2014

M B A

4th Semester Examination

Subject : MARKETING RESEARCH AND FORECASTING TECHNIQUES

(Specialization : Marketing Management)

PAPER—M–402

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Write the answers to Questions of each Half in separate books.

(First Half)

(Marks : 50)

1. Answer any *four* of the followings :   4×5

    (a) Why is it important to define the marketing research problem appropriately ?

You may use the random sampling numbers given below :

5905   3364   2689   2453   4826   3508

3042   7130   5370   4683   5872   1143

Calculate the sample mean and population mean.

(f) From the following information calculate the response rate of a survey.

The sample consisted of 2,000 telephone numbers that were generated randomly,

Number of completed interviews = 750

Number of eligible respondents = 1100

Number of ineligible respondents = 500

Not ascertained (NA) = 400

2. Answer any *two* of the following :   2×10

(a) How is ordinal scale   different from interval scale ? Design a questionnaire to measure the effectiveness of advertising by using Likert rating and Semantic differential scale.   4+6

(b) consider the following 5 brands of bath soap; Dove, Camay, Lux, Ivory and Pamolive. Preference of 400 respondents has plotted in the following table. Calculate the most Preferred brand of bath soap. (Use Z table to calculate the value)

(Turn Over)

	Dove	Camay	Lux	Ivory	Pamolive
Dove	0	240	320	180	380
Camay	160	0	190	250	230
Lux	80	210	0	150	190
Ivory	220	150	250	0	205
Pamolive	20	170	210	195	0

(c) To determine the effectiveness of the advertising campaign for a new product, management would like to know what percentage of the households are aware of the new product. The ad agency thinks that this figure is as high as 70 percent. The management would like a 97 percent confidence interval and a margin of error not greater then ± 2%.

   (i) What sample size should be used for this study ?

   (ii) If the management wants to be 99% confidence level how will the sample size change ?   6+4

[*Internal Assessment : 10 Marks*]

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(Second Half)

(Marks : 50)

3. Answer any *four* questions : 4×5

(a) What is marketing decision support system ?

(b) Give a hypothetical example of cluster analysis in marketing research.

(c) Gives the following coefficients r_{12} = .41, r_{23} = .71, r_{23} = .5. Find the value of $r_{12.3}$ and interprete the result.

(d) Write a short note on territory based sales analysis in marketing research.

(e) A random sample of 100 firms was taken to find out the average sale per customer. The sample mean was found to be Rs. 300 and the standard deviation Rs. 100. Construct an interval estimate of the population mean with a confidence level of 95.44 percent.

(f) Two salesmen A and B are employed by a company. The comparative data pertaining to sales made by the two salesmen are as follows :

(Turn Over)

	Salesman A	Salesman B
No of sales	30	35
Average sales (Rs.)	600	700
Standard deviation (Rs.)	50	40

Do the average sales of the two salesmen differ significantly ?

4. Answer any *two* questions :   2×10

(a) From the following data, fit a multiple regression equation :

Sales territory	Sales (lakh Rs.)	Advertising ('000 Rs.)	No of selling agents
1	120	50	15
2	150	60	20
3	90	40	12
4	70	20	8
5	130	60	14

(b) A random sample of five motor car tyres is taken from each of a brands manufactured by three companies the life time of these tyres is given below or the basis

of the data, test whether the average lifetime of the 3 brands of tyres are equal or not.

Lifetime of Tyres ('000 miles)

Brand	A	B	R
	35	32	33
	34	31	33
	34	31	32
	33	28	32
	34	29	33

(Given F.05 = 3.89 and F.01 = 6.93)

(c) A random sample of 500 students were classified according to economic condition of their family and also according to merit, as shown below :

Merit	Economic Condition			Total
	Rich	Middle class	Poor	
Meritorious	43	137	61	240
Not meritorious	58	113	89	260
Total	100	250	150	500

(Turn Over)

Test whether the two attributes Merit and Economic Condition are associated or not

(Given, $f_{.05}^2 = 5 \cdot 99 \, o \, f_{.01}^2 = 9 \cdot 21 \, for \, 2df$)

[Internal Assessment : 10 Marks]

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