CIMG Programme Pathway 2 Professional Advanced Certificate in Marketing

Decision Making Techniques (PAC 201)

DECEMBER 2023

DURATION: 3 HOURS

The examination comprises of two parts:

Part A – a compulsory case study, worth 40 marks

Part B – answer any three questions, worth 60 marks in total

PART A

CASE STUDY – COMPULSORY

Question 1

a. State the main difference between a Census and a Sample Survey (2 marks)

b. State one merit and two demerits of census data (3 marks)

c. State two merits and two demerits of sample data (4 marks)

d. Your firm has decided to investigate the status of examination performance of Decision-Making Techniques students in Ghana over the past five (5) years. You have been asked to gather the data for the study by using either primary or secondary data.

    i. Define primary data (1 mark)
    ii, Define secondary data (1 mark)
    iii. Decide which data type will be more appropriate for this study and give three (3) reasons for your decision. (6 marks)

e. The following Table contains the examination results of the Decision-Making Techniques students for the past five years.

Year of exam	Percentage of Students Obtaining Each Grade					
	A	B	C	D	F	TOTAL
2022	10	15	20	30	25	100%
2021	5	20	25	20	30	100%
2020	15	10	25	15	35	100%
2019	20	15	15	25	25	100%
2018	10	35	10	15	30	100%

REQUIRED:

If letters A to E are the grades the candidates obtained during the examinations, present the data on a well-labelled Grouped bar graph. (23 marks)

PART B

ANSWER ANY THREE (3) QUESTIONS ONLY FROM THIS SECTION

Question 2

a. Briefly explain the term Probability Sampling (4 marks)

b. Give three (3) reasons why Probability sampling is very common among researchers. (6 marks)

c. A marketing research firm intends to collect data from a sample of 400 major customers of its client organization using a systematic sampling technique. If the total population of the major customers is 4000, describe the process to follow until the individuals are obtained for the data. (10 marks)

Question 3

a. Explain the term **coefficient of variation (CV)** (4 marks)

b. Explain how CV can be used in decision making in choosing between two markets. (4 marks)

c. An organization conducted market research on two markets and came out with the following results:

Market 1:

Mean: 60

Standard Deviation: 10

Market 2:

Mean: 50

Standard Deviation: 7.5

i. Calculate the coefficient of variations for both markets. (8 marks)

ii. Select the more suitable market for investment based on the results of the coefficient of variations obtained. (2 marks)

iii. Give a reason for your choice of market. (2 marks)

Question 4

A sales representative wants to understand the relationship between hours travelled and the litres of fuel consumed by his sales Van per week.

Hours Travelled	Fuel Consumed
12	14
13	15
15	27
17	30
19	35

a. Plot this data on a well-labelled scattergram and insert the line of best fit. (17 marks)

b. Interpret the results obtained in 4a above   (3 marks)

Question 5

a. Define Retail Price Index (RPI) and Consumer Price Index (CPI) **(6 marks)**

b. State one use of the retail price. **(2 marks)**

c. Explain the steps involved in constructing Price Index numbers **(12 marks)**

Question 6

The government of Ghana has instructed 100 Junior High Schools to plant 100 mango trees in their gardens in support of the country's rural industrialization drive. The data below represents the number of trees planted by each school that survived.

95, 67, 28, 32, 65, 65, 69, 33, 98, 96, 76, 42, 32, 38, 42, 40, 40, 69, 95, 92, 75, 83, 76, 83, 85, 62, 37, 65, 63, 42, 89, 65, 73, 81, 49, 52, 64, 76, 83, 92, 93, 68, 52, 79, 81, 83, 59, 82, 75, 82, 86, 90, 44, 62, 31, 36, 38, 42, 39, 83, 87, 56, 58, 23, 35, 76, 83, 85, 30, 68, 69, 83, 86, 43, 45, 39, 83, 75, 66, 83, 92, 75, 89, 66, 91, 27, 88, 89, 93, 42, 53, 69, 90, 55, 66, 49, 52, 83, 34, 36

Required:

a. Using appropriate class of equal intervals prepare a Frequency Distribution table for the data. (18 marks)

b. Find the total number of schools that have 50% or more of their plants surviving. (2 marks)