INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Graduate Diploma in Materials Management
PAPER No. 13 (New)
Research Methodology

June 2015

Date   : 21.06.2015
Time   : 10.00 a.m to 1.00 pm
Instructions :

Max. Marks :100
Duration   : 3 Hrs.

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)**

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PART- A   32 marks

Attempt all questions. Each   Question carries 1 mark.

Q, 1. Select and write the correct choice from the following. (*Please do not write choice nos. like i, ii, iii, etc. write the choice in full*)

(a) Coefficient of variation of data relates to -

(i) Consistency   (ii) Dispersion

(iii) Relationship of variables

(b) ERP stands for -

(i) Evaluation review program   (ii) Enterprise resource planning

(iii) Electronic research program

(c) Area under the Normal curve for $Z < = 1$ is:

(i) 0.2714   (ii)) 0.8413

(iii). 0.3143

(d) Ogive is -

(i) An ascending curve   (ii) A descending curve

(iii) Can be both ascending and descending.

(e) t- test is used when -

(i) Sample size $n > 30$ and σ is not known   (ii) Sample size $n < 30$ and σ is not known

(iii) Sample size $n < 30$ and σ is known

(f) Marketing is

  (i) Finding ways to sell more   (ii) A company department

  (iii) A business strategy

(g) A research design is concerned with

  (i) The study of a problem   (ii) To find the cause for problem

  (iii) The way to study the problem

(h). Conclusive research is

  (i). Fundamental research   (ii) Exploratory research

  (iii). Descriptive research

Q.2. Match correcting the order in table B.   **8 marks**

Column A	Column B
1. Sampling error	a. Descriptive Research
2. Correlation coefficient	b. Sample based estimate
3. Coefficient of variation	c. Confidence interval
4. Anova	d. Consistency
5. Conclusive research	e. Dispersion
6. Structured questionnaire	f. Degree of relationship
7. Standard deviation	g. Splitting the variance
8. Estimation	h. Close ended questions

Q.3. Write true" or false" for the following statements: 8 marks

(i). Experiments are used to identify a cause and effect relationship'

(ii).One dimensional diagrams are not used for presentation of frequency distributions.

(iii). Systematic sampling is useful when population data is arranged in some order.

(iv) ANOVA is applied to study the difference between more than two populations.

(v). Syndicated service organizations provide only data base of its customers

(vi). Analysis of data is an understanding of variation and its causes in any phenomenon.

(vii). Exploratory research is an investigation studying a problem from different angles

(viii). Research designing does not facilitate research process

Q.4. Fill the gaps with a correct one out of the given choices

(i). Correlation analysis studies _____between variables (association/ cause and effect)

(ii). An index number calculated from a group of variables is called (complex/ composite) index.

(iii). Statistical methods are concerned with _____(decision making/computations)

(iv) .A trend is a _____ general direction of a business (long term/short term)

(v).The numerical value of sample mean is an _____ of population mean (estimate/estimator)

(vi) MIS stands for _____ market information system / market investment strategy)

(vii) Level of significance is denoted by _____ (alpha/sigma)

(viii) The objective of applied research Is _____ (solving a problem / gaining knowledge)

PART - B

(Answer Any Three Questions)   **3 x16 = 48 marks**

Q.5. Distinguish briefly between the given: attempt any two of the 4 parts below.

   (a). Research methods and research methodology

   (b). Partial and multiple correlation

   (c). Stratified and cluster sampling

   (d). Manager and a researcher

Q.6. (a) What is Exploratory Research? How it is different from descriptive research?

   (b) What is the main purpose and objective of exploratory research?

Q.7 (a) Explain briefly the steps involved in testing of hypotheses.
   (b) A random sample of size 36 has the sample mean 53. The sum of the squares of deviations as taken from the mean is 5184. Can the sample be regarded as taken from the population having 56 as its mean?

Q.8. Write short note on any two of the following:

   (a). Writing a good research report.

   (b).Consumer price index.

   (c).Sampling error

Q.9. There are two filling machines operating in a production unit filling syrup In bottles. Two samples each of size 36 filled bottles gave the following data: Which of the two machines is more stable in performance?

Machine	Mean content	Standard deviation
1.	490 ml	8 ml
2.	505 ml	10 ml

PART- C (Compulsory)   20 marks

Q.10. A company "REX" producing a soft beverage named "sweberry" mainly for the youngsters wished to increase its market share .It took the following steps to achieve its objective. Thinking that the consumers might be wanting a variety, it changed the taste of the beverage and added a new flavor to it. It gave the name "Swecherry" to the new product and marketed this as a health drink for all including youngsters and adults with an increase in price for the same volume of content. .It also continued to sell the previous brand Sweberry.

After a year the company recorded a decrease in its total market share of the beverages,

Instead of expecting an annual increase.

Answer the following questions:

1 .In your view what could be the causes for the reduction in the annual sale?

2 .what further actions were required to be untaken to strengthen the Market Share.

3 .Prepare a brief questionnaire containing about eight questions to be put to the Retailers and consumers for relevant information to support your view.

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