

This question paper contains 3 printed pages]

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S. No. of Question Paper : 7072

Unique Paper Code : 2353010015

Name of the Paper : Research Methodology

Name of the Course : B.A. Programme

Semester : VI

Duration : 3 Hours

Maximum Marks : 90

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any *two* parts from each question.

All questions carry equal marks.

1. (a) Explain the importance of systematic Literature review while working on a research problem. 7.5
- (b) Differentiate between the process of traditional method of submitting a manuscript and submitting a manuscript by journal portal system. 7.5
- (c) In context of mathematical writing, give brief description of a definition, proposition and notation with example. 7.5
2. (a) What are the different ways of listing of authors in a research paper ? What is the role of a corresponding author ? 7.5
- (b) Name some commonly used Mathematical Software. What is the importance of using mathematical software ? 7.5

P.T.O.

- (c) What is the role of Mathematics Subject Classification and Keywords in a research paper ? 7.5
3. (a) Explain the essential components of a scientific article written in LaTeX. 7.5
- (b) What are the different ways to present mathematical article in a conference ? 7.5
- (c) Using PSTricks, draw an ellipse with shaded sector. 7.5
4. (a) How the array environment works in LaTeX ? Explain it with example. 7.5
- (b) Create a beamer presentation with the following contents :
- Slide 1 - Title page
- Slide 2 - Three mathematical expressions
- Slide 3 - Thank You 7.5
- (c) What are the different ways to make bibliography in LaTeX ? 7.5
5. (a) Match the following resources with their main use :
- ResearchGate - A. Repository for preprints in mathematics and science,
- arXiv-B. Academic networking and Q&A platform,
- Scopus C. High-level math conferences & journals,
- MathSciNet - D. Applied math journals & industry-oriented research,
- MAA - E. Undergraduate-focused math teaching and resources,
- AMS - F. Citation database with global journal coverage,
- SIAM - G. Reviews and bibliographic data for math literature 7.5

- (b) Write a short note on any *two* journal metrics (Impact Factor, Cite Score, SNIP, SJR, Google Scholar Metrics). 7.5
- (c) Suppose Journal A has 50 papers in two years and receives 150 citations. Journal B has 100 papers and 200 citations. Compute the Impact Factor and Cite score for both and suggest which appears better. 7.5
6. (a) What do you understand by academic misconduct ? Explain in simple words. What is meant by mosaic plagiarism and self-plagiarism. 7.5
- (b) How does plagiarism detection software like URKUND or Ouriginal work ? Explain in easy steps. 7.5
- (c) Why is it important to give proper references in research ? How can correct citation help avoid plagiarism ? 7.5

