



**The Chartered  
Institute of Logistics  
and Transport**

**INTERNATIONAL ADVANCED DIPLOMA IN LOGISTICS AND TRANSPORT  
RESEARCH METHODS AND DATA ANALYSIS  
ADIP06  
NOVEMBER 2025 EXAMINATION**

**Note to Candidates**

The aim of this paper is to establish your in-depth understanding of the principles and applications involved in Research Methods and Data Analysis. Candidates are encouraged to make use of relevant examples where applicable.

**Instructions to Candidates**

- Duration of examination: **3 HOURS**
- **Answer FOUR (4) questions**
- **Start answering each main question on a new page.**
- Allocation of marks is indicated alongside each question.
- Write legibly.

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**QUESTION 1**

Using relevant examples, briefly discuss the following research concepts.

- |                         |                  |
|-------------------------|------------------|
| a) Research             | <b>(2 marks)</b> |
| b) Literature review    | <b>(2 marks)</b> |
| c) Descriptive research | <b>(2 marks)</b> |
| d) Secondary Data       | <b>(2 marks)</b> |
| e) Research Design      | <b>(2 marks)</b> |
| f) Sampling             | <b>(2 marks)</b> |
| g) Research Objectives  | <b>(2 marks)</b> |
| h) Research Proposal    | <b>(2 marks)</b> |
| i) Hypothesis           | <b>(2 marks)</b> |
| j) Research Question    | <b>(2 marks)</b> |
| k) Population           | <b>(1 mark)</b>  |
| l) Validity             | <b>(2 marks)</b> |
| m) Data analysis        | <b>(2 marks)</b> |

## QUESTION 2

Ten CILT students in the research methods and data analysis class scored the following mid-term examination marks:

**45 60 85 60 40 70 55 60 60 65**

Calculate the following.

- a) Arithmetic mean **(4 marks)**
- b) Median **(3 marks)**
- c) Mode **(3 marks)**
- d) the range **(3 marks)**
- e) variance **(2 marks)**
- f) standard deviation **(2 marks)**
- g) Draw a Pie chart to show the pass and failure rate **(3 marks)**

## QUESTION 3

- a) Identify at least four sources of secondary data. **(4 marks)**
- b) Distinguish with clear examples, qualitative, quantitative, and mixed methods. **(21 marks)**

## QUESTION 4

- a) Distinguish a researchable problem from a non-researchable problem. **(5 marks)**
- b) Steven (1946), a Harvard psychologist, published a classic paper in science in which he described the properties of four scales of measurement. Identify and explain these levels of measurement with practical examples. **(20 marks)**

## QUESTION 5

Giving practical examples, discuss any **FIVE** ethical considerations to be observed when conducting research. **(25 marks)**

## QUESTION 6

- a) Identify any five competencies that must be possessed by an interviewer.  
**(5 marks)**
- b) Using current practical examples explain any five (4) benefits of research in business.  
**(20 marks)**