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RESEARCH TOOLS AND TECHNIQUES
IN BUSINESS

Paper : 205

(New Syllabus)

Full Marks : 70

Time : 3 hours

The figures in the margin indicate full marks
for the questions

Answer *any* **five** questions

1. Over the last decade, recycling of household
   wants has become an extremely important
   need across the nations. China is the leader
   amongst waste management while India still
   has a long way to go. Though these are
   essentially policy driven or community driven
   initiatives, there are a number of attitudinal
   and motivational barriers to recycling, acting
   at an individual level.

   Mr. P. Sharma, a budding entrepreneur,
   recognized a potential business opportunity.
   He decided that a door-to-door recycling
   service may be a profitable way to get people

(Turn Over)

to recycle. He believed that households would be willing to pay a small fee to have their waste collected on a weekly basis, from outside their houses. He discussed this idea with his friends, but being a new idea in his small town, he wanted to know the attitude of households towards recycling.

(a) Specify a research approach/type for the above problem. Justify its appropriateness by evaluating its merits and limitations. 7

(b) State the differences between Research Questions and Hypotheses. Formulate at least two research questions and hypotheses to complement the specified research approach/type. 7

2. (a) Differentiate between direct and indirect qualitative research. Give an example of each. 7

(b) Briefly explain the distinguishing features of any *one* method from the following : 7

   (i) Mail interviews

   (ii) Internet interviews

3. (a) What are the advantages of a ratio scale over an interval scale? Are these advantages significant? 7

(Continued)

(b) Explain an itemized rating scale. What are the various issues involved in constructing an itemized rating scale? 7

4. (a) To determine the effectiveness of the advertising campaign for a new DVD player, the management would like to know what percentage of households is aware of the new brand. The advertising agency thinks that this figure is as high as 70 per cent. The management would like a 95 per cent confidence interval and a margin of error not greater than plus or minus 2 per cent.

   (i) What sample size should be used for this study? 4

   (ii) Suppose that the management wanted a 99 per cent confidence with an error of plus or minus 3 per cent, how would the sample size change? 3

   [Given 95 per cent area is covered, within $\pm 1 \cdot 96$ standard deviations in a normal distribution. Also 99 per cent area is covered with $\pm 2 \cdot 58$ standard deviation in a normal distribution.]
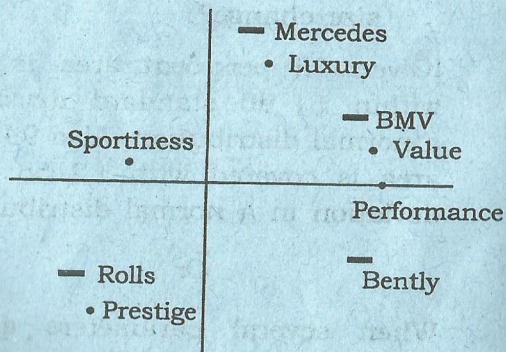
Or

When several parameters are being estimated, what is the procedure for determining the sample size? 7

(Turn Over)

(b) There is a residential locality where the residents comprise Hindus, Sikhs, Muslims, Jains and Christians. A survey is conducted to understand the food habits of the residents. Every 7th house is selected as the sample. Critically examine the sampling scheme. 7

5. (a) Define the terms 'R-square' and 'stress-value' with respect to multi-dimensional scaling (MDS). 4

(b) (i) Discuss the procedure for plotting attribute-based perceptual map. 5

(ii) The following diagram depicts four automobile brands and five attributes. State the brand-attribute relationship for the given perceptual map : 5

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                    ── Mercedes
                     • Luxury

                         ── BMV
      Sportiness           • Value
          •
  ──────────────────────────────────
                         Performance
                          •

     ── Rolls          ── Bently
       • Prestige
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(Continued)

6. (a) Discuss the major differences between cross-tabulation and frequency distribution. Briefly describe any two statistics used for testing hypotheses associated with cross-tabulation. 7

(b) What principles should be followed for an ideal questionnaire design? Illustrate with suitable examples. 7

7. (a) Discuss the different guidelines for preparing a formal research report. 7

(b) What is multiple regression? State the null hypothesis in testing the significance of overall multiple regression equation. How is the null hypothesis tested? 7

Or

"Validity is more critical to measurement than reliability." Do you agree? If so, give reasons.

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