



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Logistics & SCM
Post Graduate Diploma in Materials Management - 2 years
PAPER No. 17(enrolment code- PMM, PSM,) [ONLINE EXAM]
Research Methodology

Dec 2023

Date : 16.12.2023
Time : 2.00 pm to 5.00 pm

Max. Marks: 70
Duration : 3 Hrs.

Instructions:

1. From Part A, contains 4 main questions (with 5 sub-questions) each question carries 1 mark Total of 20 marks
2. From part B answer any 5 questions out of 5 questions. Each question carries 10 marks – A total of 50 marks
4. Graph Sheet will be provided if required.
5. Use of standard calculator is permitted.

PART – A (compulsory) [20 marks]
Attempt all questions. Each sub-question carries 1 mark.)

Q.1: Expand the following: [5 Marks]

- a. MRQH b. IRS c. CSO d. CAGR e. BMDP

Q.2: Match the following: [5 Marks]

Column A

Column B

- | | |
|---|---|
| A. Non-Parametric Test | 1. Specific observations to broad generalizations |
| B. Association between different types of variables | 2. Z- Test |
| C. Inductive Hypothesis | 3. Sources of primary data |
| D. Parametric Test | 4. Inferential Analysis |
| E. Appendices | 5. Correlation Analysis |

Q.3: State True or False: [5 Marks]

- a. Causal research is also known as Action Research.
- b. Statistical designs refer to those designs that include only one independent variable.
- c. Random errors are unpredictable in nature.
- d. A nominal scale does not have any arithmetic origin.
- e. Graphic rating scale is a five point scale.

Q. 4: Fill in the blanks: [5 Marks]

- a. Data processing is a process of converting raw data into a form which is fit for
- b. Hypothesis testing is a process to make decisions for research problems by using
- c..... is used to test whether the means of two or more independent groups are statistically significantly different.
- d. is used when the researcher wants to determine the direction and magnitude of difference in the matched values.
- e. contains a brief of the introduction, body and conclusion of the research.

PART B [50 marks]
(Attempt any 5. Each question carries 10 marks)

Q. 5: Write short notes on any two. (2X5=10 marks)

- a. Characteristics of a good research
- b. Research Problem Identification.
- c. Statistical Designs
- d. Non-Sampling Errors

Q. 6:a) Explain with examples the following types of questions **[3+3=6 marks]**
 i) Open-ended and Close- ended questions
 ii) Rating scale (continuum) questions

b) What are the various errors in responses that one should be aware of while creating Questionnaires? **[4 marks]**

Q. 7: Distinguish between Primary Data and Secondary Data? Briefly explain the various methods of primary data collection **[4+6 =10 marks]**

Q. 8:a) After processing data, a researcher analyses it to retrieve meaningful information – Explain **[7+3=10 marks]** the various data analysis methods?

b) What do you understand by the term – Measures of Central Tendency?

Q. 9:a) What is a Research Proposal? **[2+8=10 marks]**

b) Outline a research proposal to be submitted to the Sales Manager of M/s XYZ Ltd?

Q 10: The following table represent data for preferences for men and women for joint and Nuclear families - **[10 marks]**

	Joint Family	Nuclear Family	Total
Men	96	35	131
Women	170	360	530
Total	266	395	661

You are required to find out whether the opinion of men and women about the type of family is the same? Use 5% level of significance. [Chi-square value at 5% level of significance with one tailed test and 1 degree of freedom is 3.841].

Q 11: A researcher observed the sale of a product of a particular brand in 6 big retail houses in three cities. She wants to determine whether the mean sale is the same across cities. You are required to find out whether the mean sale of the three cities is the same? Use 5% level of significance. [Table value of F (d.o.f 2 ,15) is 3.68].

[10 marks]

Retail Houses	Kolkata	Mumbai	Chennai
1	3	6	9
2	8	9	8
3	4	8	6
4	9	5	7
5	6	7	5
6	7	4	7

Q 12: A researcher wants to test correlation between the IQ level and hours spend in reading newspaper per week. The data is given as below **[10 marks]**

No. of Observations	IQ	Hours spent in reading newspaper per week
1	105	6
2	91	7
3	99	24
4	100	56
5	99	29
6	103	30
7	97	20
8	113	12
9	112	10
10	110	17
11	94	16
12	110	8
13	112	9

Use rank correlation to find out correlation between the IQ level and hours spend in reading a newspaper, with 5% level of significance. [Rank correlation value at 5% level of significance with two tailed test and 1 degree of freedom is ± 0.484].
