

DRAFT UGANDA STANDARD

Second Edition
2020-mm-dd

Paper scholastic stationery — Specification



Reference number
DUS 820: 2020

© UNBS 2020

Compliance with this standard does not, of itself confer immunity from legal obligations

A Uganda Standard does not purport to include all necessary provisions of a contract. Users are responsible for its correct application

© UNBS 2020

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from UNBS.

Requests for permission to reproduce this document should be addressed to

The Executive Director
Uganda National Bureau of Standards
P.O. Box 6329
Kampala
Uganda
Tel: +256 414 333 250/1/2/3
Fax: +256 414 286 123
E-mail: info@unbs.go.ug
Web: www.unbs.go.ug

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General Requirements	2
4.1 Tolerance.....	2
4.2 Paper requirements.....	2
5 Specific requirements	2
5.1 Wire-stitched exercise books.....	2
5.2 Bound exercise books	3
5.3 Wire stitched drawing exercise books	4
5.4 Wire-stitched map exercise books	4
5.5 Bound science practical notebook.....	5
5.6 Wire-stitched examination answer books.....	5
5.7 Wire-stitched register.....	6
5.8 Bound register	6
5.9 Accountancy books	7
5.10 Graph books	7
5.11 Shorthand notebooks	7
5.12 Biology and nature study books.....	8
5.13 Music books	8
5.14 Theme books	9
5.15 Index books.....	9
5.16 Ruled sheets of paper	9
6 Packaging and Labelling	10
6.1 Packaging.....	10
6.2 Labelling.....	10
7 Sampling and criteria for conformity	11
7.1 Lot	11
7.2 General Requirements for Sampling	11
Annex A (informative) Illustration of a copy rule and side margin	12
Bibliography.....	13

Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 7, Textiles, Leather and Paper, Subcommittee SC 3, Paper and paper products

This second edition cancels and replaces the first edition (US 820:2008), which has been technically revised. The main changes compared to the previous edition are as follows:

- the title has been changed to Paper scholastic stationery — Specification;
- clause 9 has been removed and replaced with different test methods in Table 1;
- specific requirements for the different books and sheets have been listed in Clause 5

Public Review Draft

Paper Scholastic stationery — Specification

1 Scope

This Draft Uganda Standard specifies the requirements of books and sheets of paper intended for scholastic and related uses.

2 Normative references

The following referenced documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

US ISO 534, Paper and board — *Determination of thickness, density and specific volume*

US ISO 536, Paper and board — *Determination of grammage*

US ISO 1923, Cellular plastics and rubbers — *Determination of linear dimensions*

US ISO 1974, Paper — *Determination of tearing resistance (Elmendorf method)*

US ISO 2470, Paper and board — *Measurement of diffuse blue reflectance factor (ISO brightness)*

US ISO 2471, Paper and board — *Determination of opacity (paper backing) — Diffuse reflectance method*

US ISO 2758, Paper — *Determination of bursting strength*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

spine

binding edge of a book

3.2

thread stitching

process of stitching sections of a book together with thread before the book is bound

3.3

wire-stitching

process of machine stitching by means of one or more wire staples through the spine of a fold

3.6

leaf

part of a sheet of paper in a book which extends from the binding edge of the book towards the front edge of the book

4 General Requirements

4.1 Tolerance

When determined in accordance with US ISO 1923, a tolerance of ± 5 mm shall be allowed on all paper sizes.

4.2 Paper requirements

Writing paper shall

- a) Comply with the requirements in Table 1;
- b) Be free from defects such as fibre bundles, holes, wood splinters, specks and breaks, and
- c) Accept writing media such as pencils and ballpoint pens without exhibiting any strike-through or undue signs of feathering or spread.

Table 1 — Requirements of paper for making books

Parameter	Requirement	Test Method
Substance, g/m ² , min.	55	US ISO 536
Opacity, %, min.	70	US ISO 2471
Tearing, mN, min.	600	US ISO 1974
Bursting strength, kPa, min.	65	US ISO 2758
Brightness, %, min.	65	US ISO 2470

5 Specific requirements

5.1 Wire-stitched exercise books

5.1.1 The sizes of this type of book shall be any of the following:

- a) 148 mm x 210 mm
- b) 160 mm x 210 mm
- c) 162 mm x 203 mm.
- d) 162 mm x 229 mm (C5).
- e) 204 mm x 255 mm.
- f) 210 mm x 297 mm (A4).

5.1.2 These books shall be composed of a minimum of 32 pages and a maximum of 200 pages excluding the covers.

5.1.3 There shall be at least two stitches on the spine of each exercise book. The staples shall be positioned at least 25 mm and at most 60 mm from the top and bottom edges respectively, of the book.

5.1.4 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the ruling shall be done as follows:

- a) the copy rule shall be done in clearly dark visible lines with the side margin done in a contrasting thicker colour to the rule (See Annex A for an illustration of a copy rule and side margin)
- b) The distance between horizontal lines shall be either 10 mm \pm 0.5 mm for lower primary school exercise books or 8 mm \pm 0.5 mm for the other levels of education
- c) Margins, whether on the top or on the side shall be 25 mm \pm 3 mm from the end
- d) There shall be 19 continuous lines for lower primary school exercise books and 22 for other education levels
- e) Double-ruled exercise books shall have twelve double lines. The distance between the double lines shall be 5 mm \pm 0.5 mm
- f) Square-ruled exercise books shall have 8-mm + 0.5 mm squares for lower primary exercise books and 6 mm \pm 0.5 mm squares for other educational levels. These shall be ruled throughout the entire area.

5.1.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.1.6 Coloured cover paper of minimum 90 g/m² substance shall be used.

5.2 Bound exercise books

5.2.1 The sizes of this type of book shall be any of the following:

- a) 148 mm \times 210 mm
- b) 160 mm \times 210 mm
- c) 162 mm \times 203 mm.
- d) 162 mm \times 229 mm (C5).
- e) 204 mm \times 255 mm.
- f) 210 mm \times 297 mm (A4).

5.2.2 These books shall be composed of a minimum of 96 pages and a maximum of 576 pages excluding the covers

5.2.3 The sections shall be thread stitched and bound with binding cloth on the spine and strawboard on the top and the bottom of the book.

5.2.4 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the ruling shall be done as follows:

- a) The copy rule shall be done in blue colour while the top and side margin shall be in red colour.
- b) The distance between horizontal lines shall be 9 mm
- c) Margins, whether on the top or on the side shall be 25 mm from the end, and
- d) There shall be a minimum of 21 blue lines on each page

5.2.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.2.6 Strawboard suitably covered with papers both from inside and outside shall be used as cover and the minimum substance for different denominations of bound books when tested in accordance with US ISO 536 shall be as follows:

Table 2 — Substance for making bound exercise books strawboard

Denomination	Substance g/m²
96, - 10	490
1602-256	675
256-400	900
400 - 576	1 100

5.3 Wire stitched drawing exercise books

5.3.1 These books shall be of the following sizes:

- a) 176 mm× 250 mm (B5):
- b) 210 mm× 297 mm (A4)
- c) 229 mm× 324 mm
- d) 250 mm× 353 mm (B4) and
- e) 297 mm× 420 mm (A3)

5.3.2 These books shall be composed of a minimum of 20 pages and a maximum of 48 pages excluding covers

5.3.3 Drawing books shall be made with or without interleaving papers. For books with interleaving papers, the two centre leaves shall be of interleaving paper while the remaining leaves shall have drawing paper and interleaving paper alternating.

5.3.4 The binding shall be done on the spine of the book by two wire stitches of 13 mm - 16 mm in length

5.3.5 White or offset cartridge or drawing paper of minimum 80 g/m² substance shall be used.

5.3.6 Coloured cover of minimum 90 g/m² substance shall be used.

5.3.7 Drawing paper shall accept all commonly used drawing media without exhibiting undue signs of strike-through, feathering or spread.

5.4 Wire-stitched map exercise books

5.4.1 These books shall be of two sizes:

- a) 210 mm× 297 mm (A4) and
- b) 229 mm× 324 mm (C4)

5.4.2 These books shall be composed of 36 and 48 pages excluding covers.

5.4.3 Coloured cover of minimum 90 g/m² substance shall be used.

5.4.4 When border lines are required, each edge of each page shall have a border line. Each border line shall consist of either one bold line or two closely spaced lines, ruled parallel to, and at least 15 mm and at most 20 mm from, the adjacent edge of the paper.

NOTE Map exercise books are manufactured either horizontally or vertically.

5.5 Bound science practical notebook

5.5.1 The size of this type of book shall be 210 mm × 297 mm (A4).

5.5.2 These books shall be composed of a minimum of 96 pages and a maximum of 192 excluding the printed data.

5.5.3 The sections shall be thread stitched and bound with binding cloth on the spine and strawboard pasted on the top and the bottom of the book.

5.5.4 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the copy rule shall be done in blue colour while the margins shall be in red colour.

5.5.5 Azure laid of minimum 70 g/m² substance shall be used.

5.5.6 Strawboard suitably covered with papers both from inside and outside shall be used as cover and the minimum substance for different denominations of science practical notebook shall be as follows:

Table 3 — Substance for making bound science practical notebook strawboard

Denomination	Substance g/m ²
96-144	675
144 -192	900

5.6 Wire-stitched examination answer books

5.6.1 These books shall be of two sizes:

- a) 162 mm × 229 mm (C5)
- b) 210 mm × 297 mm (A4)

5.6.2 Both the above sizes shall be composed of a minimum of 16 pages and a maximum of 48 pages inclusive of covers

5.6.3 Each leaf shall be perforated for tear-out purposes. The line of perforations shall be parallel to, and located at most 11 mm from the binding edge. Perforation cuts shall have uniformly penetrated the paper such that when they are subjected to tear, the line of tear shall not deviate from the line of perforations.

5.6.4 Size C5 shall have single wire stitch binding on the spine when composed of 16 pages. For other denominations of size C5 and all denominations of size A4, two wire stitches on the spine shall be provided.

5.6.5 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the horizontal lines shall be done in blue ink and the margin shall be red. The margin shall be given at a distance of 30 mm from the spine for C5 size and 45 mm for the A4 size, the top margins in the two cases shall be 25 mm and 30 mm respectively.

5.6.6 Each page shall have a faint ruling and shall be with or without a left-hand margin line as specified by the purchaser.

5.6.7 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.6.8 There shall be no extra cover and the paper used for the top shall be the same as that used inside.

5.7 Wire-stitched register

5.7.1 The wire-stitched register shall be of the following two sizes:

- a) 210 mm × 297 mm (A4)
- b) 229 mm × 324 mm (C4)

5.7.2 These registers shall be composed of 96 and 144 pages exclusive of covers.

5.7.3 The binding shall be done on the spine of the register by two wire stitches of 13 mm - 16 mm in length.

5.7.4 The ruling shall be done as agreed upon between the purchaser and the supplier.

5.7.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.7.6 Coloured cover paper of minimum 100 g/m² substance shall be used.

5.8 Bound register

5.8.1 The register (bound) shall be of the following two sizes:

- a) 210 mm × 297 mm (A4)
- b) 229 mm × 324 mm (C4)

5.8.2 These registers shall be composed of a minimum of 96 pages and a maximum of 384 pages excluding the covers

5.8.3 The sections shall be thread stitched and bound with binding cloth on the spine and strawboard on the top and the bottom of the book. Any other binding may also be used if agreed upon between the purchaser and the supplier.

5.8.4 The ruling shall be done as agreed upon between the purchaser and the supplier

5.8.5 Cream laid, cream wove, white printing hardsized or azure laid paper of minimum 55 g/m² substance shall be used.

5.8.6 Strawboard covered suitably with paper both from inside and outside shall be used as cover. For different denominations, Table 3 shows the minimum value of the substances that shall be used:

Table 4 — Substance for making bound register strawboard

Denomination	Substance g/m ²
Up to 192 pages	675
192 and above	1 100

5.9 Accountancy books

5.9.1 Accountancy books shall be of size 210 mm × 297 mm (A4).

5.9.2 These registers shall be composed of 72 and 192 pages exclusive of covers.

5.9.3 The sections shall be thread stitched and bound with binding cloth on the spine and strawboard on the top and the bottom of the book. Any other binding may also be used if agreed upon between the purchaser and the supplier.

5.9.4 The ruling shall be done as agreed to between the purchaser and the supplier. If required, the horizontal components shall be of feint ruling and shall allow for at least 29 entries on each page.

5.9.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.9.6 Coloured cover paper of minimum 135 g/m² substance shall be used.

5.10 Graph books

5.10.1 The size of this type of book shall be 210 mm × 297 mm (A4).

5.10.2 Graph books that are ruled for graph work solely shall be composed of a maximum of 48 pages excluding the covers.

5.10.3 Graph books that are ruled for both writing purposes and graph work shall be composed of a minimum of 36 pages and a maximum of 96 pages excluding the covers.

5.10.4 The binding shall be done on the spine of the register by two wire stitches of 13 mm - 16 mm in length.

5.10.5 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the ruling shall be done as follows:

- a) The horizontal rows shall each contain 80 squares and the vertical columns 130 squares. Each square shall be 2.0 mm ± 0.5 mm
- b) Graphs shall have unruled margins at all four edges
- c) The width of the margin adjacent to the binding edge shall range from 20 mm to 30 mm, and that of the margins at the top, bottom and remaining side, shall each be at least 15 mm.
- d) The pages reserved for writing shall be ruled feint and the ruling shall incorporate a left-hand margin line

5.10.6 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.10.7 Coloured cover paper of minimum 95 g/m² substance shall be used.

5.11 Shorthand notebooks

5.11.1 The size of a shorthand notebook shall be 148 mm × 210 mm.

5.11.2 These books shall be composed of 144 pages excluding the covers

5.11.3 Shorthand notebooks shall be bound with wire. There shall be a row of at least 12 uniformly spaced holes so clean-punched through the cover and pages of the book to enable the book to be opened flat through 360°.

5.11.4 The writing paper of shorthand notebooks shall be faint ruled on both sides.

5.11.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.11.6 Coloured cover paper of minimum 135 g/m² substance shall be used.

5.12 Biology and nature study books

5.12.1 These books shall consist of the following sizes:

- a) 148 mm× 210 mm (A5).
- b) 210 mm× 297 mm (A4).

5.12.2 They shall be composed of a minimum of 48 pages and a maximum of 96 pages excluding the covers.

5.12.3 The sections shall be thread stitched and bound with binding cloth on the spine and strawboard pasted on the top and the bottom of the book.

5.12.4 Sheets of ruled writing paper and unruled drawing paper shall alternate throughout with the first leaf being a ruled writing paper. However, the two centre leaves for soft-cover books shall be of drawing paper.

5.12.5 Cream laid, cream wove or white printing hardsized paper of minimum 55 g/m² substance shall be used.

5.12.6 Coloured cover paper of minimum 135 g/m² substance shall be used.

5.13 Music books

5.13.1 Music books shall be of the following sizes:

- a) 148 mm× 210 mm (A5).
- b) 210 mm× 297 mm (A4).

5.13.2 These books shall be composed of 32 pages exclusive of covers.

5.13.3 The binding shall be done on the spine of the register by two wire stitches of 13 mm - 16 mm in length.

5.13.4 The ruling shall be done as agreed upon between the purchaser and the supplier. If required, the ruling shall be done as follows:

- a) the writing paper shall be ruled at right angles to the binding edge, in staves, each formed by five lines spaced 2.2 mm ± 0.1 mm apart.
- b) the distance between the first line of the first stave and the upper edge of a page shall be at least 20 mm and at most 30 mm and the distance between the last line of the lowest stave and the lower edge of the page shall be at least 15 mm and at most 25 mm.
- c) A4 books shall contain 12 staves per page while those of A5L shall contain six staves per page. In both cases, the distance between consecutive staves shall be uniform to within 1 mm.

d) The colour of the ruled lines shall be grey or black.

5.13.5 Cream laid, cream wove or white printing hardsized paper of minimum 105 g/m² substance shall be used.

5.13.6 Coloured cover paper of minimum 165 g/m² substance shall be used.

5.14 Theme books

5.14.1 Theme books shall be of size 210 mm × 297 mm.

5.14.2 They shall be composed of 72 pages.

5.14.3 In theme books, sheets of writing paper (ruled on both sides), interleaving paper and drawing paper shall be interleaved with one another in that order, the first and last leaves of a book being of writing paper.

5.14.4 Coloured cover paper of minimum 135 g/m² substance shall be used.

5.15 Index books

5.15.1 Index books shall be of size 210 mm × 297 mm.

5.15.2 They shall be composed of a minimum of 96 pages and a maximum of 368 pages excluding the covers.

5.15.3 Unless otherwise specified by the purchaser, index books shall be divided into 26 sets, each covering a different letter of the alphabet, given in the correct sequence.

5.15.4 Strawboard suitably covered with papers both from inside and outside shall be used as cover. The minimum substance of the cover shall be 800 g/m².

5.16 Ruled sheets of paper

5.16.1 Ruled sheets shall be one of the following types:

- a) General purpose (with appropriate ruling)
- b) Accountancy
- c) graph

5.16.2 They shall be of size 210 mm × 297 mm.

5.16.3 As agreed upon between the purchaser and the supplier, ruling may be done. If required, the ruling shall be done as follows:

- a) ruled sheets shall be ruled on both sides
- b) general purpose sheets shall have the ruling as specified in sub clause 5.2
- c) Accountancy sheets shall have the ruling as specified in sub clause 5.9.

5.16.4 Graph sheets shall have the ruling as specified in 4. on one side, and the reverse side shall be ruled faint and shall have a left-hand margin line as in 6.3.3. The width of the filing margin (longer edge, left-hand side) on the side ruled for graphs shall be at least 30 mm, and that of the remaining margins on that side shall each be at least 15 mm.

5.16.5 Ruled sheets of minimum 55 g/m² substance shall be used.

6 Packaging and Labelling

6.1 Packaging

6.1.1 Books and ruled sheets of paper shall be supplied in packages containing books of the same type, size and having the same number of pages.

6.1.2 Each package of exercise books shall first be bound once lengthwise with a packing or wrapping paper strip. The paper strip shall have a minimum width of 6 cm and minimum substance of 70 gsm. It shall also be strong enough to prevent tear. The overlapping ends of the strip shall be tightly struck with adhesive tape.

6.1.3 The cartons used for packaging exercise books shall be designed so that the contents fit without movement.

6.1.4 The cartons shall be of such quality and strength to prevent bursting, tearing, distortion or opening up from the weight of exercise books

6.1.5 The cartons shall be bound with a strong strip of tape at least two times, with at least one bind lengthwise. Alternatively, gluing the ends together ensuring that the flaps firmly stick together may seal it.

6.2 Labelling

6.2.1 Each carton of books shall be labelled with the following particulars:

- a) name and address of the manufacturer and trade mark if any;
- b) description of the exercise books in the carton, including the size in mm and the number of pages
- c) number of exercise books in the carton;
- d) lot/batch number; and
- e) country of origin

6.2.2 Each book shall be clearly and indelibly labelled with the following particulars:

- a) name and address of the manufacturer/ distributor
- b) type of book
- c) number of pages
- d) size in mm
- e) space for name, school, class, year and subject.

6.2.3 Each packet of ruled sheets of paper shall bear the following information in legible and durable marking:

- a) the name, address of the manufacturer, and trademark (if any)
- b) the type of ruling;
- c) the type of sheet, that is, single or fly (double);
- d) the number of sheets per packet; and

- e) any additional information specified by the purchaser

NOTE Only when a packet of paper contains 500 sheets (or fly sheets) of paper, may it be referred to as a ream. A packet that contains any other number of sheets, e.g. 480 sheets (or fly sheets) of paper should not be referred to as a ream.

7 Sampling and criteria for conformity

7.1 Lot

All the packages of books of identical size and belonging to the same batch of manufacture shall be grouped together to constitute a lot.

7.2 General Requirements for Sampling

7.2.1 Samples shall be protected from exposure to heat, direct sunlight, liquids, varying humidity conditions as well as any other harmful influences.

7.2.2 Samples shall be handled as little as possible and contact with sweated hands shall be strictly avoided.

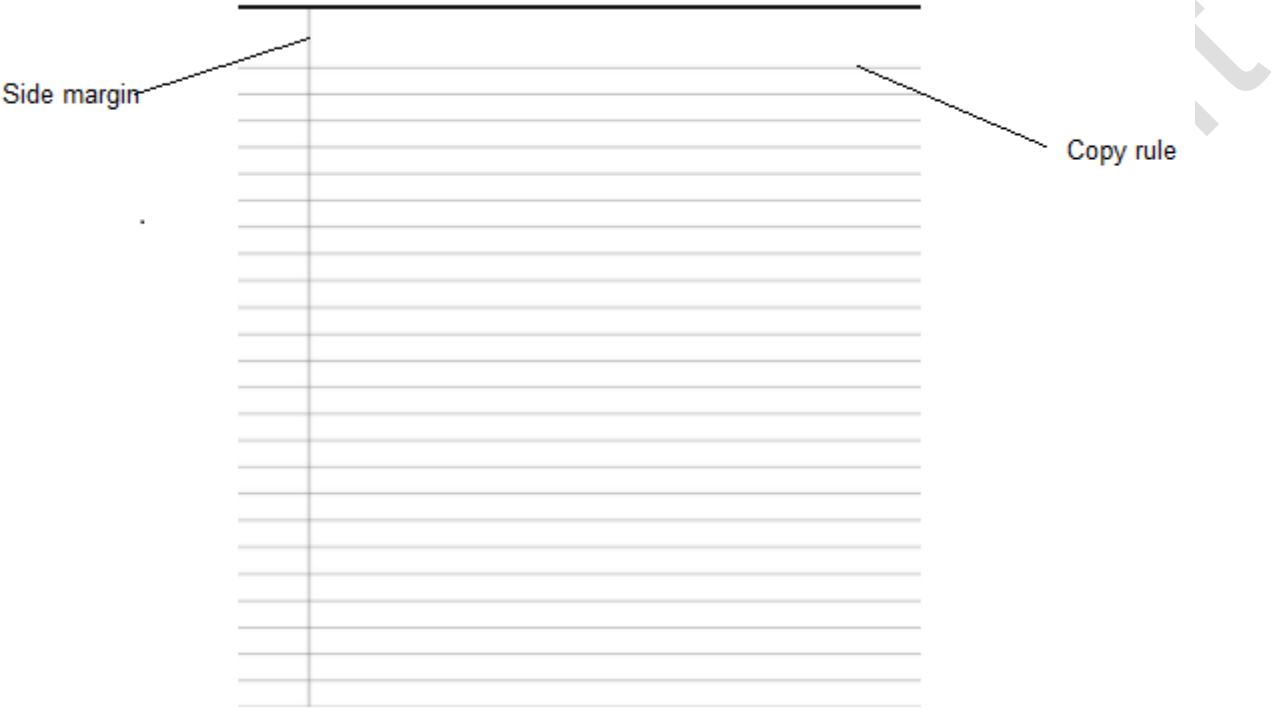
7.2.3 The number of books or ruled sheets to be sampled from each lot shall be as given in Table 5.

Table 5 — Scale of sampling

Lot size (Number of books or ruled sheets)	Sample size
Up to 100	5
101 to 150	8
151 to 300	13
301 to 500	20
501 to 1 000	32
1 001 to 3 000	50
3 001 to 10 000	80
10 001 and above	125

Annex A
(informative)

Illustration of a copy rule and side margin



Bibliography

- [1] ISO #####-#, *General title — Part #: Title of part*
- [2] ISO #####-##:20##, *General title — Part ##: Title of part*

Public Review Draft

Certification marking

Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

The use of the UNBS Certification Mark is governed by the Standards Act, and the Regulations made thereunder. This mark can be used only by those licensed under the certification mark scheme operated by the Uganda National Bureau of Standards and in conjunction with the relevant Uganda Standard. The presence of this mark on a product or in relation to a product is an assurance that the goods comply with the requirements of that standard under a system of supervision, control and testing in accordance with the certification mark scheme of the Uganda National Bureau of Standards. UNBS marked products are continually checked by UNBS for conformity to that standard.

Further particulars of the terms and conditions of licensing may be obtained from the Director, Uganda National Bureau of Standards.



Public Review Draft

ICS 85.080.10

Price based on **nn** pages