



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 any 5 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