



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

June 2016

Date : 19.06.2016
Time : 10.00 a.m to 1.00 pm

Max. Marks :100
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 and write in words the correct choice. (No marks will be given for only writing numbers/ i, ii, or iii. as your answer.) **8 marks**

- (a). Variables not desirable in experimental research are those which are :
(i). Independent (ii). Dependent (iii). Extraneous
- (b). Research design for exploratory research is :
(i). Flexible (ii). Rigid (iii). Structured.
- (c). A sample is considered a small sample if its size is :
(i). Less than 30 (ii). Greater than 30 (iii). Less than or equal to 30.
- (d). The Median of the data : 2, 6, 10 14 is :
(i). 6 (ii). 8 (iii). 10
- (e). Multistage sampling is :
(i). Random Sampling (ii). Cluster sampling
(iii). A mix of the above (i) and (ii).
- (f). If Mean of a data is 24 and standard deviation is 4.6 then the coefficient of variation is :
(ii). 5.22 (ii). 19.17 (iii). 0.192
- (g). ANOVA stands for
(i). Analysis of variation (ii). Analysis of Variance
(iii). Analysis of values

- (h). With sufficient increase in the size of a sample :
- (i). Type I error increases (ii). Type II error does not reduce
 (iii). Both Type I and type II decrease.

Q.2. State whether the following statements are true or false : 8 marks

- (a). Quantitative research is concerned with subjective assessment of attitudes.
 (b). Research and scientific method are not closely related.
 (c). In stratified sampling the sub-populations are individually homogeneous.
 (d). If coefficient of determination between two variables is 1 then there is a strong relationship between them.
 (e). t-distribution is symmetrical.
 (f). For a higher level of precision a relatively smaller sample is more appropriate.
 (g). Mode is a measure of Dispersion.
 (h). closed ended questions are more useful in exploratory research.

Q.3. Fill in the blanks out of the given choices : 8 marks

1. Experiments are conducted to infer _____ between variables (association/ causality)
2. Research design is a _____ of research. (frame work/process)
3. . An index number calculated from a group of variables is called (complex/ composite) index)
- 4.. MIS stands for _____ market information system / market investment strategy)
5. Standard deviation is denoted by _____ (alpha/sigma)
6. The objective of applied research is _____ (solving a problem / gaining knowledge)
7. Greater the dispersion in the population data _____ size sample should be used for more precision (Smaller/Greater)
8. Dichotomous questions have _____ answers(two/more than two)

Q.4. Match the following statements : 8 marks

Column A		Column B	
1	Skewed data	a.	Time series
2	Data related to time period	b.	Data cleaning
3	Measurement of dispersion	c.	Relative measure
4.	Warranty cards	d.	same measuring units
5	sampling distribution	e.	Data collection method
6	Absolute measure	f.	Lack of symmetry
7	Independent of measuring units	g.	Standard error
8	Missing values	h.	Range

PART- C (Compulsory)**20 marks****Q.10 CASE STUDY**

A global clothing retailer AKIT had excellent financial results until recently. Its worldwide sales included brightly colored knitwear and contemporary clothing. But for the last two years the results have been very discouraging as sales have been declining. This was in spite of the fact that AKIT had opened more stores at various locations in different countries.

A Descriptive research by the R & D of the company revealed the following :

- (a). The Advertisements of AKIT in Magazines, posters, bill boards, TV. etc., were scanty and poor as compared to those of competitors and rivals.
- (b). Some of the old franchisee had closed at many locations on account of poor sales.
- (c). A good number of AKIT products were not in tandem with the latest trends.

Questions :

1. Would you recommend an exploratory research ? If yes why ?
2. Do you think that poor advertising is a major cause for lower sales and profit ? If not what other reasons possibly ?
3. Give, in brief, some suggestions which you think will increase the growth and margins of AKIT
