

**2011****M B A****4th Semester Examination****MARKETING RESEARCH AND  
FORECASTING TECHNIQUES****(Specialisation : 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)****Answer any four of the following :****5×4**

- (a) What is experimental design and what are the basic assumptions of experimental design ?
- (b) Differentiate constant sum scale from Q-sort scale.

*(Turn Over)*

- (c) Write down the advantages of projective technique of data collection over the observation method of data collection.
- (d) What are the differences between semantic differential scale and the staple scale of attitude measurement?
- (e) What are the basic differences between exploratory research and descriptive research?
- (f) Write a short note on Solomon four group six study experimental design.

2. Answer any two of the following :

10×2

- (a) Make a comparative analysis of four basic scales of attitude measurement.
- (b) Discuss briefly different sampling techniques that a researcher can choose to determine the sample for their study.
- (c) Suppose a firm is interested in determining whether different methods of training its sales personnel show significant differences in their performances. The yard stick to judge the performance of sales personnel is the value of the order procured by them in a given time period. The firm chooses 20 sales personnel and randomly assigns them to different training programmes. The sales performance in terms of the orders assigned by them is given below :

$T_1$	$T_2$	$T_3$	$T_4$
20	18	16	25
30	21	18	22
16	24	25	23
18	27	19	19
26	25	22	26

Examine whether there is any significant difference between the training programmes or not.

[ Internal Assessment : 10 marks ]

### Second Half

(Marks : 50)

Answer any four of the following :

5×4

- (a) Suppose a sample of 50 housewives were asked to make a paired comparison of fair brand of detergent powder on the basis of their overall performances and the data obtained from the survey were as follows :

Most Preferred Brand

Less Preferred Brand

	Surf	Sunlight	Ghari	Safed
Surf	—	25	40	50
Sunlight	25	—	35	45
Ghari	10	15	—	30
Safed	0	5	20	—

Applying the multidimensional scaling technique find out the closeness or distances of the four give brands.

- (b) Distinguish between Type I and Type II error.
- (c) Give a focus on the advancement in Nominal group method of sales forecasting over the Delphi method
- (d) What are the uses of discriminant analysis?
- (e) Calculate the correlation coefficient of two variable x and y the values of which are given as follows :

x :	20	30	50	70	100	120	90	110
y :	3	5	6	12	13	15	19	21

- (f) The coefficient of correlation between two variates X and Y is 0.64. Their covariance is 16. The variance of X is 9. Find the standard deviation of Y series.
4. Answer any two of the following : 10×2

- (a) Suppose a firm is interested to ascertain the effect of package colour on the sale of a particular product at the same time it is interested in 'time of operation' as well as store differences. For this purpose, it considers the use of three package colour in three time periods and three stores. The firm randomly assigns the Treatment to each

experimental unit as a result of which it obtains of following results :

Store Type	Time in Operation.		
	Short	Medium	Long
Departmental	30 <sub>(x)</sub>	22 <sub>(y)</sub>	25 <sub>(z)</sub>
Discount	26 <sub>(y)</sub>	28 <sub>(z)</sub>	29 <sub>(x)</sub>
Speciality	32 <sub>(z)</sub>	31 <sub>(x)</sub>	27 <sub>(y)</sub>

x, y and z denotes three package colours. Find out whether differences between the options under three schemes exist or not.

- (b) An automobile company gives you the following information about age groups and the liking for particular model of car which it plans to introduce :

Persons who :	Age Group			
	Below 20	20-39	40-59	60 & above
Liked car	140	80	40	20
Disliked car	60	50	30	80

On the basis of this data can it be concluded that the model appeal is independent of the age group ?

- (c) Suppose a researcher is interested in evaluating the effectiveness of two promotional devices—

- (i) TV advertisement and
- (ii) Price discount.

He believed that none of these method alone can increase the sale. He has two options for price discount, reduction by Rs. 3 and reduction by Rs. 5 and advertisement is expressed as a percentage of sales and two options are there —5% and 1.5%. From the following data set find out whether any interaction effect of these two mentioned strategies is there or not :

Price Discount	Advertisement	
	5%	1.5%
Rs. 3	(71,65)	(76,74)
Rs. 5	(72,74)	(96,98)

[ Internal Assessment : 10 marks ]

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