

Journal of Scientific Research

Vol. 62 (1 & 2) 2018



तत् त्वं पूषन् अपावृणु सत्यधर्माय दृष्टये

INSTITUTE OF SCIENCE
BANARAS HINDU UNIVERSITY
VARANASI-221005 (INDIA)

**The Editorial Board
of
Journal of Scientific Research
BANARAS HINDU UNIVERSITY, VARANASI**

**Chief Editors
Prof. Naveen Kumar**

**Executive Editor
Prof. Amitabh Krishna**

Editors

Prof. M. Agrawal Department of Botany	Prof. A.K. Singh Department of Mathematics
Prof. H.B. Srivastava Department of Geology	Prof. B.P. Singh Department of Statistics
Prof. D.S. Pandey Department of Chemistry	Prof. S.B. Agrawal Department of Botany
Prof. R.P. Malik Department of Physics	Prof. Jagadish Singh Department of Geography
Prof. S.M. Singh Department of Biotechnology	Prof. G.Narayan Department of Molebular and Human Genetics

JOURNAL OF SCIENTIFIC RESEARCH

Aims and scopes

JOURNAL OF SCIENTIFIC RESEARCH aims at quick publication of original research and survey/review articles in all branches of pure and Applied Sciences. Two issues comprising one volume of the journal, are published each year. Each Issue of the journal, consists of the following sections :

(a) Earth Sciences (b) Life Sciences and (c) Physical Sciences

THE JOURNAL OF SCIENTIFIC RESEARCH, Banaras Hindu University shall cover developments of regional and global importance in all science disciplines and will retain its wide circulation.

Articles contributed to the JOURNAL OF SCIENTIFIC RESEARCH are innovative and of interest to broad audience of professional scientists. Articles shall include current reviews, new results from research, and discussion of the infrastructure of science techniques, research programme.

INSTRUCTIONS FOR CONTRIBUTORS

General

1. Authors willing to have their papers published in the journal must submit the manuscripts in triplicate (also the figures) to the Executive Editor.

2. The submission of a paper will be deemed to imply that it represents the results of original research not published previously, that it is not under consideration for publication elsewhere; and that if accepted for the journal it will not be published elsewhere. Papers should not normally exceed 10 printed pages (ca. 400 words) of the journal.

3. All contributions will be refereed. The panel of experts may normally consist of six eminent scientists (with full addresses) and be submitted by the authors along with the paper.

Text

1. Typescript. Papers must be written clearly and concisely in English. They must be typed in double spaced with ample margin on all sides on A4 white bond paper 29 × 21 cm. This also applies to the abstract, tables, figure captions, and the list of references which are to be typed on separate sheets.

2. Title page. The first page must bear :

- a. The title of the paper (in Capital letters).
- b. The initials and names of all the authors (do not include Mr., Mrs. Dr., Prof., etc.)
- c. The name and full address of the Institution (exclude terms like "Research Scholar in", etc.)
- d. A running title not exceeding 30 letters.
- e. The section for which the paper is to be considered. e.g., Physical/Life/Earth Sciences.
- f. Name and address of the authors to whom all correspondence should be addressed.

3. Abstract. The second page must have an abstract of not more than 200 words, and the title.

4. Key Words. Between 5 to 10 Key words must be provided just below the abstract, for indexing and information retrieval services.

5. The Text. It should start with a title on the third page. The paper should be divided into sections starting with introduction.

6. References. References in the text should be cited in the brackets as : (Surname, year : pp.) at the end of the paper, references should be given alphabetically in the following manner (Journals and Books to be underlined) : Surname first, and initials. Year, full title of the paper/or book, Journal, Vol. ... (Pt..) pp./Publisher, Place.

Mathematics

Equations must be clearly written. All equations must be numbered consecutively in Arabic numerical with the number in parenthesis near the right hand margin. Authors must indicate in the margin wherever special characters are used. Indices, superscripts etc. must be clearly indicated. Vectors must be underlined with a wavy line and tensors with two wavy lines.

Illustrations

All figures including photographs, which must be glossy and contrast prints, should be numbered consecutively in Arabic numerals in order of occurrence in the text. Figure captions must be typed on separate sheet.

Line drawings must be submitted as camera-ready copy in Indian Ink in the suitable size (14 × 18 cm) for reduction. Curves should be drawn sufficiently thick to permit even 1/3rd reduction.

Tables

All tables must be numbered consecutively in Arabic numerals in order of appearance in the text. The table caption should be self contained and sufficiently descriptive.

Proofs

Alterations at the proof stage shall not be allowed. Galley proofs sent to the author together with a reprint order form must be returned promptly. If the manuscript conforms to the above instructions and proofs returned as mentioned above, the paper might be published within 6 months of the date of receipt.

Offprints

25 reprints of each article will be supplied free of charge (to all authors combined). Additional reprints in multiples of 50 can be had on payment made directly to the printer.

Units Abbreviations and Acronyms

SI Units and their standard Abbreviations should normally be used. Acronyms are allowable but must be defined in full immediately after first usage.