



PAN AFRICA CHRISTIAN UNIVERSITY
BACHELORS OF COMMERCE
END OF TERM EXAMINATION

DEPARTMENT: BUSINESS

COURSE CODE: BCM108/BIT104/BUS2243

COURSE TITLE: BUSINESS STATISTICS

EXAM DATE:

TIME:

INSTRUCTIONS

- Read all questions carefully before attempting.
- Answer any **Five** Questions.
- Write your **student number** on the answer booklet provided.

SECTION A – COMPULSORY (10 MARKS)

QUESTION ONE

The following marks have been obtained by a group of students in statistics out of 100.

Paper I	80	45	55	56	58	60	65	68	70	75	80
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Paper II	82	56	50	48	60	62	64	65	70	74	90
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Required

From the data given above.

- Determine the regression equation (8 Marks)
- The most likely marks in Paper II if one scored 37 marks in Paper I (2 Mark)

SECTION B: CHOOSE ANY THREE QUESTIONS

QUESTION TWO

The following frequency distribution table below shows the heights in inches of a random sample of 195 students of PAC University.

Class Limit	62 - 63	64 - 65	66 - 67	68 - 69	70 - 71	72 - 73	74 - 75	76 - 77
Frequency	2	16	30	48	48	39	11	1

Use the information to compute

- The mean of the data (3 Marks)
- The median of the data (3 Marks)
- The mode of the data (4 Marks)

QUESTION THREE

- Differentiate with example primary data and secondary data (4 Marks)
- Using an illustration in each case, describe THREE qualities of a good questionnaire (6 Marks)

QUESTION FOUR

Ten experiments were done to find the effects of bonus rates paid to the sales team of a particular company. The results were as follows;

Bonus	0	1	2	3	4	5	6	7	8	9
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(%)										
Sales(\$ 000)	3	4	8	10	15	18	20	22	27	28

Required:

- i. Compute the Pearson's product moment correlation coefficient and interpret it. (7 Marks)
- ii. Coefficient of determination (2 Marks)
- iii. Interpret the coefficient of determination (1 Mark)

QUESTION FIVE

The table below shows the demand for a particular brand of fax machine in a department store in each of the last twelve months in the year 2014

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Demand	12	15	19	23	27	30	32	33	37	41	49	58

- i. Calculate a three-month moving average of the data (4 Marks)
- ii. Calculate the four-month moving average for months 4 to 12. (4 Marks)
- iii. Calculate the forecast for the demand in month Jan 2015 (2 Marks)

QUESTION SIX

- a) In a study of the daily production of a company over 50 days, the following data was obtained.

65	76	36	48	84	55	79	51	49	48
43	21	78	35	40	45	68	33	37	61
88	45	50	53	56	67	57	42	60	34
59	62	62	65	74	61	70	73	76	55
35	41	60	74	63	58	32	26	52	82

- i. Starting with a class 20-29, group this data into a frequency distribution (4 Marks)
- ii. Calculate the standard deviation. (6 Marks)