



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Materials Management

June 2011

Graduate Diploma in Materials Management

PAPER No. 13

Research Methodology

Date : 19.06.2011
Time : 10.00 a.m to 1.00 pm

Max. Marks :100
Duration : 3 Hrs.

Instructions :

1. From Part A – answer all questions (compulsory). Each sub questions carries 1 mark. **Total : 32 Marks**
 2. From Part B – Answer any 3 questions out of 5 questions. Each sub-question carries **16 marks. Total : 48 Marks**
 3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions .
Total: 20 Marks
 4. Please read the instructions given in the answer sheet
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Part A

Total Marks – 32

(Compulsory 4 questions – 8 sub-question)

(8 X 4)

1. Select the right answer from the alternatives :-
 - a) Basic idea of sampling is
 - i) Selecting same elements in the population
 - ii) Selecting heterogenous population
 - iii) Collecting entire data bank
 - b) Validity of sample depends on
 - i) accuracy
 - ii) population characteristics
 - iii) wide variation between the elements
 - c) Probability sampling is
 - i) Judgement based
 - ii) purposive
 - iii) random

d) Standard error of the mean

i) $\frac{\bar{x}}{\sqrt{n}}$

ii) $\frac{\bar{x}}{n}$

iii) $\frac{\sigma}{\sqrt{n}}$

e) Ordinary data include

i) Indicator of order

ii) Variation of the elements

iii) Random data

f) Halo effect is

i) known error

ii) unidentified error

iii) a pervasive error

g) OLAP is

i) Online Auto Process

ii) Other Line Analysis Process

iii) Online Analytical Process

h) Simple Category Scale is also known as

i) Likert Scale

ii) Dichotomous Scale

iii) Multiple Scale

2. Write True or False

a) Equivalence is concerned about variances in one point of time

b) Semantic differential Scale is summarized rating Scale

c) Scalogram is unidimensional

d) A portal is a gateway to web

e) Reliability is not a sufficient condition for validity

f) Cronbach's coefficient alpha is not useful for multi-item scale

g) Tertiary sources example Internet Search engines

h) Measures of Dispersion is Mode

i) \

3. Match the two columns :-

	Column A		Column B
a)	Semantic Differential Scale	a)	Additive Model
b)	Simple category Scale	b)	$\bar{X} > M$
c)	Time Series Model	c)	Range
d)	Curve showing skewness	d)	Also known as Dichotomous Scale
e)	Thematic appreciation test consists of set of	e)	Lies in the concept of "Null"
f)	Measures of dispersion	f)	Used for brand image
g)	Testing of hypothesis	g)	Pictures
h)	Important Scaling Technique	h)	Rating Scale

4. Fill up the blanks :-

- Process is out of control if it falls beyond _____ and _____
- When data reported differ from actual data is called _____ error
- Reliability of data depends on _____
- Most common rating scale is _____
- Measures for ordinal data _____
- Multivariate analysis of variance is _____
- Univariate analysis of variance is _____
- Bayesian statistics are extension of _____ approach

Part – B
(Answer any three)

16x3=48

5. Distinguish between
 - a) Direct & indirect question
 - b) Open ended & closed question

6. Explain with example Likert Scale and Semantic differential scale

7. Write short notes (any two)
 - a) Chi-Square Distribution (X^2)
 - b) ANOVA
 - c) Co-efficient of Skewness
 - d) Cross tabulation

8. Explain Exploratory Research Procedures and briefly narrate primary, secondary & tertiary sources

9. Find out Concordant & Discordant values

	Count	Lower	Middle	Upper	
Fitness	High	14	4	2	20
	Moderate	18	6	2	26
	Low	2	6	16	24
		34	16	20	70

Part C

To illustrate the application of the t-test to the one sample case, consider again the controller's problem mentioned earlier with a sample of 100 accounts, she finds that the mean age of outstanding receivables is 52.5 days, with a standard deviation of 14.

Q : Do these results indicate the population mean might still be 50 days?
