

*This question paper contains 3 printed pages*

7253

*Your Roll No*

**M.Sc. / II**

**J**

**OPERATIONAL RESEARCH**

Course XV to XVIII (xi)

(Marketing Research)

(Admissions of 2001 and onwards)

*Time - 3 hours*

*Maximum Marks 75*

*(Write your Roll No on the top immediately on receipt of this question paper)*

*Attempt any five questions  
All questions carry equal marks*

- 1 (a) What is Marketing Research?  
  
(b) Discuss multi-disciplinary nature of Marketing Research. What are the steps involved in conducting Marketing Research?  
  
(c) Explain the advantages and limitation of secondary data as compared to primary data. Give sources of generating these data.
- 2 Describe the External-Internal Influence model. Derive the explicit expressions for the number of adopters of the product. Give also the discrete analog of the model.
- 3 A company is planning to introduce a new product. How should the company go about it? Discuss the different steps in brief.
4. A firm is interested in an experiment to ascertain the effect of advertising on the sales of its product in different stores. It has devised four advertising treatments A, B, C and D. There are three

*Turn over*

blocks, each containing four stores of comparable sizes. As a result of the experiment, the following data emerge

Block- Stores	Adverti- -sement A	Advertise- -ment B	Advertise- -ment C	Advertise- -ment D	Total
Block I	20	25	23	22	90
Block II	16	18	20	19	73
Block III	12	14	16	15	57
Total	48	57	59	56	220

The firm is interested to know whether there exists a significant difference in the advertisement techniques and further whether there exists a difference in sales due to the difference in the block. Test it at 5% level of significance

5. (a) Discuss the importance of factor analysis Describe the various steps in extracting factors
- (b) Discuss in brief the linear Discriminant Analysis and its usefulness
6. (a) Write a short note on design of questionnaire for conducting market survey
- (b) Develop the mathematical model to account for the carryover effect of advertising on both new and repeat purchases

7. The marketing manager of a company is faced with the decision of whether or not to recommend the introduction of a new product in the market. The marketing manager's judgment based upon his evaluation and the opinion of the sales manager is that the product has 60% chances of being successful. If the product is successful, it is expected that it will pay-off to the extent of Rs. 20 million. But, if it fails, then it is expected that the firm will lose Rs. 15 million. No gain or loss is presumed if the product is not introduced. Before the introduction of a new product, the marketing manager has contacted two research firms that are interested in conducting the necessary study. ABC Company is known to be reliable and not very expensive whereas Company XYZ would provide work which is very reliable but at a higher cost. The work of ABC Company would provide 80% reliability at the cost of Rs. 3 million and company XYZ reliability would be 90% at the cost of Rs. 6 million. The company is faced with three alternatives:

- (i) Do not conduct Marketing Research (M R)
- (ii) Ask ABC to conduct M R
- (iii) Ask XYZ to conduct M R

Evaluate the optimal decision