



# INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Materials Management

June 2017

Graduate Diploma in Materials Management

PAPER No. 13

## Research Methodology

Date : 18.06.2017

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)

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### PART- A

32 marks

Attempt all questions. Each Question carries 1 mark.

#### Q.1. State whether the following statements are True or false: [ 8 marks ]

- (a). The main purpose of Research Methodology is to understand the logic behind the research methods and criteria of the research.
- (b). A Bar Chart comprises a series of bars of different widths and lengths.
- (c). The dispersion in a given data can easily be judged by its measure of an average.
- (d). The numerical value of a linear correlation coefficient nearing 1 indicates a weak relationship between two variables.
- (e). Quantitative research is concerned with the subjective assessment of attitudes of a Customer.
- (f). Closed ended questions are more useful in exploratory research.
- (g). Z-test is applied when  $n > 30$  even if  $\sigma$  is not known.
- (h). Chi square test is a non- parametric test.

#### Q.2. Fill in the blanks by selecting the correct choice: [ 8 marks ]

- (a). Advertisements improve the \_\_\_\_\_ of a product/service. (Sale/price)
- (b). A trend is a \_\_\_\_\_ general direction of a business.(short term/long term)
- (c). The objective of applied research is \_\_\_\_\_ a problem.(solving/studying)
- (d). In experimental research design the control group is \_\_\_\_\_ to a treatment. (Subjected/ not subjected).
- (e). Extraneous variables \_\_\_\_\_ the study in experimental research. (Effect/ do not effect)
- (f). Correlation analysis studies \_\_\_\_\_ between two variables. (Association/ cause and effect relationship)
- (g). For good business research \_\_\_\_\_ data is required.(economical/reliable)
- (h). One dimensional diagram is also known as \_\_\_\_\_ chart.(Bar/Pie)

**Q.3. State the general full forms of the given abbreviations [ 8 marks ]**

- (i) C2C;                      (ii) SPSS;                      (iii) CRM;                      (iv) ANOVA;  
 (v) JIT;                      (vi) EDI;                      (vii) ERP;                      (viii) CII

**Q.4. Match the following [ 8 marks ]**

	<b>A</b>		<b>B</b>
1	Cross-sectional study	a)	Frame work of research
2	Structured questionnaire	b)	Large sample is used
3	Research design	c)	An assumption or statement
4	For more precise estimate	d)	Non-parametric test
5	Z-test is used	e)	Dispersion
6	Hypothesis	f)	At a point of time
7	Chi-square test	g)	Closed ended questions
8	Standard deviation	h)	Large sample $n > 30$

**PART - B**

**(Answer Any Three Questions)**

**3 x16 = 48 marks**

**Q.5.** The following table gives the number of days in a given period during which Car accidents occurred.

Number of accidents	2	9	6	8	16
Number of days	8	6	7	2	1

Find the average (A.M) number of accidents and the standard deviation.

**Q.6.** A manager wants to to be 95% confident that the expected monthly withdrawal from his branch is within plus minus Rs.1000..What should be the proper size of the sample, if the standard deviation is known to be Rs. 3500?

**Q.7.** A sample of 49 apples purchased from the fruit- market contained 15 sour apples. Test the claim ‘ that less than 10% of the apples on the average are sour.

**Q.8.** Write brief notes on any two of the following:

- (a). Marketing research
- (b). Research design
- (c).Types of error in testing of hypotheses.

- Q.9. (a) What are the criteria of a good research?  
(b) Distinguish between an oral research report and a written research report.

**PART- C ( Compulsory )**

**20 marks**

**Q.10 CASE STUDY**

The airline industry in India is expected to have a strong market potential. Strong economic growth, ever increasing foreign trade, revival of tourism and fast travelling to save time, all are helping the surge in air travel. An airline "SEAKET"( fictitious name) had a very good market of airline sale during the previous 7 years. It is now showing a decline in its market share, in spite of the boom in the industry.

**Answer the following questions:**

- (a). What could possibly be the reasons for decline in airline sale of SEAKET. Mention only three or four prominent reasons according to you.  
(b). Would you suggest a survey to understand the attitude of the air travellers towards the rates or services of the company?  
(c).Design a brief open-ended questionnaire for exploratory study to get feed back.

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