



REFORMED CHURCH UNIVERSITY

FACULTY OF COMMERCE
MASTER OF COMMERCE IN PUBLIC ADMINISTRATION
RESEARCH METHODS AND STATISTICS

MPA 107

PART 1 SEMESTER 1 EXAMINATION

TOTAL MARKS [100]

DATE: DECEMBER 2024

Time: 3 Hours

INSTRUCTIONS

1. This paper has *six (6)* questions
2. Answer question *one (1)* and *any* other *three (3)*
3. Each question carries *25 marks*
4. Start each question on a new page

1. Citing relevant examples, discuss any 4 data generation instruments for qualitative research. (25)
2. Assess the stages of a research process. (25)
3. a) Explain the term validity of research instruments. (10)
b) Examine the applicability of any four types of instrument validity in research. (15)
4. Citing examples, discuss the functions of a hypothesis in a research process. (25 Marks)
5. The following sample observations were randomly selected

X	5	3	6	3	4	4	6	8
Y	13	15	7	12	13	11	9	5

Required:

- a) Calculate the mean of X. (2 marks)
 - b) Calculate the mean of Y. (2 marks)
 - c) Compute the standard deviations of X and of Y. (8)
 - d) Find Z-scores when X is 9 and Y is 14 (4 marks)
 - e) Calculate correlation coefficient of the two variables and comment on it. (5 marks)
 - f) Calculate the coefficient of determination and comment on your result. (4 marks)
6. The following data relate to ages of congregants at a local church on a particular Sunday service.

55; 51 ; 52 ; 41 ; 32 ; 33 ; 36 ; 44 ; 41 ; 52 ;
 36 ; 32 ; 32 ; 21 ; 20 ; 25 ; 26 ; 24 ; 21 ; 20 ;
 18 ; 17 ; 10 ; 11 ; 10 ; 15 ; 14 ; 49 ; 48 ; 14 ;
 19 ; 5 ; 4 ; 6 ; 3 ; 9 ; 8 ; 26 ; 32 ; 40 ;
 41 ; 2 ; 54 ; 34 ; 35 ; 37 ; 38 ; 11 ; 50 ; 10

Required:

- a) Show the above data on a scatter diagram (7 marks)
- b) Draw a frequency distribution table with class width of 10 (4 marks)
- c) State the modal class of the above data. (2 marks)
- d) Draw the histogram showing the above data. (8 marks)
- e) State 2 advantages and 2 disadvantages of a scatter diagram. (4 marks)

END OF PAPER