



**WEIGHTS AND MEASURES (AMENDMENT)
LAW,**

No. 24 OF 1974.

OF

THE NATIONAL STATE ASSEMBLY

[Certified on 17th July, 1974]

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*Weights and Measures (Amendment)
Law, No. 24 of 1974*

L. D.—O. 33/71.

A LAW TO AMEND THE WEIGHTS AND MEASURES
ORDINANCE.

BE it enacted by the National State Assembly of the
Republic of Sri Lanka as follows:—

1. This Law may be cited as the Weights and
Measures (Amendment) Law, No. 24 of 1974.

Short title.

2. The heading "Authorized Weights and
Measures" occurring immediately before section 5 in
Part II of the Weights and Measures Ordinance
(hereinafter referred to as the "principal enact-
ment") is hereby amended by the substitution
therefor, of the following new heading:—

Amendment of
the heading of
Part II of Chap-
ter 158.

"Authorized Units of Measurement."

3. Sections 5, 6 and 7 of the principal enactment
are hereby repealed and the following new sections
are substituted therefor:—

Replacement of
sections 5, 6
and 7 of the
principal enact-
ment.

"The Inter-
national System
of Units shall
be the base uni-
ts of measure-
ment."

5. The International System of
Units as defined in Parts I and II of the
First Schedule hereto shall be the base
units of measurement for Sri Lanka:

Provided, however, that the yard and
the pound as specified in Part III of the
First Schedule hereto and defined in
relation to the metre and the kilogramme
may be lawfully used concurrently with
such International System of Units.

Definitions of
units of mea-
surement.

6. The definitions of the units of
measurement specified in the Second
Schedule hereto shall be the definitions
of the units of measurement for all
measurements made in Sri Lanka.

Weights and
measures au-
thorized for use
in trade.

7. The weights and measures
specified in the Third Schedule hereto
are hereby authorized for use in trade."

4. Sections 8, 9, 10, 11 and 12 of the principal
enactment are hereby repealed.

Repeal of sec-
tions 8 to 12 of
the principal
enactment.

Replacement of section 13 of the principal enactment.

5. Section 13 of the principal enactment, as amended by Act No. 7 of 1971, is hereby repealed and the following new section is substituted therefor:—

“Weights and measures in Third Schedule declared to be authorized weights and authorized measures.

13. All the weights and measures specified in the Third Schedule hereto are hereby declared to be, and are referred to in this Ordinance as, authorized weights and authorized measures, respectively; and every denomination of weight and measure specified in such Third Schedule hereto is hereby declared to be, and is referred to in this Ordinance as, an authorized denomination of weight or measure.”

Replacement of the heading of Part III of the principal enactment.

6. The heading “Standards of Weight and Measure” occurring immediately before section 14 in Part III of the principal enactment is hereby amended by the substitution therefor, of the following new heading:—

“Standards of The Units of Measurement”

Replacement of section 14 of the principal enactment.

7. Section 14 of the principal enactment is hereby repealed and the following new section is substituted therefor:—

“Sri Lanka standards.

14. (1) For the purposes of this Ordinance, the Minister may from time to time procure such standards of the units of measurement as he may consider necessary.

(2) Every standard of any unit of measurement procured under subsection (1) shall be the equivalent of a unit of measurement defined in the First or Second Schedule hereto or any multiple or sub-multiple of any such unit of measurement, and shall be made of such materials and in such manner as to be, as far as practicable, proof against mechanical and atmospheric agencies and other sources of error.

(3) A description of every standard of any unit of measurement procured under subsection (1) shall be published in the *Gazette* on a direction by the Warden.

(4) Every standard of any unit of measurement procured under subsection (1) shall be verified and authenticated at a specified standards laboratory before such standard is brought into use in Sri Lanka.

(5) The Minister may by notification in the *Gazette* declare that a standard of any unit of measurement, which has been procured and verified under this section, shall be brought into use in Sri Lanka and such standard shall upon such notification become a Sri Lanka standard and shall for all purposes whatsoever be conclusively presumed to be true and accurate."

8. Section 15 of the principal enactment, as amended by Act No. 7 of 1971, is hereby further amended as follows:—

Amendment of
section 15 of the
principal enact-
ment.

(1) by the repeal of subsection (2) of that section and the substitution therefor, of the following new subsection:—

"(2) The Minister shall, once at least in each period of fifteen years, cause such Sri Lanka standards as he deems necessary, equivalent to the units of measurement defined in the First Schedule, to be verified at a specified standards laboratory:

Provided, however, that before any Sri Lanka standard of any unit of measurement is sent out of Sri Lanka for such purpose, the Minister may cause a secondary standard of that unit of measurement to be verified by comparison with such Sri Lanka standard and to be authenticated in such manner as the Minister may direct and to be placed in the custody of the Warden, and such secondary standard shall, during such time as the Sri Lanka standard is out of Sri Lanka, be deemed to be a Sri Lanka standard."; and

(2) by the insertion, immediately after subsection (2) of that section, of the following new subsection:—

"(3) Any Sri Lanka standard other than a standard verified under subsection (2) shall be verified by the Warden once in every ten

4 *Weights and Measures (Amendment)*
Law, No. 24 of 1974

years after its first verification by comparison with a Sri Lanka standard specified in section 14.”

Amendment of section 16 of the principal enactment.

9. Section 16 of the principal enactment, as amended by Act No. 7 of 1971, is hereby further amended as follows:—

(1) by the repeal of subsections (2) and (3) of that section; and

(2) by the substitution, for subsection (4) of that section, of the following new subsection:—

“(4) Every secondary standard of any unit of measurement shall be kept and preserved in such manner as may be prescribed at the office and in the custody of the Warden, who shall, once at least in each period of five years, cause such standard to be compared with the Sri Lanka standard of that unit of measurement and, if necessary, to be corrected or adjusted.”

Amendment of section 17 of the principal enactment.

10. Section 17 of the principal enactment is hereby amended by the substitution, for subsection (1) of that section, of the following new subsection:—

“(1) The Warden or any local authority may from time to time for the purposes of this Ordinance procure such copies as may be necessary of the secondary standards of any unit of measurement; every such copy shall be made in such manner and of such materials, form and specifications as may be prescribed.”

Amendment of the heading of Part IV of the principal enactment.

11. The heading “Use of Weights and Measures” occurring immediately before section 22 in Part IV of the principal enactment is hereby amended by the substitution therefor, of the following new heading:—

“Use of Units of Measurement.”

Replacement of section 22 of the principal enactment.

12. Section 22 of the principal enactment, as amended by Act No. 7 of 1971, is hereby repealed and the following new section is substituted therefor:—

“All contracts, sales, &c. and collection of fees or duties to be in terms of authorized units of measurement.

22. (1) Save as is otherwise provided in section 54, every contract, bargain, sale or dealing made or had in Sri Lanka whereby any work, goods, wares, merchandise or other thing is or are to be done, sold, delivered, carried, measured, computed, paid for, or agreed

for by weight or measure, shall be made and had according to any one of the units of measurement specified in the Second Schedule, or any one of the authorized weights and measures specified in the Third Schedule, or any multiple or sub-multiple or a combination of any multiple and sub-multiple of any such authorized weight or measure specified in such Third Schedule.

(2) All fees and duties whatsoever charged or collected in Sri Lanka according to any unit of measurement shall be charged and collected according to one of the units of measurement specified in the Second Schedule or any one of the authorized weights and measures specified in the Third Schedule.

(3) The packing in Sri Lanka of any article in a container for the purposes of sale shall be done according to any one of the authorized units of measurement.

(4) Every contract, bargain, sale or dealing which is not made or had in accordance with the provisions of subsection (1) shall be void:

Provided, however, that notwithstanding anything in this section, a court may, in any case where any person has derived or received any advantage from or under any such contract, bargain, sale or dealing, make such order as the court may deem expedient for the purpose of compensating the person from whom or on account of whose act such advantage was derived or received."

13. Section 23 of the principal enactment is hereby repealed and the following new section is substituted therefor:—

"Only weights and measures specified in the Third Schedule to be used for trade.

23. Save as is otherwise provided in section 54, no weight or measure other than a weight or measure specified in the Third Schedule shall be used for the purpose of any trade."

Replacement of section 23 of the principal enactment.

Replacement of
section 24 of
the principal
enactment.

14. Section 24 of the principal enactment is hereby repealed and the following new section is substituted therefor:—

"Use of authori-
sed weights for
sale of articles.

24. Subject as hereinafter provided, every article which is sold by weight shall be sold either by any metric or avoirdupois weight, and every computation of the weight of any article for the purpose of trade shall be made either by any metric or avoirdupois weight:

Provided, however, that—

- (a) drugs, when sold by retail, may be sold either by metric or apothecaries' weight;
- (b) carat metric weight may be used for the sale or for the computation of the weight—
 - (i) of gold and silver or any article made thereof including gold or silver thread, lace and fringe;
 - (ii) of platinum, diamonds, or any other precious metal or stone."

Replacement of
section 44 B of
the principal
enactment.

15. Section 44B of the principal enactment (inserted by Act No. 7 of 1971) is hereby repealed and the following new section is substituted therefor:—

"False, incor-
rect or untrue
declaration or
statement, &c.

44B. Any person who, in any place or area in which an Order under section 29 is in force, by any means whatsoever, whether direct or indirect, makes any false, incorrect or untrue declaration or statement as to the number, quantity, measure, gauge or weight of any goods or things in connection with their purchase, sale, weighing or measurement, or in the computation of any charges for services rendered on the basis of weight or measure, or who sells, or causes to be sold, or delivers or causes to be delivered to a purchaser anything by weight or measure short of the quantity demanded of or represented by the seller, shall be guilty of an offence and shall, on conviction after trial before a Magistrate, be liable to a fine not exceeding one thousand rupees or to imprisonment

of either description for a term not exceeding six months or to both such fine and imprisonment.”.

16. Section 54 of the principal enactment is hereby repealed and the following new section is substituted therefor:—

Replacement of section 54 of the principal enactment.

“ Use of measures.

54. Nothing in this Ordinance shall be deemed to prohibit or restrict the use of any measure other than a unit of measurement specified in the Second Schedule hereto for the purpose of the measurement of the length or extent of any land.”.

17. Section 56 of the principal enactment is hereby amended in subsection (1) of that section:—

Amendment of section 56 of the principal enactment.

(a) by the substitution, for the definition of “measuring instrument”, of the following new definition:—

“ “measuring instrument” means any instrument used for the measurement of length, area, volume or capacity or any such instrument as may be declared by the Minister by notification published in the *Gazette* to be a measuring instrument for the purposes of this Ordinance;” and

(b) by the omission of the definitions of “gallon”, “pound avoirdupois”, “square yard” and “yard.”.

18. Section 57 of the principal enactment is hereby repealed.

Repeal of section 57 of the principal enactment.

19. The First, Second, Third, Fourth, Fifth, Sixth, Seventh and Eighth Schedules to the principal enactment are hereby repealed and the following new Schedules are substituted therefor:—

Replacement of the Schedules to the principal enactment.

FIRST SCHEDULE

Definitions

PART I

The base units of the International System and their symbols are—

- | | | |
|---------------------------|---|---------------------------------------|
| 1. the metre symbol m. | — | for length |
| the kilogramme symbol kg. | — | for mass or weight |
| the second symbol s. | — | for time |
| the ampere symbol A. | — | for the intensity of electric current |

the kelvin symbol K.	— for thermodynamic temperature
the candela symbol cd.	— for luminous intensity
the mole symbol mol.	— for amount of substance

Definitions of the base units :

- 1.1 The unit of length is the 'metre' (m).

The metre is the length equal to 1 650 763.73 wave-lengths in vacuum of the radiation corresponding to the transition between the levels $2p_{10}$ and $5d_5$ of the Krypton 86 atom. (11th C.G.P.M. (1960), Resolution 6).

- 1.2 The unit of mass is the 'kilogramme' (kg.).

The kilogramme is the unit of mass, it is equal to the mass of the international prototype of the kilogramme. (1st and 3rd C.G.P.M. 1889 and 1901).

- 1.3 The unit of time is the 'second' (s).

The second is the duration of 9 192 631 770 periods of radiation corresponding to the transition between the two hyperfine levels of the ground state of the Caesium—133 atom. (13th C.G.P.M. (1967), Resolution 1).

- 1.4 The unit of intensity of electric current is the 'ampere' (A).

The ampere is that constant current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2×10^{-7} newtons per metre of length. (C.I.P.M. (1946), Resolution 2 approved by the 9th C.G.P.M. 1948).

- 1.5 The thermodynamic unit of temperature is the 'kelvin' (K).

The kelvin, unit of thermodynamic temperature, is the fraction $1/273.16$ of the thermodynamic temperature of the triple point of water. (13th C.G.P.M. (1967), Resolution 4). The kelvin is also used to express intervals of temperature.

- 1.6 The unit of luminous intensity is the 'candela' (cd.)

The candela is the luminous intensity, in the perpendicular direction, of a surface of $1/600\,000$ square metre of a black body at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre. (13th C.G.P.M. (1967), Resolution 5).

- 1.7 The unit of the amount of substance is the 'mole' (mol).

The mole is the amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogramme of carbon 12.

Note : (1) When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles, or specified groups of such particles. (14th C.G.P.M. 1971).

(2) (a) The meanings of the terms used in these definitions will be those that are assigned to them in Physics.

(b) C.G.P.M. stands for the General Conference of Weights and Measures.

PART II

2. The supplementary units are :

the radian—symbol rad—for plane angle.
the steradian—symbol sr—for solid angle.

2.1 The unit of plane angle is the 'radian' (rad).

The radian is the plane angle which having its vertex at the centre of a circle intercepts an arc equal in length to the radius.

2.2 The unit of solid angle is the 'steradian' (sr).

The steradian is the solid angle which having the centre of a sphere as its vertex cuts out on the surface of this sphere an area equivalent to that of a square of a side equal to the radius of the sphere.

PART III

OTHER BASE UNITS OF MEASUREMENT LEGAL FOR USE

3. The yard—symbol 'yd.' for length.
The pound—symbol 'lb.' for Mass or Weight.

DEFINITIONS OF THE OTHER BASE UNITS

3.1 The yard shall be 0.914 4 metre exactly.

3.2 The pound shall be 0.453 592 37 kilogramme exactly.

SECOND SCHEDULE

Definitions of Units of Measurement Legal for Use in all Measurements

PART I

1. In general the base units of the International System of Units together with the multiples and sub-multiples formed by addition of the following prefixes to base units are legal for use in all measurements. The abbreviated forms in the multiples and sub-multiples are formed by the placing of symbols for the prefixes directly in front of the symbol for the units.

<i>Multiplication factors</i>	<i>Prefix</i>	<i>S.I. Symbol</i>
1 000 000 000 000 — 10 ¹²	.. tera	.. T
1 000 000 000 — 10 ⁹	.. giga	.. G
1 000 000 — 10 ⁶	.. mega	.. M
1 000 — 10 ³	.. kilo	.. k
10 — 10 ¹	.. deca	.. da
0.1 — 10 ⁻¹	.. deci	.. d
0.001 — 10 ⁻³	.. milli	.. m
0.000 001 — 10 ⁻⁶	.. micro	.. μ
0.000 000 001 — 10 ⁻⁹	.. nano	.. n
0.000 000 000 001 — 10 ⁻¹²	.. pico	.. p
0.000 000 000 000 001 — 10 ⁻¹⁵	.. femto	.. f
0.000 000 000 000 000 001 — 10 ⁻¹⁸	.. atto	.. a

Note.—These prefixes are not to be applied to the base unit of mass or weight, the kilogramme. To obtain the multiples and sub-multiples of the kilogramme, see point 5.1.

In addition to the above units the units mentioned in the rest of the Schedule are also valid for use.

PART II

2.—MEASUREMENT OF LENGTH

2.1 *Other Metric Units :*

1 nautical mile*	—	1 852 metres
1 centimetre	—	1/100 th of a metre

(*The nautical mile is to be used only for purposes of navigation).

2.2 *British Imperial Units :*

Mile	—	1 760 yards
Furlong	—	220 yards
Chain	—	22 yards
Yard	—	0.914 4 metre
Foot	—	1/3rd of a yard
Inch	—	1/36th of a yard

PART III

3.—MEASUREMENT OF AREA

3.1 *S.I. Units :*

Square metre	—	The superficial area of a square each side of which measures 1 metre
Square kilometre	—	1 000 000 square metres
Square millimetre	—	1 000 000th of a square metre

3.2 *Other Metric Units :*

Hectare	—	100 ares—10 000 square metres
Are	—	100 square metres
Square decimetre	—	100 square metres
Square centimetre	—	1/10 000th of a square metre

3.3 *British Imperial Units :*

Square mile	—	640 acres
Acre	—	4 840 square yards
Rood	—	1 210 square yards
Perch or Square pole or rod	—	121/4 square yards
Square	—	100/9 square yards
Square yard	—	The superficial area equal to that of a square each side of which measures 1 yard
Square foot	—	1/9th of a square yard
Square inch	—	1/144th of a square foot

PART IV

4.—MEASUREMENT OF VOLUME OR CAPACITY

4.1 *S.I. Units :*

Cubic metre	—	A volume equal to that of a cube each edge of which measures 1 metre
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4.2 Other Metric Units

Hecto litre	=	100 litres (100 cubic decimetres)
		= 1/10th of a cubic metre
Cubic decimetre	=	1/1 000th of a cubic metre
Litre	=	1 cubic decimetre
		= 1/1 000th of a cubic metre
Cubic centimetre	=	1/100 000th of a cubic metre
Decilitre	=	1/10th of a litre which is equal to
		1/10 000 of a cubic metre
Centilitre	=	1/100th of a litre
		= 1/100 000th cubic metre
Millilitre	=	1/1 000 000th of a cubic metero
		= 1/1 000th of a litre

4.3 British Units

4.31 Volume in general

Cubic yard	=	A volume equal to that of a cube each edge of which measure 1 yard
Cubic foot	=	1/27th cubic yard
Cubic inch	=	1/1 728th cubic foot

4.32 Liquid measures

Gallon	=	Space occupied by 10 lbs. weight of distilled water of density 0.998 859 gramme per millilitre weighed in air of density 0.001 217 gramme per millilitre against weights of density 8.136 grammes per millilitre
Quart	=	Quarter gallon
Pint	=	1/2 quart
Gill	=	1/4 pint
Fluid ounce	=	1/160th gallon
Fluid drachm	=	1/8th part of a fluid ounce
Minim	=	1/60th part of a fluid drachm

4.33 Dry measures

Bushel	=	8 gallons
Peck	=	2 gallons
Quart or seer	=	1/4th part of a gallon
Pint	=	1/8th gallon
Chundu	=	1/16th gallon
Gill	=	1/32nd gallon

PART V

5. THE MEASUREMENT OF MASS OR WEIGHT, DENSITY, FORCE, PRESSURE AND VISCOSITY

A. THE MEASUREMENT OF MASS OR WEIGHT

5.1 S.I. Units

1 Gramme—symbol g. = 1/1000 kilogramme

(Note.—All the prefixes mentioned in point 1 of the Schedule for the formation of multiples and sub-multiples in the SI system are applied to the gramme and not to the kilogramme).

10 *Weights and Measures (Amendment)*
Law, No. 24 of 1974

Note.—These prefixes are not to be applied to the base unit of mass or weight, the kilogramme. To obtain the multiples and sub-multiples of the kilogramme, see point 5.1.

In addition to the above units the units mentioned in the rest of the Schedule are also valid for use.

PART II

2.—MEASUREMENT OF LENGTH

2.1 *Other Metric Units :*

1 nautical mile* — 1 852 metres
1 centimetre — 1/100 th of a metre

(*The nautical mile is to be used only for purposes of navigation).

2.2 *British Imperial Units :*

Mile — 1 760 yards
Furlong — 220 yards
Chain — 22 yards
Yard — 0.914 4 metre
Foot — 1/3rd of a yard
Inch — 1/36th of a yard

PART III

3.—MEASUREMENT OF AREA

3.1 *S.I. Units :*

Square metre — The superficial area of a square each side of which measures 1 metre
Square kilometre — 1 000 000 square metres
Square millimetre — 1 000 000th of a square metre

3.2 *Other Metric Units :*

Hectare — 100 ares—10 000 square metres
Are — 100 square metres
Square decimetre — 100 square metres
Square centimetre — 1/10 000th of a square metre

3.3 *British Imperial Units :*

Square mile — 640 acres
Acre — 4 840 square yards
Rood — 1 210 square yards
Perch or Square pole or rod — 121/4 square yards
Square — 100/9 square yards
Square yard — The superficial area equal to that of a square each side of which measures 1 yard
Square foot — 1/9th of a square yard
Square inch — 1/144th of a square foot

PART IV

4.—MEASUREMENT OF VOLUME OR CAPACITY

4.1 *S.I. Units :*

Cubic metre — A volume equal to that of a cube each edge of which measures 1 metre

4.2 *Other Metric Units*

Hecto litre	=	100 litres (100 cubic decimetres)
		= 1/10th of a cubic metre
Cubic decimetre	=	1/1 000th of a cubic metre
Litre	=	1 cubic decimetre
		= 1/1 000th of a cubic metre
Cubic centimetre	=	1/100 000th of a cubic metre
Decilitre	=	1/10th of a litre which is equal to
		= 1/10 000 of a cubic metre
Centilitre	=	1/100th of a litre
		= 1/100 000th cubic metre
Millilitre	=	1/1 000 000th of a cubic meter
		= 1/1 000th of a litre

4.3 *British Units*

4.31 *Volume in general*

Cubic yard	=	A volume equal to that of a cube each edge of which measure 1 yard
Cubic foot	=	1/27th cubic yard
Cubic inch	=	1/1 728th cubic foot

4.32 *Liquid measures*

Gallon	=	Space occupied by 10 lbs. weight of distilled water of density 0.998 859 gramme per millilitre weighed in air of density 0.001 217 gramme per millilitre against weights of density 8.136 grammes per millilitre
Quart	=	Quarter gallon
Pint	=	1/2 quart
Gill	=	1/4 pint
Fluid ounce	=	1/160th gallon
Fluid drachm	=	1/8th part of a fluid ounce
Minim	=	1/60th part of a fluid drachm

4.33 *Dry measures*

Bushel	=	8 gallons
Peck	=	2 gallons
Quart or seer	=	1/4th part of a gallon
Pint	=	1/8th gallon
Chundu	=	1/16th gallon
Gill	=	1/32nd gallon

PART V

5. THE MEASUREMENT OF MASS OR WEIGHT, DENSITY, FORCE, PRESSURE AND VISCOSITY

A. THE MEASUREMENT OF MASS OR WEIGHT

5.1 *S.I. Units*

1 Gramme—symbol g. = 1/1000 kilogramme

(Note.—All the prefixes mentioned in point 1 of the Schedule for the formation of multiples and sub-multiples in the SI system are applied to the gramme and not to the kilogramme).

12 *Weights and Measures (Amendment)*
Law, No. 24 of 1974

5.2 *Metric Units*

1 Metric tonne	=	1 000 kilogrammes
1 Metric carat	=	1/5th part of a gramme

5.3 *British Imperial Units*

5.31 *Avoirdupois weight*

1 Ton	=	2 240 lb.
1 Candy*	=	560 lb.
1 hundredweight (cwt.)	=	112 lb.
Cental	=	100 lb.
Quarter	=	28 lb.
Stone	=	14 lb.
Pound	=	0.453 592 37 kg.
Ounce	=	1/16 lb.
Dram	=	1/16 oz.
Grain	=	1/7 000 lb.

(*For the use in the weighting of copra only).

5.32 *Apothecaries weight*

1 oz. Apothecaries	=	480/7 000 part of a lb.
1 drachm	=	1/8 oz. apothecaries
1 scruple	=	1/3rd of an apothecaries drachm

5.33 *Troy weight*

1 oz. troy	=	480 grains
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B. THE MEASUREMENT OF DENSITY AND FORCE

5.4 *Density*

SI Units :

The SI unit of density is the "kilogramme per cubic metre"

The kilogramme per cubic metre is the density of a homogeneous body of which the mass is 1 kilogramme and the volume 1 cubic metre.

5.5 *Other Metric Units*

The tonne per cubic metre	=	1 000kg/m ³
The kilogramme per litre	=	1 000 kg/m ³
The gramme per millilitre	=	1 000 kg/m ³
The gramme per litre	=	1 kg/m ³

5.6 *Force*

SI Units :

The unit of force is the newton—symbol (N) The newton is the force which communicates to a moving body of a mass of 1 kilogramme, an acceleration of 1 metre per second per second.

C. THE MEASUREMENT OF PRESSURE AND VISCOSITY

5.7 *Pressure and Stress*

SI Units. The SI unit of stress and of pressure is the pascal—symbol 'Pa'.

The pascal is the stress or the pressure which acting on a plane area of 1 square metre exerts on this area a total force of 1 newton.

5.8 *Dynamic Viscosity*—

The SI unit of dynamic viscosity is the pascal second—symbol 'Pa·s'. The pascal second is the dynamic viscosity of a fluid in which the flow is laminar and in which the velocity gradient under a shearing stress of one pascal is one metre per second per metre, normal to the plane in which the fluid slides.

5.9 *Kinematic Viscosity*

SI Units:

The SI unit of kinematic viscosity is the square metre per second—

symbol $\frac{\text{m}^2}{\text{s}}$

The square metre per second is the kinematic viscosity of a fluid in which the dynamic viscosity is 1 pascal second and the density of which is equal to 1 kilogramme per cubic metre.

D. THE MEASUREMENT OF THE LINEAR DENSITY OF TEXTILES

5.10 *Other Metric Units*—

The tex is the unit of measurement of the linear density, that is to say, the mass in grammes, of one kilometre of yarn.

- 1 milligramme per kilometre = 1 millitex symbol mtex = 1mg/km
- 1 decigramme per kilometre = 1 decitex symbol dtex = 100mg/km
- 1 gramme per kilometre = 1 tex symbol tex = 1g/km
- 1 kilogramme per kilometre = 1 kilotex symbol ktex = 1kg/km

PART VI

6. THE MEASUREMENT OF TIME AND FREQUENCY

6.1 *Time*

- The minute (min) = 60 seconds
- The hour (h) = 3 600 seconds
- The day = 86 400 seconds

6.2 *Frequency*

The unit of frequency is the hertz (Hz).
The hertz is the frequency of a periodic phenomenon of which the period is one second.

PART VII

7. THE MEASUREMENT OF TEMPERATURE, HEAT, WORK AND ENERGY

7.1 *Temperature*

The Degree Celsius (C) is the International Practical Temperature scale in which its zero on the thermo dynamical temperature scale is 273.15K
The degree Celsius = The degree Kelvin

14 *Weights and Measures (Amendment)*
Law, No. 24 of 1974

The International Practical Temperature Scale is the International Practical Temperature Scale of 1968 described in the Proceedings of the Thirteenth General Conference on Weights and Measures held in Paris in the years 1967 and 1968 and adopted in the year 1968 by the International Committee on Weights and Measures.

7.2 *British Units*

The degree Fahrenheit = $\frac{5}{9}$ th of a degree Celsius.

The Fahrenheit temperature scale is such that the numerical value of a temperature on that scale is related to the numerical value of that temperature on the International Practical Temperature Scale by the formula—

$$t^{\circ}\text{F} = 32 + \frac{9}{5}t^{\circ}\text{C}$$

where $t^{\circ}\text{F}$ is the numerical value of a temperature on the Fahrenheit temperature scale; and

$t^{\circ}\text{C}$ is the numerical value of the temperature on the International Practical Temperature

7.3 Temperature Intervals on the SI temperature scale, International Practical Temperature Scale and the Fahrenheit temperature scale may be referred to by the abbreviations "degK", "degC" and "degF".

7.4 The unit of work, energy and quantity of heat is the joule (J)

The joule is the work produced by a force of 1 newton displacing itself by 1 metre in its direction.

PART VIII

8. THE MEASUREMENT OF ELECTRICAL QUANTITIES

8.1 The following units of measurement, that is to say,

- (a) the ohm as the unit of measurement of electrical resistance.
- (b) the volt as the unit of measurement of the difference of potential.
- (c) the watt as the unit of measurement of electrical power.
- (d) the coulomb as the unit of measurement of the quantity of electricity.
- (e) the farad as the unit of measurement of electrical capacitance.
- (f) the henry as the unit of measurement of electrical inductance.
- (g) the siemens as the unit of measurement of electrical conductance.

They will have the following meanings:—

8.2 *Electric Resistance*

The unit of electric resistance is the 'ohm' symbol (Ω). The ohm is the electric resistance between two points of a conductor when a constant difference of potential of one volt applied between these two points, produces in this conductor a current of one ampere, this conductor not being the source of any electromotive force.

8.3 *Electric Potential, Electro-Motive-Force*

The unit of electric potential or tension is the 'volt' symbol (V). The volt (unit of electric potential difference and electromotive force) is the difference of electric potential between two points of a conducting wire carrying a constant current of one ampere, when the power dissipated between these points is equal to one watt.

8.4 *Power*

The unit of power is the 'watt' symbol (W). The watt is the power of a system of energy in which one joule of work is carried uniformly during 1 second.

8.5 *Quantity of Electricity*

The unit of the quantity of electricity is the 'coulomb' symbol (C). The coulomb is the quantity of electricity transported in one second by a current of one ampere.

8.6 *Electric Capacitance*

The unit of electric capacitance is the 'farad' symbol (F). The farad is the capacitance of a capacitor between the plates of which there appears a difference of potential of one volt when it is charged by a quantity of electricity equal to one coulomb.

8.7 *Electric Inductance*

The unit of electric inductance is the 'the henry' symbol (H). The henry is the inductance of a closed circuit in which an electromotive force of one volt is produced when the electric current in the circuit varies uniformly at a rate of one ampere per second.

8.8 *Electric Conductance*

The unit of electric conductance is the 'siemens' symbol (S). The siemens is equal to a reciprocal ohm.

PART IX

9. THE MEASUREMENT OF LUMINOUS INTENSITY AND ILLUMINATION

9.1 The following units of measurement, that is to say—

- (a) the lumen as the unit of measurement of luminous flux.
- (b) the lux as the unit of measurement of illumination.
- (c) the 'candela per square metre' as the unit of luminance.

They will have the following definitions :—

9.2 *Luminous flux*

The unit of luminous flux is the 'lumen' symbol (lm). The lumen is the luminous flux emitted in an angle of 1 steradian by a uniform point source having an intensity of 1 candela.

9.3 *Illumination*

The unit of illumination is the 'lux' symbol (lx). The lux is the illumination of a surface of 1 square metre which receives a luminous flux of 1 lumen distributed normally and uniformly.

9.4 Luminance

The unit of luminance is the "candela per square metre" (cd/m^2). The candela per square metre is the luminance in the normal direction of a plane surface of 1 square metre, of a source the luminous intensity of which, normal to this surface, is 1 candela.

PART X

10. THE MEASUREMENT OF ANGLE

10.1 The following units may also be used for the measurement of angle :—

Degree ($^\circ$)	=	$\pi/180$ radians
The minute ($'$)	=	1/60 degree
The second ($''$)	=	1/60 of a minute
The grade (... g)	=	$\pi/200$ radians
The deci-grade	=	1/10th grade
The centi-grade	=	1/100th of a grade

The symbols for the units are given in parenthesis.

PART XI

11. THE MEASUREMENT OF OPTICAL POWER

11.1 SI Units : The SI unit of the power of an optical system is the diopetre—symbol ' m^{-1} '.

The diopetre is the power of an optical system which has a focal distance of 1 metre in a medium which has a refractive index equal to 1.

PART XII

12. NUCLEAR ACTIVITY

12.1 SI Units : The SI unit of nuclear activity is the second to the power minus one. The second to the power minus one is the activity of a radio-nucleide in which a number of disintegrations is 1 per second—symbol ' s^{-1} '.

PART XIII

13. THE MEASUREMENT OF THE DOSAGE OF EXPOSURE

13.1 SI Units : The SI unit of the dosage of exposure is the coulomb per kilogramme—symbol " C/kg ".

The coulomb per kilogramme is the exposure dose to an ionising radiation which produces in a kilogramme of air a total electric charge of ions of the same sign, of 1 coulomb.

13.2 *The absorption dose and an equivalent dose of an ionising radiation.*

SI Units : The SI unit of the absorption dose or the equivalent dose is the joule per kilogramme—symbol " J/kg ".

The joule per kilogramme is the absorption dose or the equivalent dose of an ionising radiation transmitting an energy of 1 joule to an exposed element of 1 kilogramme.

THIRD SCHEDULE

Weights and Measures authorized for use in any trade

1. PART I—LINEAR MEASURES

1.1 Metric System

Measures of—

100 metres
50 metres
30 metres
20 metres
10 metres
3 metres
2 metres
1 metre
50 centimetres
1 decimetres
1 centimetre
1 millimetre
1 micrometre

1.2 British Imperial System

Measures of—

100 feet
66 feet
50 feet
33 feet
20 feet
10 feet
8 feet
6 feet
5 feet
4 feet
1 yard (3 feet)
2 feet
1 foot
6 inches
1 inch
1/10th of an inch
1/12th of an inch
1/16th of an inch
1/32 of an inch
1/64th of an inch
1/100th of an inch
1/128th of an inch
1/256th of an inch
1/1000th of an inch

2. PART II—SQUARE MEASURES

2.1 Metric System

Measure of, or any multiple of,
1 square decimetre

2.2 Imperial System

Measures of, or any multiple of,
1 square foot

3. PART III—(a) CUBIC MEASURES

3.1 Metric System

Measures of, or any multiple of,
the cubic decimetre = 0.001m^3

3.2 British Imperial System

Measures of, or any multiple of,
 $\frac{1}{4}$ th cubic yard

(b) CAPACITY MEASURES—LIQUID

3.3 Metric System

Measures of—

10 litres, or any multiple of 10 litres
5 litres
 $2\frac{1}{2}$ litres
2 litres
1 litre
500 millilitres
250 millilitres
200 millilitres
100 millilitres
50 millilitres
25 millilitres
20 millilitres
10 millilitres
5 millilitres
2 millilitres
1 millilitre

3.4 British Imperial System

Measures of—

1 gallon or any multiple of 1 gallon
 $\frac{1}{2}$ gallon
1 quart
1 pint
 $\frac{1}{2}$ pint
8 fluid ounces
1 gill
4 fluid ounces
 $\frac{1}{2}$ gill
 $\frac{1}{4}$ gill
1 fluid ounce or sub-multiples of 1 fluid ounce
4 fluid drachms
2 fluid drachms
1 fluid drachm
60 minims
30 minims
10 minims

(c) CAPACITY MEASURES—DRY

3.5 British Imperial System

Measures of — 1 bushel
 $\frac{1}{2}$ bushel
1 peck

PART IV—WEIGHTS

4.1 *Metric System*

(a) Weights of—

50 kilogrammes	
20 kilogrammes	
10 kilogrammes	
5 kilogrammes	
2 kilogrammes	
1 kilogramme	
500 grammes	500 milligrammes
200 grammes	200 milligrammes
100 grammes	100 milligrammes
50 grammes	50 milligrammes
30 grammes	30 milligrammes
20 grammes	20 milligrammes
10 grammes	10 milligrammes
5 grammes	5 milligrammes
3 grammes	3 milligrammes
2 grammes	2 milligrammes
1 gramme	1 milligramme

(b) Weights of—

500	carats (metric)
200	carats (metric)
100	carats (metric)
50	carats (metric)
20	carats (metric)
10	carats (metric)
5	carats (metric)
2	carats (metric)
1	carat (metric)
0.5	carat (metric)
0.25	carat (metric)
0.2	carat (metric)
0.1	carat (metric)
0.05	carat (metric)
0.02	carat (metric)
0.01	carat (metric)

4.2 *British Imperial System*

(a) Weights of—

56 pounds
50 pounds
28 pounds
20 pounds
14 pounds
10 pounds
7 pounds
5 pounds
4 pounds
2 pounds
1 pound
8 ounces ($\frac{1}{2}$ lb.)
4 ounces ($\frac{1}{4}$ lb.)
2 ounces

Weights and Measures (Amendment)
Law, No. 24 of 1974

- 1 ounce
- 8 drams ($\frac{1}{2}$ oz.)
- 4 drams
- 2 drams
- 1 dram
- $\frac{1}{2}$ dram
- 4000 grains
- 2000 grains
- 1000 grains
- 500 grains
- 300 grains
- 240 grains
- 200 grains
- 120 grains
- 100 grains
- 72 grains
- 50 grains
- 48 grains
- 30 grains
- 24 grains
- 20 grains
- 10 grains
- 6 grains
- 5 grains
- 4 grains
- 3 grains
- 2 grains
- 1 grain
- 0.5 grain
- 0.3 grain
- 0.2 grain
- 0.1 grain
- 0.05 grain
- 0.03 grain
- 0.02 grain
- 0.01 grain
- (b) 500 ounces troy
- 400 ounces troy
- 300 ounces troy
- 200 ounces troy
- 100 ounces troy
- 50 ounces troy
- 40 ounces troy
- 30 ounces troy
- 20 ounces troy
- 10 ounces troy
- 5 ounces troy
- 4 ounces troy
- 3 ounces troy
- 2 ounces troy
- 1 ounce troy
- (c) 1 ounce apothecaries
- 4 drachms apothecaries
- 2 drachms apothecaries
- 1 drachm apothecaries
- 2 scruples apothecaries
- $1\frac{1}{2}$ scruples
- 1 scruple
- $\frac{1}{2}$ scruple