



PAC UNIVERSITY

MFT601A/MCP605 STATISTICS EXAMINATION

STREAM:

TIME: 3 HRS

EXAMINATION SESSION:

YEAR:

INSTRUCTIONS

- (i) Answer ONE and any other Two questions**
- (ii) Do not write on the question paper**
- (iii) Show your working clearly**

Question One 20 Marks

- a. Determine the mean, mode and the median of the following set of data. (6 Marks)

STEM	LEAF
3	23, 26, 29, 45
4	12, 13, 26, 24
5	16, 23, 34, 34, 34, 35, 35
6	18, 34, 35, 40, 44

- b. State any three (3) requirements for the use of Pearson correlation. (3 Marks)
- c. Briefly explain how to determine the cumulative frequency in a grouped data distribution? (3 Marks)
- d. You have been commissioned by the county officer to determine the relationship between education level and level of psychological stability among the households in your county. Briefly discuss the general procedure you would follow to test the hypotheses. (8 Marks)

Question Two

- a. According Chebyshev's theorem (1821-1894), one can be able to determine the spread of variables given the standard deviation and the mean. Using the empirical rule, determine the maximum time required for a student to complete a test given the mean as 2 hours and the standard deviation of 0.76. (7 Marks)

- b. Using an appropriate example in your field of study, explain how standard deviation can be used to compare two or more groups. (3 Marks)

Question Three

Using relevant examples differentiate between the following concepts.

- i. One-way ANOVA and two-way ANOVA (2 Marks)
- ii. Parametric and non-parametric statistical tests (2 Marks)
- iii. Descriptive and inferential statistics (2 Marks)
- iv. Discrete variables and Continuous variables (2 Marks)
- v. Chi-square goodness-of-fit test and chi-square test of independence (2 Marks)

Question Four

Assume you have been consulted by XYZ organization to assist analyze their data using Multiple linear regression.

- a. When is this statistical model used? (2 Marks)
- b. Discuss the assumptions of the model (8 Marks)

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