**BUREAU OF INDIAN STANDARDS**

**2nd Meeting of Computer hardware, Peripherals, Office equipment and User Interfaces Sectional Committee, LITD 36 (e-Meeting, through webex)**

**Minutes**

|  |  |
| --- | --- |
| **Date Time** | **Meeting link** |
| 12 July 2022 1030hrs to 1330hrs | <https://bisindia.webex.com/bisindia/j.php?MTID=me6815dfcf80722782281916ec1a42f48> |

**Chairman:** Shri A K Rai

**Member secretary:** Bhanu Krishnadev P

## WELCOME AND OPENING REMARKS

## CONFIRMATION OF MINUTES OF THE PREVIOUS MEETING

1. The Minutes of the meeting 1 of LITD 36 held on 04 October 2021 is circulated to the committee members on 10 November 2021. No comment is received on the Minutes. The committee may formally approve the Minutes of the meeting-1.

## SCOPE & COMPOSITION OF COMMITTEE

1. **Scope:** Standardization in the field of
* Computer hardware and peripherals, removable digital storage media (utilizing optical, holographic, and magnetic recording technologies) and flash memory technologies for digital information interchange.
* Basic characteristics, test methods and other related aspects of office equipment such as Printers/Scanners, Copiers, Projectors, and Systems composed of their combinations.
* User-system interfaces in ICT environments and support for these interfaces to serve all users, including people having accessibility or other specific needs.
1. Liaison:
* ISO/IEC/JTC1 TC- SC-23 (P): Digitally Recorded Media for Information Interchange and Storage
* ISO/IEC/JTC1 TC- SC-28 (P): Office equipment
* ISO/IEC/JTC1 TC- SC-35 (P): User interfaces
1. **Composition:**
* The initial composition is given in [Annex 1](#_Annex_1).
* The co-option requests have been received from the below organizations.

| **Sl No** | **Organization** |
| --- | --- |
| 1 | HP India |

## PROGRAM OF WORK OF LITD 36

1. The Program of work of LITD 36 Sectional Committee is given in [Annex 2](#_Annex_2). The committee may please note the information.

## ACTIVITIES OF THE PANELS

1. **LITD 36/P1 PANEL: REVIEW OF STANDARDS**
2. The following are the standards that are considered for review under this Panel. The recommendations on each standard were provided below. The committee may please review and comment.

|  |  |  |  |
| --- | --- | --- | --- |
| **SI. No.** | **IS No.** | **TITLE** | **Recommendations** |
| 1 | [IS 1885 ( Part 52 / Sec 3) : 1980](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=ODMzOA%3D%3D) | Electrotechnical vocabulary Part 52 data processing Sec 3 equipment technology | It was recommended to withdraw the standard as the relevant/base ISO Standard ISO 2382 has been adopted and published.  |
| 2 | [IS 1885 ( Part 59) : 1986](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=ODM0NQ%3D%3D) | Electrotechnical vocabulary Part 69 educational or training equipment and systems | The Terminology mentioned in this Indian Standard are mostly covered in the different terminology standards under LITD. For the remaining terminology to be considered, it is recommended for the adoption of IEC 60050-171: 2019, International Electrotechnical Vocabulary (IEV) - Part 171: Digital technology - Fundamental concepts. |
| 3 | [IS 14441 : 1997](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=NjIwNg%3D%3D) | Specification for keyboard | No update |
| 4 | [IS 14486 : 1997](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=NjM5Mg%3D%3D) | General purpose dot matrix printer – Specification | No update |
| 5 | [IS 14886 : 2000](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=Njg3MQ%3D%3D) | Switch mode power supply - Specification | No update |
| 6 | [IS 14896 : 2001](https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=Njg4Mw%3D%3D) | Personal computer – Specification | The Panel has drafted the Indian Standard based on the inputs provided by ETDC, Chennai. Committee may please review and approve the same provided in [**Annex 3**](https://d.docs.live.net/337ab3b7f5411b8b/Desktop/LITD%2036/Meetings/Meeting%202/IS%2014896%28Annex%203%29.docx)(Separate attachment). |

1. **LITD 36/P2 PANEL: Ink cartridges and toners of printers**
2. The study report prepared by this panel on the “Feasibility of Standardizing the dimensions of Cartridges used in Printers” has received comments as mentioned in [**Annex 4**](https://d.docs.live.net/337ab3b7f5411b8b/Desktop/LITD%2036/Meetings/Meeting%202/BIS%20Study%20Report%20on%20Feasibility%20of%20Standardizing%20Ink%20Cartridges%20Slot%28ANNEX%204%29.docx)(Separate Attachment).
3. Mr Ashish Khanna may please present the changes that were made based on the comments received and also highlight the final recommendation.

## REVIEW OF THE PUBLISHED STANDARDS

1. In accordance with BIS procedure, Indian Standards which are in existence for more than 3 years are to be reviewed for reaffirmation/revision/withdrawal. Standards due for review has been identified are listed in [Annex 5](#_Annex_5).
2. The Committee may examine the review proforma of the each standard and provide comments.

## INTERNATIONAL STANDARDIZATION ACTIVITIES

1. The Computer hardware, Peripherals, Office equipment and User Interfaces Sectional Committee, LITD 36 is the National mirror committee (NMC) of
* ISO/IEC/JTC1 SC-23 (P): Digitally Recorded Media for Information Interchange and Storage,
* ISO/IEC/JTC1 SC-28(P): Office equipment,
* ISO/IEC/JTC1 TC- SC-35 (P): User interfaces.
1. **ISO/IEC/JTC1 SC-23 (P): Digitally Recorded Media for Information Interchange and Storage**
	1. Scope: - algorithms for the lossless compression of data

- volume and file structure

- methods for determining the life expectancy of digital storage media

- methods for error monitoring of digital storage media

Standardization in the field of removable digital storage media utilizing optical, holographic and magnetic recording technologies, and flash memory technologies for digital information interchange, including;

* 1. Projects and Publications:

The list of standards published under ISO/IEC/JTC1 SC 23 can be viewed from the below mentioned link.

<https://www.iso.org/committee/45240/x/catalogue/p/1/u/0/w/0/d/0>

**The committee may please note the information.**

1. **ISO/IEC/JTC1 SC 28: Office equipment**
2. **Scope:**

Standardization of basic characteristics, test methods and other related items of products such as 2D and 3D Printers/Scanners, Copiers, Projectors, Fax and Systems composed of their combinations, excluding such interfaces as user system interfaces, communication interfaces and protocols.

1. **Structure and Indian Participation:**

The members under the Working groups need to be included based on the expertise of the Individuals.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No** | **WG Number** | **WG Title** | **Experts** |
| 1 | WG 2 | Consumables |  |
| 2 | WG 3 | Productivity |  |
| 3 | WG 4 | Image quality assessment |  |
| 4 | WG 5 | Office Colour |  |
| 5 | WG 6 | Sustainability requirements |  |

1. **Projects and Publications:**

The list of standards published under ISO/IEC/JTC1 SC 28 can be viewed from the blow mentioned link.

<https://www.iso.org/committee/45314/x/catalogue/p/1/u/0/w/0/d/0>

The committee may please note the information.

1. **ISO/IEC JTC 1 SC 35: USER INTERFACES:**
2. **Scope:**

Standardization in the field of user-system interfaces in information and communication technology (ICT) environments and support for these interfaces to serve all users, including people having accessibility or other specific needs, with a priority of meeting the JTC 1 requirements for cultural and linguistic adaptability.

This includes:

* user interface accessibility (requirements, needs, methods, techniques and enablers);
* cultural and linguistic adaptability and accessibility (such as evaluation of cultural and linguistic adaptability of ICT products, harmonized human language equivalents, localization parameters, voice messaging menus);
* user interface objects, actions and attributes;
* methods and technologies for controlling and navigating within systems, devices and applications in visual, auditory, tactile and other sensorial modalities (such as by voice, vision, movement, gestures);
* symbols, functionality and interactions of user interfaces (such as graphical, tactile and auditory icons, graphical symbols and other user interface elements);
* visual, auditory, tactile and other sensorial input and output devices and methods in ICT environments (for devices such as keyboards, displays, mice);
* user interfaces for mobile devices, hand‐held devices and remote interactions.
1. **Structure and Indian Participation:**

The members under the Working groups need to be included based on the expertise of the Individuals.

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| --- | --- | --- | --- |
| **SL. No** | **WG Number** | **WG Title** | **Experts** |
| 1 | WG 1 | Keyboards, methods and devices related to input and its feedback |  |
| 2 | WG 2 | Graphical user interface and interaction |  |
| 3 | WG 4 | User interfaces for mobile devices |  |
| 4 | WG 5 | Cultural and linguistic adaptability |  |
| 5 | WG 6 | User interfaces accessibility |  |
| 6 | WG 9 | Natural user interfaces and interactions |  |
| 7 | WG 10 | Affective computing user interfaces |  |

1. **Projects and Publications:**

The list of standards published under ISO/IEC/JTC1 SC 35 can be viewed from the below mentioned link.

<https://www.iso.org/committee/45382/x/catalogue/p/1/u/0/w/0/d/0>

The committee may please note the information.

## EMERGING AREAS FOR THE STANDARDS TO BE DEVELOPED

1. The committee may please provide the input on the Emerging/Sensitive areas of developing the standards under the scope of this committee.

## WTO-TBT ENQUIRY POINT

1. World Trade Organization (WTO) is the International Organization dealing with global rules of trade between nations. The Technical Barriers to Trade Agreement (TBT) tries to ensure that Regulations, Standards, Conformity Assessment procedures do not create unnecessary obstacles to trade. Manufactures and exporters of each country need to know about the latest standards and technical regulations in their prospective markets. To help ensure that this information is made available conveniently, all WTO member Governments are required to establish National Enquiry Point. India is a signatory to the WTO TBT Agreement. Under this Agreement, India has to fulfill certain obligations such as establishing an enquiry point and transparency of its standards and its regulations. BIS functions as the enquiry point as nominated by Ministry of Commerce, the dealing Ministry with WTO.
2. As the WTO TBT Enquiry Point, BIS answers all the reasonable enquiries pertaining to Technical Regulation, Standards and Conformity Assessments procedures addressed to it from the Enquiry Points of other countries. It also serves as the information centre within the country. Additionally, BIS also disseminates the TBT Notifications of other member bodies to the National Stakeholders.
3. The awareness regarding TBT notifications is lacking among various stakeholders in India and as a result India is not sending its comments on draft notifications by other countries, which may be of trade interest to India. As signatory of WTO-TBT agreement, there is a greater need for us to be aware of the TBT notifications issued by different countries in order to protect our interest.
4. BIS disseminates the TBT Notifications of other countries to the Indian Stakeholders with a view to seek their comments and taking up the same at appropriate forum. The stakeholders are expected to examine the notifications on the following aspects:
5. Are the notifications in accordance with International Standards?
6. Are they stricter than the International Standards?
7. Are they stricter than the International Standards then necessary to meet the legitimate Objective of

a. Protection of human health or safety

b. Animal or Plant life or health

c. Environment Protection

1. The BIS technical committees have also been identified as stakeholders for the TBT Notifications and relevant notifications are being disseminated to them. The committee members should examine the TBT Notifications with a view to protect Indian trade interest.
2. The e-mail address of BIS Enquiry Point is as follows:

BIS: info@bis.org.in

1. The Committee may note.

## NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION (NITS)

1. National Institute of Training for Standardization (NITS) has been set up by BIS with world class facilities to impart training on various aspects leading to standardization, quality and other management systems, consumer protection, public service delivery, etc. The training calendar for the current year is available on BIS web site. The organizations willing to depute their personnel for training may kindly go through the appropriate programme and get them registered to undergoing training.

## DATE AND PLACE FOR THE NEXT MEETING

## ANY OTHER BUSINESS

# Annex 1

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Organization** | **Member Name** |
| 1 | Government e Market Place, New Delhi | Shri Ajay Kr Rai |
| 2 | Canon India Private Limited, Gurugram | Shri Satoshi Hirabayashi |
| Shri Ashish Khanna |
| 4 | Centre for Development of Advanced Computing, Pune | Shri Rajesh Kushwaha |
| Ms. Savita Kashyap |
| 6 | Computer Society of India, New Delhi | Prof M. N. Hoda |
| 7 | Computers and Media Dealer's Association, New Delhi | Shri Puneet Singhal |
| Shri Manoj Khanna |
| Shri Pramod Rajpal |
| 10 | Dell Technologies, Gurugram | Shri Rajender Saini |
| Shri Prem Ananth |
| 12 | Electronics Regional and Test Laboratory (North), New Delhi | Shri M.P. Sharma |
| 13 | HP India Sales Private Limited, Bengaluru | Ms Upasana Choudhry |
| Ms Anubhuti |
| Shri Mayuri Simaria Jain |
| 16 | Hewlett Packard India Sales Private Limited, Gurugram | Ms Manjeeri Gopal |
| 17 | Infineon Technologies India Private Limited, Noida | Shri Madhusudhanan Sampath |
| Shri Ajay Hanyalu |
| 19 | Manufacturers Association for Information Technology, New Delhi | Mr. George Paul |
| 20 | Ministry of Electronics and Information Technology, New Delhi | Shri U.K.Nandwani |
| Ms. Asha Nangia |
| Shri Mukul Kumar Yadav |
| 23 | Ministry of Electronics and Information Technology- Standardization Testing and Quality Certification (STQC), New Delhi | Shri Manish Selal |
| 24 | Moser Baer India Limited, New Delhi | Mr. Yogesh Singhal |
| 25 | National Informatics Centre, New Delhi | Mr. Rajdeep Choudhury |
| 26 | ST Microelectronics Private Limited, Greater Noida | Shri Prashant Pandey |
| 27 | Samsung India Electronics Private Limited, New Delhi | Shri Deepak Bharadwaj |
| Shri Sanjay Kumar Bansal |
| 29 | The Institution of Electronics and Telecommunication Engineers, New Delhi | Dr. Jyotsna Kumar Mandal |
| Prof Nilesh N Kasat |
| 31 | UL India Private Limited, Bengaluru | Shri Ashish Mathur |
| Shri V. Manjunath |

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# Annex 2

| **Sl No** | **IS Number** | **IS Title** |
| --- | --- | --- |
| 1. | IS 1885 (Part 52/Sec 3) : 1980 | Electrotechnical vocabulary Part 52 data processing Sec 3 equipment technology |
| 2. | IS 1885 (Part 59) : 1986 | Electrotechnical vocabulary Part 69 educational or training equipment and systems |
| 3. | [IS 11402 (Part 1) : 1986ISO 3562:1976](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ5NA%3D%3D) | Interchangeable magnetic single disk cartridge top loaded Part 1 physical and magnetic characteristics |
| 4. | [IS 11404 (Part 1) : 2018IS0 6596-1:1985](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ5Ng%3D%3D) | Information processing - Data interchange on 130 mm 5 25 In flexible disk cartridges using twoFrequency recording at 7 958 ftprad 1 9 tpmm 48 Tpi on one side Part 1 dimensional physical and magnetic characteristics First Revision |
| 5. | [IS 11404 (Part 2) : 1986ISO 6596-2:1985](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ5Nw%3D%3D) | Specification for data interchange on 130 mm single sided 1 9 tpmm flexible disk cartridges using two frequency recording Part 2 track format |
| 6. | [IS 11405 (Part 1) : 2018ISO 7487-1:1993](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ5OA%3D%3D) | Information technology - Data interchange on 130 mm 5 25 In flexible disk cartridges using 3 frequency modulation recording at 7 958 ftprad 1 9 tpmm 48 Tpi on both sides - Iso type 202 Part 1 dimensional physical and magnetic characteristics First Revision |
| 7. | [IS 11405 (Part 2) : 1986ISO 7487-2:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ5OQ%3D%3D) | Specification for data interchange on 130 mm double sided 1 9 tpmm flexible disk cartridges using 3 frequency modulation recording Part 2 track format |
| 8. | [IS 11405 (Part 3) : 2018ISO 7487-3:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwMA%3D%3D) | Information processing - Data interchange on 130 mm 525 in flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad 19 tpmm 48 tpi on both sides PART 3 Track format B |
| 9. | [IS 11406 : 1986ISO 7665:1983](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwMQ%3D%3D) | File structure and lABelling of flexible disk cartridges for information interchange |
| 10. | [IS 11408 : 2006ISO 1864:1992](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwMw%3D%3D) | Information technology - Unrecorded 12 7 mm 0 5 In wide magnetic tape for information interchange - 32 ftpmm 800 Ftpi nrzi 126 ftpmm 3 200 Ftpi phase encoded and 356 ftpmm 9 042 Ftpi nrzi First Revision |
| 11. | [IS 11409 : 2006ISO/IEC 1863:1990](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwNA%3D%3D) | Information processing - 9 - Track 12 7 mm 0 5 In wide magnetic tape for information interchange using NRZI at 32 ftpmm 800 Ftpi - 32 cpmm 800 Cpi First Revision |
| 12. | [IS 11410 : 2006ISO/IEC 3788:1990](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwNg%3D%3D) | Information processing - 9 - Track 12 7 mm 0 5 In wide magnetic tape for information interchange using phase encoding at 126 ftpmm 3 200 Ftpi - 63 cpmm 1 600 Cpi First Revision |
| 13. | [IS 11411 : 1986ISO 5652:1984](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwNw%3D%3D) | Specification for 9 - Track 12 7mm wide magnetic tape format and recording using group coding at 246 cpmm for information processing |
| 14. | [IS 11419 : 2018ISO 1001:2012](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUxNQ%3D%3D) | Information technology - File structure and labelling of magnetic tapes for information interchange Second Revision |
| 15. | [IS 11853 (Part 1) : 1987ISO 8378-1:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzA1MA%3D%3D) | Data Interchange On 130 Mm Double Sided 3 8 Tpmm Flexible Disk Cartridges Using Modified Frequency Modulation Recording - Part 1 Dimensional Physical And Magnetic Characteristics |
| 16. | [IS 11853 (Part 2) : 1986ISO DIS 8378-2:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzA1MQ%3D%3D) | Specification for data interchange on 130 mm double sided 3 8 tpmm flexible disk cartridges using 3 frequency modulation recording Part 2 track format a |
| 17. | [IS 11853 (Part 3) : 1986ISO DIS 8378-3:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzA1Mg%3D%3D) | Data Interchange on 130 mm Double Sided 3 8 tpmm Flexible Disk Cartridge Using Modified Frequency Recording - Part 3 Track Format B |
| 18. | [IS 12223 (Part 1) : 1987ISO 8063-1:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzQ5Nw%3D%3D) | Specification for 6 30 mm wide magnetic tape cartridge using imfm recording Part 1 mechanical physical and magnetic properties |
| 19. | [IS 12223 (Part 2) : 1989ISO 8063-2:1986](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzQ5OA%3D%3D) | Data Interchange on 6 30 mm Wide Magnetic Tape Cartridge Using IMFM Recording at 252 ftpmm - Part 2 Track Format and Method of Recording For Data Interchange in Start Stop Mode |
| 20. | [IS 12327 (Part 1) : 1988ISO 8630-1:1987](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzYzOQ%3D%3D) | Information processing - Data interchange on 130 mm flexible disk cartridges using 3 frequency modulation recording at 13 262 ftprad on 80 tracks on each side Part 1 dimensional physical and magnetic characteristics |
| 21. | [IS 12327 (Part 3) : 1989ISO 8630-3:1987](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MzY0MQ%3D%3D) | Specification for data interchange on 130 mm double sided 3 8 tpmm high density flexible disk cartridge using 3 frequency modulation recording at 13 262 ftprad Part 3 Track Format B For 80 Tracks |
| 22. | [IS 12660 : 1989ISO 4341:1978](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDA3OA%3D%3D) | Information processing - Magnetic tape cassette and cartridge labelling and file structure for information interchange |
| 23. | [IS/ISO/IEC 12862 : 2011](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NDQ%3D) | Information Technology - 120 mm 8 54 Gbytes per Side and 80 mm 2 66 Gbytes per Side DVD Recordable Disk for Dual Layer DVD-R for DL |
| 24. | [IS 12876 : 1989ISO 3407:1983](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDMzOA%3D%3D) | Specification for information interchange on 3 81 mm magnetic tape cassette at 4 cpmm phase encoded at 63 ftpmm |
| 25. | [IS 12922 (Part 1) : 1989IS0 9880-1 :1987](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDM5MQ%3D%3D) | Specification for 90 mm flexible disk cartridge using 3 - Frequency recording at 7 958 ftprad on 80 tracks on each side Part 1 dimensional physical and magnetic characteristics |
| 26. | [IS 12922 (Part 2) : 1989ISO 8860-2:1987](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NDM5Mg%3D%3D) | Specification for 90 mm flexible disk cartridge using 3 frequency r - Ecording at 7 958 ftprad on 80 tracks on each side Part 2 track format |
| 27. | [IS/ISO/IEC 13170 : 2009](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NDU%3D) | Information Technology- 120 mm 8 54 Gbytes per Side and 80 mm 2 66 Gbytes per Side DVD Re-recordable Disk for Dual Layer DVD-RW for DL |
| 28. | [IS 13737 : 1993ISO/IEC 10089:1991](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NTQ4NQ%3D%3D) | Information technology - 130 mm rewritABle optical disk cartridge for information interchange |
| 29. | [IS 13738 (Part 1) : 1993ISO/IEC 9529-1:1989](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NTQ4Ng%3D%3D) | Information processing systems - Data interchange on 90 mm flexible disk cartridges using 3 frequency modulation recording at 15 916 ftprad on 80 tracks on each side Part 1 dimensional physical and magnetic characteristics |
| 30. | [IS 13738 (Part 2) : 1993ISO/IEC 9529-2:1989](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NTQ4Nw%3D%3D) | Information processing systems - Data interchange on 90 mm flexible disk cartridges using 3 frequency modulation recording at 15 916 ftprad on 80 tracks on each side Part 2 track - Format |
| 31. | [IS 14175 : 2018ISO 9293:1994](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NTkwNw%3D%3D) | Information technology - Volume and file structure of disk cartridges for information interchange First Revision |
| 32. | [IS 14176 : 1994ISO 9660:1988](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NTkwOA%3D%3D) | Information processing - Volume and file structure of CD - ROM for information interchange |
| 33. | [IS 14441 : 1997](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NjIwNg%3D%3D) | Specification for keyboard |
| 34. | [IS 14486 : 1997](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NjM5Mg%3D%3D) | General purpose dot matrix printer - Specificaiton |
| 35. | [IS 14701 : 1999ISO/IEC 10090:1992](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NjY1Mg%3D%3D) | Information technology - 90 mm optical disk cartridges rewritable and read only for data interchange |
| 36. | [IS 14886 : 2000](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=Njg3MQ%3D%3D) | Switch mode power supply - Specificaiton |
| 37. | [IS 14896 : 2001](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=Njg4Mw%3D%3D) | Personal computer - Specificaiton |
| 38. | [IS 15062 : 2001](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NzA3Ng%3D%3D) | Floppy disk drive - Specificaiton |
| 39. | [IS 15189 : 2002ISO/IEC 10149:1995](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=NzIyOQ%3D%3D) | Information technology - Data interchange on read - Only 120 mm optical data disks Cd - Rom |
| 40. | [IS/ISO/IEC 16824 : 1999](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NDY%3D) | Information Technology - 120 mm DVD Rewritable Disk DVD-RAM |
| 41. | [IS/ISO/IEC 16963 : 2015](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NDc%3D) | Information Technology- Digitally Recorded Media for Information Interchange and Storage - Test Method for the Estimation of Lifetime of Optical Disks for Long-Term Data Storage |
| 42. | [IS/ISO/IEC 17342 : 2004](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NzI%3D) | Information Technology- 80 mm 1 46 Gbytes per Side and 120 mm 4 70 Gbytes per Side DVD Re-Recordable Disk DVD-RW |
| 43. | [IS/ISO/IEC 17592 : 2004](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NTQ%3D) | Information Technology - 120 mm 4 7 Gbytes per Side and 80 mm 1 46 Gbytes per Side DVD Rewritable Disk DVD-RAM |
| 44. | [IS/ISO/IEC 19752 : 2017](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=Mjc0OTY%3D) | Information technology Office equipment Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that contain printer components |
| 45. | [IS/ISO/IEC 19798 : 2017](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=Mjc1MDI%3D) | Information technology Office equipment Method for the determination of toner cartridge yield for colour printers and multi-function devices that contain printer |
| 46. | [IS/ISO/IEC 19799 : 2007](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=Mjc1MDM%3D) | Information technology Method of measuring gloss uniformity on printed pages |
| 47. | [IS/ISO/IEC 20563 : 2001](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NTg%3D) | Information Technology 80 mm 1 23 Gbytes per Side and 120 mm 3 95 Gbytes per Side DVD-Recordable Disk DVD-R |
| 48. | [IS/ISO/IEC 23912 : 2005](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjQ2NTk%3D) | Information Technology 80 mm 1 46 Gbytes per Side and 120 mm 4 70 Gbytes per Side DVD Recordable Disk DVD-R |
| 49. | [IS/ISO/IEC 24735 : 2021](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjczNjI%3D) | Information technology Office equipment Method for measuring digital copying productivity |
| 50. | [IS/ISO/IEC 29142-1 : 2013](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwOTY%3D) | Information Technology - Print Cartridge Characterization Part 1 General Terms Symbols Notations and Cartridge Characterization Framework |
| 51. | [IS/ISO/IEC 29142-2 : 2013](https://www.services.bis.gov.in/php/BIS_2.0/bisconnect/standard_review/Standard_review/Isdetails?ID=MjUwOTc%3D) | Information Technology - Print Cartridge Characterization Part 2 Cartridge Characterization Data Reporting |
| 52. | IS/ISO/IEC 29142-3 : 2013 | Information Technology - Print Cartridge Characterization Part 3 Environment |

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# Annex 5

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| **S.No** | **IS. No.** | **Title** | **Base Standard** | **Recommendation** |
| 1 | IS 11402 (Part 1) : 1986 | Specification for Interchangeable magnetic single disk cartridge, top loaded: Part 1 Physical and magnetic characteristics | ISO 3562-1976 ‘lnformation processing - Interchangeable magnetic single disk cartridge (top loaded) - Physical and magnetic characteristics |  The base ISO standard of this Indian standard has been withdrawn, The Indian standard may be considered for withdrawn if the technology in this is outdated. |
| 2 | IS 11404 (Part 2) : 1986 |  Specification for data interchange on 130 mm, single sided, 1.9 tpmm, flexible disk cartridges using two frequency recording: Part 2 track format | ISO 6596/2-1985 ‘Information processing-Data interchange on 130 mm (5.25 in) flexible disk cartridges using two - frequency recording at 7 958 ftprad I,9 tpmm (48 tpi) on one side-Part 2 : Track format’, | The base standard of this Indian standard is considered for withdrawal. It may be reviewed by the Manufacturers to provide the recommendation |
| 3 | IS 11405 (Part 2) : 1986 | Specification for data interchange on 130 mm,double sided 1.9 tpmm, flexible disk cartridges using 3 frequency modulation recording: Part 2 track format | ISO 7487,2-1985 ‘Intormation processing-Data interchange on 130 mm (5.25 in) flexible disk cartridgas using -modified frequency.modulation recording at 7 -958 ftprad 1,9 tpmm (48 tpi) on both sides -.. Part 2 : Track format A,’ | The base standard of this Indian standard has been withdrawn, hence the Indian standard may be reviewed by the committee to provide recommendation. |
| 4 |  IS 11406 : 1986 | File structure and labelling of flexible disk cartridges for information interchange | IS0 7665-1983 ‘Information processing- File structure and labelling of flexible disk cartridges for information interchange’,  | As the base ISO standard has not yet been revised /amended, the Indian Standard IS 11406: 1986 may be considered for reprinting to change the UDS in cover page to ICS. |
| 5 | IS 11408 : 2006 | Information technology - Unrecorded 12.7 mm (0.5 In) wide magnetic tape for information interchange - 32 ftpmm (800 Ftpi), nrzi, 126 ftpmm (3 200 Ftpi) phase encoded and 356 ftpmm (9 042 Ftpi), nrzi (First Revision) | ISO/IEC 1864 :1992 ‘Information technology — Unrecorded 12,7 mm (0,5 in) wide magnetic tape for information interchange — 32 ftpmm (800 ftpi), NRZ1, 126 ftpmm (3 200 ftpi) phase encoded and 356 ftpmm (9 042 ftpi), NRZ1’ | IS 11408: 2006 is an identical adoption of ISO/IEC 1864:1992. As the base ISO/IEC standard has not yet been revised /amended, the Indian Standard IS 11408: 2006 may be reaffirmed. |
| 6 | IS 11409 : 2006 | Information processing - 9 - Track, 12.7 mm (0.5 In) wide magnetic tape for information interchange using NRZI at 32 ftpmm (800 Ftpi) - 32 cpmm (800 Cpi) (First Revision) | ISO/IEC 1863 : 1990 ‘Information processing — 9-track, 12,7 mm (0,5 in) wide magnetic tape for information interchange using NRZ1 at 32 ftpmm (800 ftpi) — 32 cpmm (800 cpi)’ | IS 11409: 2006 is an identical adoption of ISO/IEC 1863:1990. As the base ISO/IEC standard has not yet been revised /amended, the Indian Standard IS 11409: 2006 may be reaffirmed. |
| 7 | IS 11410 : 2006 | Information processing - 9 - Track, 12.7 mm (0.5 In) wide magnetic tape for information interchange using phase encoding at 126 ftpmm (3 200 Ftpi) - 63 cpmm (1 600 Cpi) (First Revision) | lSO/lEC 3788 : 1990 Informationprocessing — 9-track, 12,7 mm (0,5 in) wide magnetic tape for information interchange using phase encoding at 126 ftpmm (3 200 ftpi) — 63 cpmm (1 600 cpi) | IS 11410: 2006 is an identical adoption of ISO/IEC 3788:1990. As the base ISO/IEC standard has not yet been revised /amended, the Indian Standard IS 11410: 2006 may be reaffirmed. |
| 8 | IS 11411 : 1986 | Specification for 9 - Track, 12.7mm wide magnetic tape format and recording, using group coding at 246 cpmm for information processing | ISO 5652-1984 ‘information processing - 9-track, 12,7 mm (0.5 in) wide magnetic tape for information interchange - Format and recording, using group coding at 2 46 cpmm (6 250 cpi)‘, | The base standard ISO 5652-1984 has been withdrawn. The committee may review and provide recommendation in the withdrawal of Indian Standard. |
| 9 |  IS 11419:2018 | Information technology - File structure and labelling of magnetic tapes for Information interchange (Second Revision) | ISO/IEC 1001 : 2012 ‘Informationtechnology — File structure and labelling of magnetic tapes for information interchange’ | As the base ISO/IEC standard have not yet been revised /amended, the Indian Standard IS 11419:2018 may be considered for reaffirmation. |
| 10 | IS 11853 (Part 1) : 1987 | Data Interchange On 130 Mm, Double Sided, 3.8 Tpmm, Flexible Disk Cartridges Using Modified Frequency Modulation Recording - Part 1 : Dimensional, Physical And Magnetic Characteristics | IS0 8378/l-1986 ‘Information processing - Data interchange on 130 mm ( 5.25 in ) flexible disk cartridges using modifiedfrequency modulation recording at 7 958 ftprad 3.8 tpmm ( 96 tpi ) on both sides-Part 1 : Dimensional, physical and magnetic characteristics’, i | The base ISO Standard has been withdrawn. Committee may review and provide recommendation on the withdrawal of Indian Standard. |
| 11 | IS 11853 (Part 2) : 1986 | 1. Specification for data interchange on 130 mm, double sided, 3.8 tpmm; flexible disk cartridges using 3 frequency modulation recording: Part 2 track format A | ISO/DIS 8378/2 ‘Information processing -Data interchange on 130 mm ( 5.25 in ) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad, 3.8 tpmm( 96 tpi ), on two sides - Part 2 : Track formet A’,  | The Base standard of this Indian standard has been withdrawn. Committee may review and provide the recommendation on the withdrawal of Indian Standard. |
| 12 |  IS 11853 (Part 3) : 1986 | Data Interchange on 130 mm, Double Sided, 3.8 tpmm, Flexible Disk Cartridge Using Modified Frequency Recording - Part 3 : Track Format B | ISO/DIS 837813 Information processing -Data interchange on 130 mm flexible disk cartridges using modifiedfrequency modulation recording at 7 958 ftprad, 3.8 tpmm ( 96 tpi ),on two sides ‘Part 3 Track format B’, | The Base standard of this Indian standard has been withdrawn. The committee may review and provide recommendation on the withdrawal of Indian Standard. |
| 13 | IS 12223 (Part 1) : 1987 | Specification for 6.30 mm wide magnetic tape cartridge using imfm recording: Part 1 mechanical, physical and magnetic properties | ISO 8063/l-1986 Jlnformatiorlrocessing - Data interchange on 6’30 mm ( 0.25 in ) wide magnetic tape cartridge using IMFI\,ecording at 252 ftpmm ( 6 400 ftpi ) - Part 1 : Mechanical, physical and magnetic properties’  | The Base standard of this Indian standard has been withdrawn. Committee may review and provide recommendation on the withdrawal of Indian Standard. |
| 14 | IS 12223 (Part 2) : 1989 | Data Interchange on 6.30 mm Wide Magnetic Tape Cartridge Using IMFM Recording at 252 ftpmm - Part 2 : Track Format and Method of Recording For Data Interchange in Start/Stop Mode | ISO 8063/2 : 1986 ‘Information processingData interchange on 6.30 mm (0.25 in) wide magnetic tape cartridge using IMFM recording at 252 ftpmm (6400 ftpi) - Part 2: Track format and method of recording for data interchange in start/stop mode’ | The base standard of this Indian standard has been withdrawn. Committee may review and provide recommendation on withdrawal of Indian Standard. |
| 15 |  IS 12327 (Part 1) : 1988 |  Information processing - Data interchange on 130 mm flexible disk cartridges using 3 frequency modulation recording at 13 262 ftprad on 80 tracks on each side: Part 1 dimensional, physical and magnetic characteristics | ISO 8630-l : 1987 ‘Informationprocessing Y Data interchange on 130 mm ( 5’25 in ) flexible disk cartridges using modifiedfrequency modulation recording at 13 262 ftprad, on 80 tracks on each side - Part 1 : Dimensional physical and magnetic characteristics, ’  | The base standard of this Indian standard has been withdrawn. The committee may review and provide recommendation on withdrawal of Indian Standard. |
| 16 |  IS 12327 (Part 3) : 1989 | Specification for data interchange on 130 mm double sided 3.8 tpmm high density flexible disk cartridge using 3 frequency modulation recording at 13 262 ftprad (Part 3 Track Format B For 80 Tracks) | ISO 8630-3 : 1987 ‘Information processingData interchange on 130 mm (5.25 in) flexible disk cartridges using modified frequency modulationrecording at 13 262 ftprad on 80 tracks on each side - Part 3 : Track format B for 80 tracks’ |  IS 12327 (Part 3): 1989 is an identical adoption of ISO 8630-3: 1987. As the base ISO standard has not yet been revised /amended, the Indian Standard IS 12327 (Part 3): 1989 may be considered for reprinting to change the UDC in cover page to ICS. |
| 17 |  IS 12660 : 1989 | Information processing - Magnetic tape cassette and cartridge labelling and file structure for information interchange | ISO 4341 : 1978 ‘Information processing-Magnetic tape cassette and cartridge labelling and file structure for information interchange’,  |  As the base ISO standard has not yet been revised /amended, the Indian Standard IS 12660: 1989 may be considered for reprinting to change the UDC number in cover page to ICS. |
| 18 |   IS 12876 : 1989 | Specification for information interchange on 3.81 mm magnetic tape cassette at 4 cpmm, phase encoded at 63 ftpmm | ISO 3407: 1983 ‘Information processing -Information interchange on 3.81 mm (0.150 in) magnetic tape cassette at 4 cpmm ( 100 cpi ), phase encoded at 63 ftpmm ( 1 600 ftpi )‘.  | The base Standard is withdrawn. The committee may review and provide recommendation on withdrawal of Indian Standard. |
| 19 | IS 12922 (Part 1) : 1989 | Specification for 90 mm flexible disk cartridge using 3 - Frequency recording at 7 958 ftprad on 80 tracks on each side: Part 1 dimensional, physical and magnetic characteristics | ISO 8860/l : 1987 ‘Information processing -Data interchange on ~90 mm ( 3.5 in ) flexible disk cartridges using modified frequency modulation recording at 7 958 ftprad on 80 tracks on each side - Part 1 :characteristics’, Dimensional, physical and magnetic   | The corrigendum ISO 8860-1: 1987 may be considered for adoption and Indian Standard may be considered for reaffirmation and revision. |
| 20 | IS 12922 (Part 2) : 1989 | Specification for 90 mm flexible disk cartridge using 3 frequency r - Recording at 7 958 ftprad on 80 tracks on each side: Part 2 track format |  IS0 8860-2 : 1987 ‘Information processing - Data interchange on 90 mm ( 3% in ) flexible disk modulation recording at 7 958 ftprad on 80 tracks on each side cartridges using modified frequency Part 2 : Track format’, | The corrigendum ISO 8860-2: 1990 may be considered for adoption. The Indian Standard may be considered for reaffirmation and revision. |
| 21 |  IS 13737 : 1993 | Information technology - 130 mm rewritable optical disk cartridge for information interchange | ISO/IEC 10089 : 1991 ‘Information technology130 mm rewritable optical disk cartridge for information interchange’,  | As the base IEC standard has not yet been revised /amended, the Indian Standard IS 13737: 1993 may be considered for reprinting to change the UDC number in cover page to ICS. |
| 22 |  IS 13738 (Part 1) : 1993 | Information processing systems - Data interchange on 90 mm flexible disk cartridges using 3 frequency modulation recording at 15 916 ftprad, on 80 tracks on each side: Part 1 dimensional, physical and magnetic characteristics | ISO/IEC : 9529-1 : 1989 ‘Information processing system - Data interchange on 90 mm ( 3.5 in ) flexible disk cartridges using modified frequencymodulation recording at 15 916 ftprad, on 80 tracks on each side-Part 1 : Dimensional, physical and magnetic characteristics’ | As the base ISO/IEC standard has been withdrawn, the Indian Standard IS 13738 (Part 1): 1993 may be considered for withdrawal based on the review by the Committee. |
| 23 | IS 13738 (Part 2) : 1993 | Information processing systems - Data interchange on 90 mm flexible disk cartridges using 3 frequency modulation recording at 15 916 ftprad, on 80 tracks on each side: Part 2 track - Format | ISO/IEC 9529-2 : 1989 ‘Information processing systems - Data interchange on 90 mm ( 3.5 in ) flexible disk cartridges using modified frequency modulation recording at 15 916 ftprad, on 80 tracks on each side - Part 2 : Track format’  | As the base ISO/IEC standard has been withdrawn. The committee may review and provide the recommendation the Indian Standard. |
| 24 | IS 14176 : 1994 | Information processing - Volume and file structure of CD - ROM for information interchange |  IS0 9660 : 1988 ‘Information processing - Volume and file structure of CD-ROM for information interchange’,  | The Amendment 2 issued by ISO may be taken up for adoption. The Indian Standard may be considered for reprinting to change the UDC number in cover page to ICS |
| 25 | IS 14441 : 1997 | Specification for keyboard | Indigenous | LITD 36/P1 is currently reviewing this Indian Standard and is supposed to submit the recommendation. This Indian Standard may be reaffirmed. |
| 26 |  IS 14486 : 1997 |  General purpose dot matrix printer - Specification | Indigenous | LITD 36/P1 is currently reviewing this Indian Standard and is supposed to submit the recommendation. This Indian Standard may be reaffirmed. |
| 27 |  IS 14701 : 1999 | Information technology - 90 mm optical disk cartridges, rewritable and read only, for data interchange | ISO/IEC 10090 : 1992 ‘Information technology - 90 mm optical disk cartridges, rewritable and read only, for data interchange’ | As the base ISO/IEC standard has not yet been revised /amended, the Indian Standard IS 14701: 1999 may be reaffirmed. |

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