BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF MARKETING

PROGRAMME: BACHELOR OF BUSINESS STUDIES HONOURS IN MARKETING

RESEARCH METHODOLOGY **BS209**

DURATION: 3 HOURS

INSTRUCTIONS

1. Answer **Question One and ANY Three** questions.
2. Each question carries 25 marks.
3. Start answering each main question on a fresh page.
4. Credit will be given for appropriate use of illustrative examples.
5. No cell phones and programmable calculators are allowed in the examination room.
6. The use of non-programmable calculators and statistical formulae list is allowed

QUESTION 1 (Compulsory)

A machine fills cans with soft drinks so that their contents have a nominal volume of 330 ml.Over a period of time, it has been established that the volume of liquid in the cans follows a normal distribution with mean 335 ml and standard deviation 3 ml.A setting on the machine is altered, following which the operator suspects that the mean volume of liquid discharged by the machine into the cans has decreased.He takes a random sample of 60 cans and finds that the mean volume of liquid in these cans is 334.6 ml.Does this confirm his suspicion?

Required:

i. Formulate the null and alternative hypothesis (5)

ii. Identify the 5 key statistics in this problem (5)

iii. Define the critical region by drawing a well labelled diagram(5)

iv. Carry out the relevant test at 5% significance level (5)

v. Interpret your findings(5)

[25 Marks]

QUESTION 2

i.Contrast the 4 probability sampling methods used in research (10)

ii.The following are sampled coursework marks scored by an Accounting student in his 10 semester modules.

34, 25, 15, 40, 45,30,36,39,48,30

From the above marks calculate the following:

Mean (3)

Median (4)

Mode (1)

Variance (5)

Standard deviation (2)

[25 Marks]

QUESTION 3

Ten architects each produced a design for a new building and two judges, A and B, independently awarded marks, x and y respectively, as given in the table below.

Design	Judge A(x)	Judge B(y)
1	50	46
2	35	26
3	55	48
4	60	44
5	85	62
6	25	28
7	65	30
8	90	60
9	45	34
10	40	42

Required:

i. Formulate the null and alternative hypothesis that there is no correlation between the marks awarded by the two judges (5)

ii. Calculate Spearman's rank correlation coefficient for the data at 2 decimal places (15)

iii. Interpret your findings at 5% significance level (5)

[25 Marks]

QUESTION 4

The coach of Manchester United Football Club is interested in finding out whether the weather has an effect on his team's performance. Of the 100 matches played, the following are the results

	Outcome	Weather	
		Good	Bad
Results	Win	65	5
	Draw	10	5
	Lose	5	10

Using the Chi-square test at 5% significance level:

a. Formulate a suitable null and alternative hypothesis(5)

b. Carry out a test to determine whether the weather has an effect on the performance of Manchester United Football Club (15)

c. Comment on your findings(5)

[25 Marks]

QUESTION 5

a. Using relevant examples, identify and discuss the four measurement scales used in business research (15)

b. Evaluate the role of ethics in business research (10).

[25 Marks]

QUESTION 6

Prepare a research proposal with the following sub headings

a. Title (2)

b. Problem statement (5)

c. Research questions (5)

d. Significance of the study(5)

e. Research delimitations (5)

f. Scale reliability (3)

[25 Marks]

END OF PAPER