NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF NATURAL RESOURCES MANAGEMENT (NATURE CONSERVATION)	
QUALIFICATION CODE: 07BNTC	**LEVEL:** 7
COURSE CODE: BRM622S	**COURSE NAME:** BASIC RESEARCH METHODOLOGY
DATE: JANUARY 2023	
DURATION: 3 HOURS	**MARKS:** 100

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Mr Brain J. Mhango
MODERATOR:	Prof Ben Strohbach

INSTRUCTIONS
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination question paper
2. Answering book

THIS QUESTION PAPER CONSISTS OF 3 PAGES (Excluding this front page)

ANSWER ALL THE QUESTIONS IN THIS QUESTION PAPER

QUESTION 1

Briefly define the following terms as used in research (3 marks each):

i. Margin of error

ii. Confidence level

iii. Level of significance

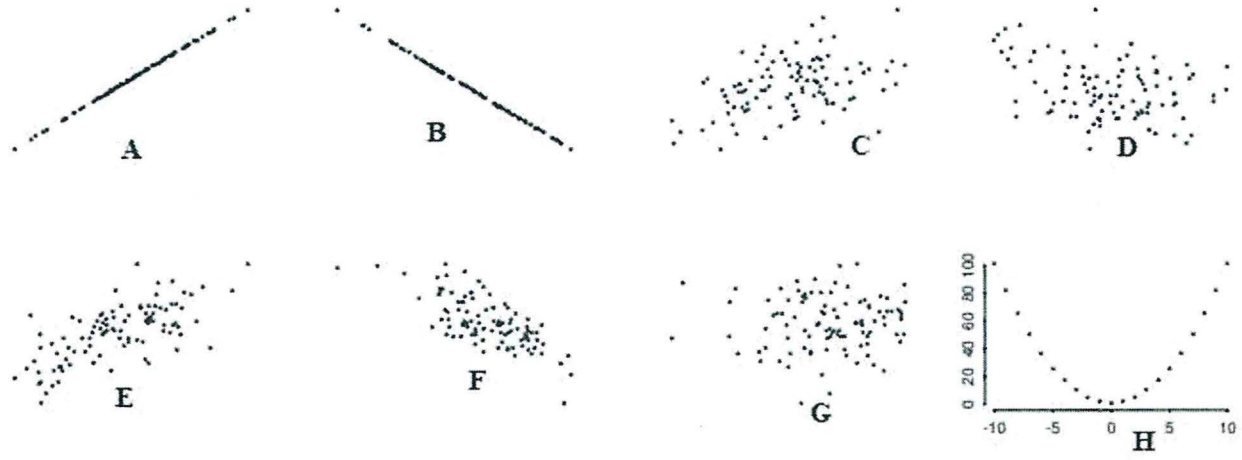
iv. Critical value

v. Significance of the study

(15)

QUESTION 2

a) Estimate the Pearson's correlation coefficient of each of the scatterplost from A-G. Proviode your answer in a table showwing the three main attribtes of a Pearson' correlation coefficient.



Your table shoul look like the one shown below:

Scatter Plot	?	?	?
A			
B			
C			
D			
E			
F			
G			
H			

[12]

b). Eight tomato plants (A-H) of the same variety were selected at random and treated with a solution in which x grams of fertiliser was dissolved in a litre of water. The yield, y kilograms of tomatoes was recorded as shown in the table below:

Plant	A	B	C	D	E	F	G	H
X	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
Y	3.9	4.4	5.8	6.6	7.0	7.1	7.3	7.7

(i) Plot a scatter diagram of yield versus amount of fertiliser solution (3)

(ii). Determine the equation of the least squares regression line of y on x (4)

(iii). Estimate the expected yield of a plant treated weekly with 3.2 grams of fertiliser. (3)

[10]

QUESTION 3

Provide a set of data for the four scales of measurement (nominal, ordinal, interval and ratio), and based on your data sets , provide a table and an appropriate graph to represent the data. You must have a minimum of 10 data elements for each data set. Preferably, relate your data sets to the nature conservation discipline.

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QUESTION 4

Discuss how you would arrive at a quantitative research method and highlight your main concerns before carrying-out the research activity. (25)

STATISTICS FORMULAS

$$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

$$s^2 = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n-1}$$

$$r = \frac{1}{n-1} \sum_{i=1}^{n} \left(\frac{x_i - \bar{x}}{s_x}\right)\left(\frac{y_i - \bar{y}}{s_y}\right)$$