UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME   :   **AGRICULTURAL EDUCATION YEAR 3**

COURSE CODE   :   **AEE 301**

TITLE OF PAPER   :   **EDUCATIONAL RESEARCH METHODS**

TIME ALLOWED   :   **TWO (2) HOURS**

INSTRUCTION   :   **ANSWER ALL (4) QUESTIONS**

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QUESTION 1

Define the following terms as they are used in educational research & statistics:

a. Ordinal scale
b. Triangulation
c. Alpha level
d. Directional hypothesis
e. Type I Error
f. Type II Error
g. Field testing
h. Quantitative Analysis
i. Reliability
j. Qualitative Analysis
k. Reliability co-efficient
l. Ethical consideration
m. Ex post facto
n. Independent variable
o. Rival variable
p. Construct validity
q. Face validity
r. Descriptive Statistics
s. Conceptual framework
t. Theoretical framework
u. Mean
v. Standard deviation
w. Pilot testing
x. Correlation
y. ANOVA
z. Content validity (**1 point each**)

(25 MARKS)

QUESTION 2

Given,

Mean (M) = 6.37

Variance (S^2) = 65.8

N = 30.0

i. Calculate the reliability co-efficient using K-R21 formula:
$$r = \frac{[n\,\Sigma_s 2] - \mu(n - \mu)}{\Sigma_s 2(n-1)}$$

   Show all your step by step calculation (15 Marks)

ii. What is your interpretation of the reliability co-efficient you obtained in i.? (5 Marks)

iii. Explain why researchers report reliability in Educational research (5 Marks)

(25 MARKS)

QUESTION 3

Identify and discuss the major elements that constitute Chapter 1 of a research proposal in Agricultural Educational (**2.5 Marks each**)

(25 MARKS)

QUESTION 4

Jabulane Dube conducted a study on the effect of Teaching Method A and Teaching Method B on students' academic performance in the Department of Excellence. The students demographic characteristics included: male and female, age, family occupation, level of education and employment. Given this information,

i. Identify the Dependent variable,
ii. Identify the Independent variable and
iii. Rival variables. In each case, justify your designating each of the three variables.

(25 MARKS)