



**INDIAN INSTITUTE OF MATERIALS MANAGEMENT**  
**Post Graduate Diploma in Logistics & SCM**  
**Post Graduate Diploma in Materials Management - 2 years**  
**PAPER No.6 (enrolment code –PGMM, PGSM)**  
**Research Methodology**

**June 2025**

**Date : 14.06.2025**

**Time : 10.00 a.m to 1.00 p.m**

**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 any5 questions out of 5 questions. Each question carries 10 marks – A total of 50 marks
3. 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 terms:**

**[5 marks]**

a) MRQH      b) IRS      c) CSO      d) CAPI      e) SD

**Q. 2) Select appropriate option**

**[5 marks]**

a) A universe from which a researcher takes sample is called \_\_\_\_\_.  
(i) section      (ii) population      (iii) area      (iv) sample

b) Popular report is \_\_\_\_\_ in nature.  
(i) Technical      (ii) verbal  
(iii) Non-technical      (iv) Written

c) \_\_\_\_\_ tests do not require any information about the population parameters from which a sample is drawn.  
(i) non-parametric      (ii) parametric      (iii) signed      (iv) rank

d) In \_\_\_\_\_ test two attributes are tested to find out whether they are associated with each other.  
(i) Z test  
(ii) t-test  
(iii) Chi-square  
(iv) Kolmogorov-Smirnov (KS) test

e) Mann-Whitney test is used to determine whether two \_\_\_\_\_ samples are drawn from the same population.  
(i) quota      (ii) independent  
(iii) progressive      (iv) cluster

**Q. 3) State 'True' or 'False'**

**[5 marks]**

a) Process of assigning number to observations is measurement.  
b) Interval scale will have named and ordered variables.  
c) Construct validity does not capture a specific trait.  
d) Statistics of attributes deals with quantitative questions.  
e) BMDP is a database management software.

**Q. 4) Match the following**

**[5 marks]**

**Column A**

**Column B**

1	Oral Presentation	A	Nominal data
2	Chi-square-test	B	Graphs and Charts
3	One-way Anova	C	Correlation Analysis
4	General to specific conclusion	D	Kruskal-Wallis Test
5	Association between variables	E	Deduction

**PART B****[50 marks]**

(Attempt any 5. Each question carries 10 marks)

**Q. 5)****(2 x 5 = 10 marks)**

- a) Discuss fundamental steps of a research process with one example.
- b) Explain the functions and importance of literature review in research.

**Q. 6)****(2 x 5 = 10 marks)**

- a) Explain the conditions and components of a research problem.
- b) Describe the types of errors in measurement. How can these errors be minimized.

**Q. 7)****(2 x 5 = 10 marks)**

- a) What do you understand by scaling techniques? Discuss different types.
- b) Discuss different methods of primary data collection.

**Q. 8)****(2 x 5 = 10 marks)**

- a) What are the attributes of a well-designed questionnaire?
- b) Calculate the Correlation coefficient of given data.
- c)

x	41	42	43	44	45
y	3.2	3.3	3.4	3.5	3.6

**Q. 9)****(2 x 5 = 10 marks)**

- a) Explain the concept of ANOVA in detail.
- b) What do you understand by rank correlation? Give one example.

**Q. 10)****(2 x 5 = 10 marks)**

- a) Discuss the types of data analysis with one example each.
- b) What is a good hypothesis and what are its types?

**Q. 11)****(2 x 5 = 10 marks)**

- a) What are the integral parts of a research report? Explain.
- b) What is Chi-square test of independence?

**Q. 12) Write Short Notes on (Any Two)****(2 x 5 = 10 marks)**

- a) Signed-Rank Test
- b) Decision Rule
- c) Parametric Tests
- d) Central tendency