UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

PROGRAM	:	**BACHELOR OF SCIENCE IN FSNT, COS, COSE AND TADM, YEAR III**
COURSE CODE	:	**COS 301**
TITLE OF PAPER	:	**RESEARCH METHODS**
TIME ALLOWED	:	**TWO (2) HOURS**
INSTRUCTIONS	:	**ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2) QUESTIONS**

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QUESTION 1 (COMPULSORY)

(a) Outline the points to be considered when selecting a research problem. **(10 Marks)**

(b) Outline the features of a hypothesis. **(2 x 5 = 10 Marks)**

(c) A researcher wants to investigate the influence of baking time and temperature on the volume, size, and crust color of bread. The researcher decides to use temperature of 100°C and 120°C and time of 20 min, 25 min and 30 min. Based on the information given:

i. Name the type of research and the specific design
ii. Identify the factor(s)
iii. Identify the levels of the factor(s)
iv. Identify the response variable(s) **(5+4+5+6 = 20 Marks)**

[TOTAL MARKS = 40]

QUESTION 2

(a) Describe the difference between rating and ranking scales. Give an example for each. **(10 Marks)**

(b) Describe the similarities and differences between true and quasi-experimental designs. Give examples. **(10 Marks)**

(c) What is a secondary data? Explain the characteristics of secondary data. **(10 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

(a) A researcher wants a sample of size $n = 40$ from a population of size $N = 10{,}000$. The population is divided into three strata of size $N1 = 5000$, $N2 = 3{,}000$ and $N3 = 2{,}000$. Determine the sample size to be drawn from each stratum so that each stratum will be represented in the sample proportionally. **(15 Marks)**

(b) Describe the following: **(5 x 3 = 15 Marks)**

i. Response bias
ii. Independent variable
iii. Post only with control experimental design
iv. Nominal scale
v. Cluster sampling

[TOTAL MARKS: 30]

QUESTION 4

(a) Define reliability and explain two types of reliability tests. **(10 Marks)**

(b) "A reliable test is necessarily valid." Indicate your agreement/disagreement with this statement and give example to support your agreement/disagreement. **(10 Marks)**

(c) Explain the advantages of mixed research design and describe **two (2)** types of mixed research designs. **(10 Marks)**

[TOTAL MARKS = 30]