i), construct the ogive or cumulative frequency distribution diagram.

                                                                                       (5 Marks)

  (g) Describe the three types of probability sampling techniques   **(3 Marks)**

  (h) How is Regression analysis different from Correlation analysis   **(2 Marks)**

Q2.

 (a) The table below shows the price variable of the real estate in (000) Shs.

Price	150-200	200-250	250-3-0	300-350	350-400	400-450	450-500	500-550
Frequency	2	13	23	27	26	19	12	2

  Required:

Estimate the arithmetic mean, the mode, and the median using the interpolation formula

                                                             (10 Marks)

(b) What is the main property of measures of central tendency and what informs the selection of a measure to use. **(2 Marks)**

(c) Explain four scales of Measurement, citing relevant examples in each case. **(8 Marks)**

Q3.

(a) Define the following measures of dispersion: **(8 Marks)**
    i)   Range
    ii)   Quartile deviation
    iii)   Mean deviation
    iv)   Standard deviation
(b) The annual salary structure for workers in a certain NGO follows the distribution below:

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Salary (Shs. millions)	10-14	15-19	20-24	25-29	30-34	35-39
No. of employees	1	14	23	21	15	6

Required:

Compute the variance and the standard deviation   **(12 marks)**

Q4.

A company keeps records of its monthly expenditure for advertising and its total monthly sales. for the first 10 months in 2020, the records showed the following.

Advertising cost (Shs. 000)	43	44	36	38	47	40	41	54	37	46
Sales (000)	74	76	60	68	79	70	71	94	65	78

Required:

(a) Compute the Pearson correlation coefficient between Advertising and sales.   **(10 Marks)**

(b) Find the least square regression equation for the data above   **(8 Marks)**

(c) Use the regression equation in (b) above to predict the sales if the company plans to spend Shs. 50,000 for advertising in the following month, assuming that other factors can be neglected
(2 Marks)

END