



QP CODE: 26801802



Reg No :

Name :

IMCA DEGREE EXAMINATION APRIL 2026

Sixth Semester

Faculty of Technology and Applied Sciences

INTEGRATED MCA

CORE - IMCA6C01 - RESEARCH METHODOLOGY

2020 Admission Onwards

F77CF2A0

Time: 3 Hours

Maximum: 75 Marks

Part A

*Answer any **ten** questions*

Each question carries 3 marks

1. Explain literature survey.
2. Define main objectives of research.
3. Explain analysis of data.
4. Explain arithmetic mean.
5. Calculate the mean deviation of data 120, 130, 135, 140.
6. What is coefficient of standard deviation?
7. Define scientific misconduct with practical examples.
8. Define measurement of uncertainty.
9. What are the key components that should be avoided when writing an abstract for a research paper?
10. What are the limitations of relying solely on impact factor to evaluate the quality of research journals?
11. List three reasons why accurate citations are essential in scholarly writing.
12. Discuss the significance of "interpretation" in drawing meaningful conclusions from research findings.

(10×3=30 marks)





Part B

Answer **all** questions

Each question carries **9** marks

13. a) Differentiate between applied vs fundamental and conceptual vs empirical researches.

OR

- b) What are different data collection methods?

14. a) Calculate the harmonic mean for the following data 3, 4, 4.5, 5, 3.5, 4.75, 4.25.

OR

- b) Explain quartile deviation with necessary formulas.

15. a) Explain measurements of uncertainty in detail.

OR

- b) It is claimed that a random sample of 100 tyres with mean life of 15269km is drawn from a population of tyres which has a mean of life 15200km and SD of 1248km. Test validity of the claim(use Z test with level of significance 5%).

16. a) Elaborate on the key components and objectives of the methodology section in a research paper, emphasizing its role in ensuring research replicability and validity.

OR

- b) Compare and contrast the h-index with other citation-based metrics, evaluating their effectiveness in assessing researcher's impact and productivity.

17. a) Discuss the different stages involved in planning and structuring a research report. Evaluate the significance of each section within a research report.

OR

- b) Detail the layout and structure of a research report, highlighting the significance of each section and its contribution to effectively communicating research findings.

(5×9=45 marks)

