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**Draft IS 10680 (Part 1): 2025**
**Identical with ISO/IEC 1539-1:2023**
**May 2025**

**BUREAU OF INDIAN STANDARDS**
**DRAFT FOR COMMENTS ONLY**



# मसौदा भारतीय मानक

# सूचना प्रौद्योगिकी -प्रोग्रामिंग भाषाएँ - फोरट्रान
## भाग 1 आधार भाषा
## (दूसरा पुनरीक्षण)

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# Draft Indian Standard
# Programming languages — Fortran
## Part 1: Base language
## *(Second Revision)*

**ICS 35.060**

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|---|---|
| **Data Management System Sectional Committee, LITD 15** | **Last Date for Comments: 08 July 2025** |

**NATIONAL FOREWORD**

(Formal clauses will be added later)

This draft Indian Standard (Part 1) (Second Revision) which is identical to 'ISO/IEC 1539-1:2023 Programming languages — Fortran Part 1: Base language' issued by the International Organization Standardization (ISO) and International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards (BIS) on the recommendations of the

Data Management System Sectional Committee and approval of the Electronics and Information Technology Division Council.

This Standard was first published in 1983 and was identical with ISO 1539: 1980. The first revision of this standard was published in 2016 and was identical with ISO/IEC 1539-1: 2010. The second revision has been undertaken to align it with the latest version of ISO/IEC 1539-1:2023.

The main changes are as follows:

— an array can have a coarray component;

— additional forms of declaration;

— additional edit descriptors;

— additional intrinsic procedures;

— conformance with ISO/IEC 60559:2020;

— other changes listed in the Introduction.

The text of ISO/IEC Standard may be approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard', and

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

| International Standard | Corresponding Indian Standard | Degree of Equivalence |
|---|---|---|
| ISO/IEC 646:1991, Information technology—ISO 7-bit coded character set for information interchange | IS 10315: 1997 ISO/IEC 60646 7 Bit coded character set for information interchange (First Revision) | Identical with ISO/IEC 60646 |
| ISO/IEC 9899:2018, Programming languages—C | IS/ISO/IEC 9899: 2018 Information Technology — Programming Languages — C | Identical with ISO/IEC 9899 : 2018 |

The technical committee has reviewed the provisions of the following International Standard referred in this adopted draft standard and has decided that it is acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:-

| International Standard | Title |
|---|---|
| ISO/IEC 10646 | Information technology—Universal Multiple-Octet Coded Character Set (UCS) |
| ISO/IEC/IEEE 60559:2020, | Information technology — Microprocessor Systems — Floating-Point arithmetic |

**Scope of ISO/IEC 1539-1: 2023 is as follows:**

"This document specifies the form and establishes the interpretation of programs expressed in the base Fortran language. The purpose of this document is to promote portability, reliability, maintainability, and efficient execution of Fortran programs for use on a variety of computing systems.

This document specifies

— the forms that a program written in the Fortran language can take,

— the rules for interpreting the meaning of a program and its data,

— the form of the input data to be processed by such a program, and

— the form of the output data resulting from the use of such a program.

Except where stated otherwise, requirements and prohibitions specified by this document apply to programs rather than processors.

This document does not specify

— the mechanism by which programs are transformed for use on computing systems,

— the operations required for setup and control of the use of programs on computing systems,

— the method of transcription of programs or their input or output data to or from a storage medium,

— the program and processor behavior when this document fails to establish an interpretation except for the processor detection and reporting requirements in items (2) to (10) of 4.2,

— the maximum number of images, or the size or complexity of a program and its data that will exceed the capacity of any particular computing system or the capability of a particular processor,

— the mechanism for determining the number of images of a program,

— the physical properties of an image or the relationship between images and the computational elements of a computing system,

— the physical properties of the representation of quantities and the method of rounding, approximating, or computing numeric values on a particular processor, except by reference to ISO/IEC 60559:2020 under conditions specified in Clause 17,

— the physical properties of input/output records, files, and units, or

— the physical properties and implementation of storage.”

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding ISO/IEC Standard. For details please refer to ISO/IEC 1539-1:2023 or kindly contact

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