Indian Institute of Materials Management

Post Graduate Diploma in Materials Management

Graduate Diploma in Materials Management

Paper No. 13

Research Methodology

Date: 22.06.2014

Max. Marks: 100

Time: 10.00 a.m to 1.00 pm

Duration: 3 Hrs.

Instructions:
1. Part A: Four Questions (Q 1 to Q 4). All questions are compulsory. Each Question carries 1 mark. (Total marks 32).
2. Part B: From Part B answer any three out of 5 questions. Each question carries 16 marks. (Total marks 48).
3. Part C: (Compulsory). Case study. (Total marks 20)

Part A 32 marks

Attempt all questions. Each Question carries 1 mark.

Q : 1 Select Correct Answers From the Following: 8 marks

(Write the Full answer of Your Choice and not only – a, b, or c)

A. Secondary Data is :
   a) Data Collected First in Study
   b) Census Data
   c) Data collected through the Questionnaire

B. In Quota sampling, sample is selected :
   a) In equal proportion from each strata
   b) In unequal proportion from each strata
   c) By allotting Fix Number to each strata

C. Median of the Data: 30, 31, 20, 22, 24, 26, 16, 18 is –
   a) 22, b) 24, c) 23

D. In Research study, a Census is appropriate if :
   a) The population size is small
   b) Researcher has ample time for study
   c) Sampling application is not possible
E. A Consumer Prize Index is used to determine:
   a) Purchasing Power of Money.
   b) Minimum wage of workers.
   c) Import policy of Govt.

F. Application of Chi Square test is possible if:
   a) Sample size is less than 50.
   b) Equal to or more than 50.
   c) Must be more than 50.

G. Mistakes if any can be pin-pointed and corrected easily in:
   a) Oral Report, b) Written report. c) In both.

H. Mail Questionnaire is very suitable as:
   a) Only responsible people sends it back.
   b) Sensitive Questions can be included.
   c) Larger number of the people covering wide area can be contacted.

Que. 2: Fill in the Blanks. (Selecting from the given choices) 8 Marks.

a) Marketing Research is not useful if it--------------------
   i) takes long time to conduct. ii) is very expensive one.

b) Exploratory Research would be ideally suited ---------------------
   i) to generate new product idea. ii) to study market competition.

c) In observation method it is not possible to gather information on:
   i) Intensity of problem. ii) Opinions and intensions.

d) Observation and Experimentation are some of the methods of collecting ------------------ in Research.
   i) Primary Data ii) Secondary Data.

e) The ---------------- is the central value or the item that occurs most often.
   i) Mode ii) Median.
f) Quota Sampling is ----------- type of sampling.
   i) Probability  ii) Non-probability.

g) Dichotomous Questions have ----------- answers.
   i) Only Two   ii) Multiple.

h) Graphical presentations is another way of ----------- presentation.
   i) Mathematical  ii) Pictorial.

Q : 3 Match the Pairs. (Write full correct pairs) 8 marks

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Chi-Square Test</td>
<td>Can identify the pairs for their more or less similar characteristics.</td>
</tr>
<tr>
<td>B</td>
<td>Hypothesis</td>
<td>Predicts the value of one variable from the other.</td>
</tr>
<tr>
<td>C</td>
<td>Experimentation</td>
<td>Statistics that already exists.</td>
</tr>
<tr>
<td>D</td>
<td>INOVA</td>
<td>Non-Parametric Test.</td>
</tr>
<tr>
<td>E</td>
<td>Secondary Data</td>
<td>Controlled group method</td>
</tr>
<tr>
<td>F</td>
<td>Regression Analysis</td>
<td>Used to test the equality of three or more sample means.</td>
</tr>
<tr>
<td>G</td>
<td>Pictorial presentation</td>
<td>Tentative Proposition.</td>
</tr>
<tr>
<td>H</td>
<td>Sign Test</td>
<td>Pie –Chart.</td>
</tr>
</tbody>
</table>

Q : 4 State True or False 8 marks

a) Diagrams are liable to be misused for presenting an illusory picture of a problem.

b) Market Research is an exact science.

c) Personal Interview is the best method of Data Collection techniques in Industrial Research.

d) Experimentation is a research process in which all variables are manipulated.

e) In open end questions, respondents are not free to answer in their own wards.

f) Graphic presentation of data can indicate the nature and direction of trends of the Data.

g) Data error occurs during the data collections, data analysis or its interpretations.

h) Average of First and last Value in given data arranged in ascending order is called Mode.
PART - B

(Answer Any Three Questions) 16 x 3 = 48 marks

Que. 5: Explain In Short:

(a) Research Design.
(b) Case Study.
(c) Experimental Research.
(d) Observation Method.

Que. 6: Discuss various Tools of Data Collection used in Market Research? Which Tool is most preferred in M. R? What are its advantages over other tools?

Que. 7: Write Notes On:

(a) Random Sampling.
(b) Quota Sampling.
(c) Area Sampling.
(d) Purposive Sampling.

Que. 8: (A) Calculate the Median from the Following Data.

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency</th>
<th>Cumulative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 to 10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>10 to 20</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>20 to 30</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>30 to 40</td>
<td>20</td>
<td>51</td>
</tr>
<tr>
<td>40 to 50</td>
<td>15</td>
<td>66</td>
</tr>
<tr>
<td>50 to 60</td>
<td>09</td>
<td>75</td>
</tr>
<tr>
<td>60 to 70</td>
<td>05</td>
<td>80</td>
</tr>
</tbody>
</table>

(B) Calculate A.M. of the following Frequency Distributions.

<table>
<thead>
<tr>
<th>Daily Wage of Workers in Rs.</th>
<th>120</th>
<th>125</th>
<th>130</th>
<th>135</th>
<th>140</th>
<th>145</th>
<th>150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Workers</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>14</td>
<td>10</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Que. 9: (A) Define and Explain the Terms:

(a) Correlation and Coefficient of Correlation.
(b) Regression and regression Equation.

(B) Write a Note on Types of Research Reports with emphasis on their advantages and disadvantages.
PART- C (Compulsory) 20 marks

CASE STUDY

Q. 10 A Car Manufacturing Company XYZ Limited is holding its number ONE Position in entry level segment / small cars since last 15 yrs. The Company noticed that since last 3 Years, its market share in small cars has came down from 85 % to 60 % even though their car is lowest in prize in its segment. In order to find out the facts / reasons for their fall of sale, Marketing Department is assigned to undertake the study and suggest the measures in order to achieve back number one position in small car segment.

As a Market Research Consultant, answer the following questions ……

a. What would be your approach to plan and undertake the study? Who will be your Targeted Respondents to be included in Sample Group.

b. Which Research Method you will prefer to undertake this study? Why?

c. What type of Method of Data Collection you will prefer? What would be the various Items of Information on which Data is to be collected?

d. Work out Tool for Data Collection so that minimum 10 important items of information on which Data will be available to draw meaningful conclusions.

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