



PAN AFRICA CHRISTIAN UNIVERSITY

END OF SEMESTER EXAMINATION FOR THE DEGREE OF

MAY – AUGUST 2025

CAMPUS: ROYSAMBU

DEPARTMENT: BUSINESS

COURSE CODE: BCM108 | BUS2243 | BIT210 | BSIT210

COURSE TITLE: BUSINESS STATISTICS

EXAM DATE:

TIME:

INSTRUCTIONS

- This examination script consists of **six (6)** questions.
- Answer question **ONE** and ANY other **four** Questions.
- Read all questions carefully before attempting.
- Write your **student number** on the answer booklet provided.

Question One**(Compulsory= 10 marks)**

- a) Using suitable examples, distinguish between:
- i. weighted and unweighted price index numbers. (3 marks)
 - ii. A 'price index' and a 'quantity index'. (3 marks)
- b) Explain why the Laspeyres price index is often greater than the Paasche price index for the same bundle of goods over the same period of time. (4 marks)

Question Two**(10 marks)**

The distances travelled from home to work (in km) by 30 employees of a company are as follows:

9	2	15	5	8	10
10	20	5	15	9	8
10	15	5	10	8	1
10	10	9	12	7	10
11	10	20	25	10	7

- a. Find the:
- i. arithmetic mean (2 marks)
 - ii. median (2 marks)
 - iii. mode. (2 marks)
- b. Calculate the standard deviation. (4 marks)

QUESTION THREE**(10 Marks)**

Using suitable examples, differentiate between the following

- i) Primary data and secondary data (2 marks)
- ii) Simple random sampling and stratified sampling (2 marks)
- iii) Population and Sample (2 marks)
- iv) Coefficient of variation and coefficient of skewness (2 marks)
- v) Descriptive statistics and inferential statistics (2 marks)

QUESTION FOUR**(10 Marks)**

The following is the data on weights of 50 cartons of cooking fat are given below

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

Required:

- (i) Create a suitable grouped frequency distribution. (Starting with 11-20 class) (5 Marks)
- (ii) Using the grouped frequency distribution in (i) above, calculate:
 - a. Lower Quartile (Q1) (2 marks)
 - b. Upper Quartile (Q3) (3 marks)

QUESTION FIVE**(10 Marks)**

The prices and quantities of five commodities are shown in the table below:

	2023		2024	
Commodity	Price	Unit	Price	Unit
Q	2	8	4	6
P	5	10	6	5
W	4	14	5	10
R	2	19	2	13

Using 2023 as the base year, construct:

- (i) Laspeyre's price index (3 Marks)
- (ii) Paasche Price index (3 Marks)
- (iii) Fishers price index (4 Marks)

QUESTION SIX**(10 Marks)**

- a. Explain **two** components of a time series. (4 Marks)
- b. Consider the time series below and calculate the **three** centered moving average for the data (6 marks)

Period	Time Series
1	15
2	27
3	20
4	14
5	25
6	11

Required: