

## WEIGHTS AND MEASURES REGULATIONS, 1965

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L.N. 57 of 1965

# WEIGHTS AND MEASURES ACT, 1962

(1962, No. 40)

## Weights and Measures Regulations, 1965

*Commencement : 13th May, 1965*

In exercise of the powers conferred by section forty of the Weights and Measures Act, 1962, and of all other powers enabling the Minister in that behalf, the Minister hereby makes the following regulations.

### PART I.—GENERAL PROVISIONS

1. No person shall be appointed superintendent of weights and measures or deputy superintendent of weights and measures unless he has passed a qualifying examination set by the Board of Trade in England or an examination deemed to be equivalent thereto.
 

Qualification for appointment of superintendent and deputy superintendent.
2. No person shall be appointed inspector of weights and measures unless he has passed the Testamur Examination of the Institute of Weights and Measures Administration or an examination deemed to be equivalent thereto.
 

Qualification for appointment of inspectors.
3. A register of all stamps, brands, seals and certificates of verification forms issued to inspectors shall be kept by the superintendent of weights and measures. All such stamps, brands, seals and documents issued to an inspector shall be kept by him under lock and key when not actually being used; and upon his ceasing to hold office an inspector shall surrender the same to the superintendent.
 

Register of stamps, etc.
4. An inspector shall at least once in every month check the stock of stamps, brands, seals and documents in his possession and shall report immediately any deficiency or loss to the superintendent of weights and measures.
 

Duty of inspector to check stock.
5. An inspector shall report to the superintendent every month the fees collected and inspections carried out on such forms as may be from time to time approved by the superintendent of weights and measures.
 

Monthly report of fees and inspections.
6. An inspector shall at least once in every three months make a careful examination of the standards and instruments in his custody and shall report immediately to the superintendent of weights and measures any deficiency or damage.
 

Quarterly examination of standards, etc.
7. An inspector shall once every six months, or more often as the superintendent may direct, test or cause to have tested, all working standards under his control. Working standards shall be adjusted to agree with working standards more recently tested, or Nigerian trade standards as the case may be.
 

Half yearly tests of working standards.
8. Before stamping any weight, measure or instrument or issuing any certificate of verification in respect thereof an inspector shall—
  - (a) examine the same and ascertain that it complies with the appropriate conditions for acceptance for verification under these regulations;
  - (b) verify the same in a manner prescribed by these regulations and ascertain that it is correct within the limits of error specified.

Duty of inspectors before stamping, etc.

Certificate to be delivered upon payment of fees.

9. An inspector shall not deliver a certificate of verification in respect of any weight, measure or instrument to the owner or user thereof except upon payment of the appropriate fee as specified in the Fifth Schedule to the Weights and Measures Act 1962. Where the owner or user has made a request in writing for the inspector to attend his premises, the person requesting may be required to pay, in addition to statutory fees the reasonable travelling expenses of the inspector and the cost of conveying the standards and equipment consequent upon such attendance.

Charge of fees on inspector declining to stamp or issue a certificate.

10. Where an inspector declines to stamp or issue a certificate of verification in respect of any weight, measure or instrument on the grounds that it does not comply with the requirements of these regulations or is not within the specified limits of error, he shall charge the appropriate fee, except that the fee may be waived in cases where the inspector's decision to refuse to issue a certificate of verification was reached as a result of visual examination only.

Form of stamp.

11. For the purpose of stamping any weight, measure or instrument an inspector shall use only a stamp issued to him by the superintendent of weights and measures.

Obliteration of stamps and cancellation of certificates.

12. An inspector shall obliterate the stamp and cancel the certificate of verification in respect of any weight, measure or instrument when the weight, measure or instrument is found—

(a) upon test to have an error outside the limits specified in these regulations ;

(b) to have been altered or tampered with in such a way that it no longer complies with the requirements of these regulations ;

(c) to have been repaired or adjusted so that it becomes necessary to ascertain that the indications of the instrument remain correct throughout its range ;

Provided that where, in the opinion of the inspector, the incorrectness or non-compliance is not such as to justify the immediate obliteration of the stamp and cancellation of the certificate of verification, he may leave with the trader a written notice calling upon him to have the weight, measure or instrument corrected within a stated period not exceeding four calendar months ; the inspector shall obliterate the stamp and cancel the certificate of verification if the correction has not been made within such period.

Kind of punch for obliteration.

13. For the purpose of obliterating the stamp under regulation twelve the inspector shall use a punch of 6-pointed star design. No other method of obliteration shall be used nor shall it be lawful for any other person than an inspector acting in pursuance of these regulations to obliterate a stamp.

Reference of weights etc., not covered by regulations to superintendent.

14. Where a weight, measure or instrument embodies a feature or principle of construction not covered by these regulations or embodies some feature likely to render it unsuitable for trade use, the inspector shall refer the matter to the superintendent of weights and measures for a decision as to whether or not it is acceptable for verification.

Non-stamping of certain weights.

15. No inspector shall stamp or certificate any weight, measure or instrument which is not sufficiently strong to withstand ordinary use in trade.

16.—(1) No weight or measure shall be stamped or certificated by an inspector unless it is of one of the denominations specified in the Third Schedule to the Act.

Prohibition of stamping etc., weights and measures of unspecified denomination.

(2) Where the denomination or capacity of a weight, measure or instrument is not marked in full it shall be marked only by one of the abbreviations set out in Table I to these regulations.

17. An inspector shall not stamp or certificate any weight, measure or instrument unless it is complete in itself. No weight, measure or instrument shall bear a manufacturer's or maker's mark which might be mistaken for an inspector's stamp.

Inspector not to stamp or certificate incomplete instrument.

18. An inspector shall first examine weights, measures and instruments in the condition in which they are being used, with a view to seeing they are not unjust. When satisfied, the inspector shall test weights, measures and instruments in a clean condition, and if necessary he may call on the owner or user to clean them.

Examination of weights, measures and instruments.

19.—(1) Where an inspector is authorised under section eight of the Act by the superintendent of weights and measures to adjust weights, measures and instruments, such authority shall be confined to—

Limitation of the authority of inspector under section 8 of the Act.

(a) the adjustment of simple weights and measures ;

(b) the adjustment of counterpoise weights and sliding poises belonging to compound lever machines ;

(c) the balancing of weighing instruments ; and

(d) the setting or recalibration of the measure adjustment on measuring instruments.

(2) Any authorisation granted by the superintendent under the said section eight shall be issued to individual inspectors by name and shall not permit adjusting to be undertaken by their assistants.

20. Where it appears to an inspector in any special circumstances that it is impracticable or unreasonable for the owner or user of any weight, measure or instrument, to comply literally with any requirement of these regulations, he shall consult the superintendent with a view to referring the matter to the Permanent Secretary, Ministry of Commerce and Industry, who may if he thinks fit dispense with the observance of such requirements upon such conditions as he thinks fit in the special circumstances referred to him.

Waiver of requirements of regulations

21. These regulations shall not apply to the following, that is to say—

(a) in so far as they relate to material, weights, measures and instruments used in the manufacture of explosives ; and

Exemption from regulations

(b) instruments or installations incorporating load cells or other electrical devices for the measurement of weight. Such instruments and installations shall be stamped and certificated by inspectors only on the instructions of the superintendent who shall in each case decide after due consultation with the manufacturers and users of the instrument or installation what tests and allowances shall be applied.



Power of  
inspector  
to stamp  
and issue  
certificates  
contrary to  
regulations.

22.—(1) An inspector may at any time during the period of two years immediately following the date of the commencement of these regulations, stamp, or issue a certificate of verification in respect of, any weight, measure or instrument notwithstanding that such weight, measure or instrument does not comply with the requirements of these regulations ;

provided that such weight, measure or instrument—

(a) complies with the requirements of the law in force immediately before the date of the commencement of these regulations ; and

(b) is not likely to facilitate the perpetration of fraud ; and

(c) is correct within the appropriate limits of error specified in these regulations.

(2) No certificate issued under paragraph (1) of this regulation shall be valid for more than twelve months from the date it was issued nor shall such certificate be extended under any circumstance by virtue of section nine of the Act.

## PART II.—WEIGHTS

Examination  
of weights,  
and condi-  
tions for  
acceptance  
for verifica-  
tion.

23.—(1) All weights accepted for verification shall be made in one piece entirely of some solid metal other than lead except where lead is inserted for the purpose of adjustment. Weights made of soft metals or soft alloys, *e.g.* tin or solder, shall not be accepted. Avoirdupois weights shall not be made of aluminium or other metals of low density. Weights shall have smooth surfaces and be free from flaws or blowholes.

(2) Every weight shall have its denomination clearly and permanently marked on the upper surface unless the small size of the weight renders marking impracticable.

(3) Iron weights shall be blacked, blacklead, galvanised or otherwise treated for protection against rust and an inspector shall refuse to accept for verification any iron weight which is in a rusty condition.

(4) Avoirdupois weights shall be either flat circular, bar or bell weights ; but 50 lb., 20 lb., 10 lb., and 5 lb. shall be octagonal bar weights only. Avoirdupois iron weights of flat shape shall not be made larger than 4 lb. No iron weight of less than 4 oz. shall be accepted for verification.

(5) Metric weights of iron shall be hexagonal in shape. No iron metric weight of less than 100 grammes shall be accepted for verification.

(6) Metric weights other than iron metric weights shall be either cylindrical, hexagonal, or, in the case of weights not exceeding 10 grammes, made of flat or sheet metal or wire.

(7) Troy bullion weights, apothecaries' weights, metric carat weights and grain weights of 1 oz. and upwards shall be made of stainless steel, solid brass, gunmetal or bronze and shall be cylindrical with either handles or knobs. Those below 1 oz. shall be flat or of wire and shall be made of stainless steel, solid brass, gunmetal, bronze, platinum or aluminium.

(8) All avoirdupois weights (other than those made of stainless steel) of 4 oz. and above and all iron metric weights shall have one adjusting hole only in the underside which shall not extend to the upper surface or side. Lead for adjusting shall be made secure by undercutting or other suitable method. The size and depth of adjusting holes shall be at the discretion of the inspector who shall have due regard to the possibility of the perpetration of fraud.



(9) Adjusting holes in troy weights intended for bullion weighing shall be capped with metal in such manner as is approved by the superintendent.

(10) Metric weights other than iron metric weights, avoirdupois stainless steel weights, troy weights and apothecaries' weights may be accepted for verification without adjusting holes, but if adjusting holes are provided they shall comply with the conditions specified in paragraph (8) of this regulation.

24.—(1) Every weight submitted for stamping shall be tested by comparison with a valid standard.

Verifica-  
tion of  
weights.

(2) The errors permissible on the verification of weights shall be those specified in Tables II to VII to these regulations.

25. Weights shall be stamped on the lead in the adjusting hole and the size of the stamp used shall be such as to cover the whole of the surface of the lead as far as practicable. Weights not provided with adjusting holes shall be stamped on the under surface. Where the adjusting hole is capped, the stamp shall be impressed where possible in such a manner that part of the impression is on the cap and part on the under surface of the weight.

Stamping  
of weights.

### PART III.—MEASURES OF LENGTH

26.—(1) Imperial measures of length of one yard and under and metric measures of length of one metre and under accepted for verification and intended for use in markets and retail shops shall be end measures made of rust proof steel, brass, hard wood or other material approved by the superintendent of weights and measures. The measures shall be straight from end to end, free from flaws and cracks and of sufficient strength to resist bending in normal trade use. Wooden measures shall have both ends neatly tipped with brass and the tips shall be rivetted. Jointed or folding measures shall be acceptable for verification if in the inspector's opinion the measure is not such as to facilitate fraud and there is no undue looseness in the hinged joints.

Examination  
of measures  
of length,  
and condi-  
tions for  
acceptance  
for verifica-  
tion.

(2) All subdivisions of a measure of length shall be clearly incised lines and the major subdivisions shall be of greater length than the minor subdivisions.

(3) Every measure of length shall be clearly denominated and no wooden measure of length of one metre or less shall be denominated or graduated in both metric and imperial units.

27.—(1) Every metal measure of length shall be tested by comparison with a valid standard at or near normal temperature. A yard or metre measure intended for use in markets or retail shops may be tested by comparison with a valid working standard steel tape.

Verifica-  
tion of  
measures  
of length.

(2) Link measures, chain measures and metallic ribband or metallic tape measures and all measures of length exceeding in the case of imperial measures one yard and in the case of metric measures one metre shall be tested at the weights and measures headquarters of the Ministry of Commerce and Industry and shall be subject to such tension under test and tested in such manner as the superintendent of weights and measures shall direct.

(3) The errors permissible on the verification of measures of length are as specified in Table VIII to these Regulations.

Stamping  
of measures.

28.—(1) Measures of length shall be stamped as near as possible to the beginning of the measure and if practicable at the end of the measure. Yard or metre measures intended for use in markets or retail shops having not more than three subdivisions shall be stamped at or near each subdivision and at each end.

(2) An unsubdivided measure of length shall be engraved or marked "not subdivided".

#### PART IV.—LIQUID MEASURES OF CAPACITY

29.—(1) A liquid measure of capacity accepted for verification may be made of glass, any metal or alloy of metals, or any one of the group of materials commonly known as "plastics".

(2) Subject to sub-paragraph (e) of paragraph (6) of this regulation liquid measures may be either conical or cylindrical in form.

(3) The capacity of a liquid measure other than a measure made of transparent material shall be defined by the brim, except where a top lip or rim is fitted to prevent spilling when the capacity shall be clearly and unambiguously defined by the junction of the top lip or rim and the body of the measure. Such a top lip or rim shall not add more than ten per cent to the marked capacity of the measure.

(4) The capacity of a liquid measure made of a transparent material shall be defined either by the brim or by a clearly defined line at least 5 cms. in length distant not less than 1.5 cms. or more than 4 cms. from the brim.

(5) The denomination of a measure shall be clearly marked on the outside of the body of the measure. Where the capacity is defined by the brim the denomination shall be as near to the brim as practicable. Where the capacity is defined by a line the denomination shall be plainly marked at the line.

(6) Before accepting a measure for verification an inspector shall ascertain—

(a) that the measure is sufficiently strong to prevent deformation by hand pressure; and

(b) that it is sufficiently strong to withstand the wear and tear of ordinary use in the trade for which it is intended; and

(c) that in the case of plated measures the plating is uniform and shows no sign of peeling; and

(d) that in the case of measures intended or designed for the measurement of food no contamination of the contents can take place by reason of the material of which the measure is constructed; and

(e) that it empties completely when tilted to an angle of 120 degrees from the vertical and has no false bottom; and

(f) that it is not subdivided unless it is for the measurement of drugs or medicines or intended for laboratory use.

30.—(1) Liquid measures shall be tested wherever practicable by filling the standard with water and emptying the contents into the measure under test.

(2) Where the capacity is defined by a line the level of the water shall be taken at the bottom of the meniscus.

Examination  
of liquid  
measures of  
capacity,  
and  
conditions  
for  
acceptance  
for  
verifica-  
tion.

Verifica-  
tion of  
liquid  
measures of  
capacity.

(3) Measures for the measurement of drugs or medicines and such measures for laboratory use as are submitted for verification shall be tested only at the weights and measures headquarters, in such manner as the superintendent of weights and measures shall direct.

(4) The errors permissible on the verification of liquid measures of capacity shall be those specified in Table IX to these regulations.

31.—(1) Metal measures shall be stamped wherever practicable by impressing the stamp on molten solder or soft metal which is securely fixed to the measure; on measures having a lip or rim the stamp shall be placed at the bottom of the inside of the lip or rim, and on other metal measures the stamp shall be on the outside of the measure as near to the denomination as possible.

Stamping of liquid measures of capacity.

(2) On measures other than metal measures the stamping shall be in such a manner as the superintendent may direct.

#### PART V.—DRY MEASURES OF CAPACITY (OTHER THAN INDIGENOUS MEASURES)

32.—(1) Dry measures of capacity accepted for verification shall be made wholly of metal of sufficient gauge and strength to withstand ordinary wear and tear in use for trade. Measures of 1 gallon and over, and 5 litres and over shall have one strengthening band round the rim. Other strengthening bands may be fitted as required.

Examination of dry measures of capacity and conditions for acceptance for verification.

(2) All dry measures shall be cylindrical brim measures and no subdivided dry measures shall be permitted. The internal diameter of dry measures shall not differ by more than five per cent from the depth.

(3) The denomination shall be clearly and permanently marked on the outside of the body of the measure.

33. The errors permissible on the verification of dry measures of capacity are specified in Table X to these Regulations.

Verification of dry measures of capacity.

34. Dry measures shall be stamped by impressing the stamp on a pad of molten solder or soft metal which is securely fixed near the brim of the measure.

Stamping of dry measures of capacity

#### PART VI.—WEIGHING INSTRUMENTS : GENERAL

35.—(1) Every weighing instrument accepted for verification shall be clearly and permanently marked with its capacity and the name of the manufacturer.

(2) The position of any indicator or sliding poise shall be unambiguous and clearly readable and the graduations shall be sharply defined lines.

(3) Where special instructions are necessary as to the method of use of any weighing instrument, they shall be prominently and permanently marked on the instrument.

Examination of weighing instruments, and general conditions for acceptance for verification.

(4) Knife edges and bearings shall be of hard steel, agate or other material approved by the superintendent. Knife-edges shall bear throughout their working length and shall be so secured in their levers as to prevent movement or rotation. Means shall be provided to retain knife-edges in their bearings and to prevent shackles and bearings becoming misplaced.

(5) No instrument having parts readily removable without mechanical aid shall be accepted for verification unless the instrument cannot be used without such parts.

(6) No accelerating weighing instrument shall be accepted for verification.

(7) No weighing instrument of any type having a wooden platform, scoreboard or framework shall be accepted for verification.

Verifica-  
tion of  
weighing  
instruments

36.—(1) Every weighing instrument not exceeding 5 cwt. (or in the case of a metric instrument 250 kg.) in capacity shall be tested by the inspector up to its full capacity. In the case of instruments exceeding 5 cwt. (or 250 kg.) the inspector may call upon the owner or user to provide such load as may be reasonably available for test purposes and may use the method of substitution.

(2) Weighing instruments shall be tested for error by ascertaining the weight required to bring the beam or steelyard to a horizontal position. Where the indications are given on a dial or chart the error shall be read directly from the same. The errors permissible at intermediate loads shall be in proportion to the load applied, provided that from zero to half load, half the prescribed limits of error at full load may be allowed at any point.

(3) Where reversible or interchangeable parts are fitted to an instrument reversal or interchange shall not affect the accuracy of the instrument.

(4) Where relieving gear is fitted to any weighing instrument the prescribed limits of error shall not be exceeded when the machine is put steadily into and out of gear. An inspector shall ascertain that it is not possible wilfully to alter the indications of the instrument by use or misuse of the relieving gear.

(5) Weighing instruments in which the indications are given on a chart or dial shall not be tested for sensitiveness. Sensitiveness on other weighing instruments shall be tested by loading the instrument with the maximum test load, and with the beam or steelyard in a horizontal position, ascertaining that the addition of the amount shown in the Table for sensitiveness causes the beam or steelyard to rise or fall to the limit of its range of movement. In the case of beam scales the allowances shall cause an appreciable movement of the beam.

Stamping  
of weighing  
instruments.

37. All weighing instruments except beam scales specifically exempted by Regulation forty-one shall contain a plug or stud of soft metal made irremovable by undercutting or otherwise.

#### PART VII—BEAM SCALES

Applica-  
tion of  
Part VII.

38. This part of these Regulations shall apply to "beam scales," that is to say, any equal armed weighing instrument the pans of which are suspended below the beam.

Examination  
of beam  
scales, and  
conditions  
for  
acceptance  
for verifica-  
tion.

39.—(1) In no case shall the capacity of a hand beam scale accepted for verification be less than 11lb. (or  $\frac{1}{2}$  kg. metric weight) or more than 4 lb. (or 2 kg. metric weight). The types of hand beam scale used by itinerant and street traders shall be specifically approved for the purpose by the superintendent.

(2) Beam scales used by licensed goldsmiths shall be of a type specifically approved for the purpose by the superintendent.

(3) Any attachment for adjusting the balance of beam scales shall be permanently fastened, and, where a balance ball or box is used it shall be so fixed that it cannot readily be tampered with. Balancing flags or screws which can be adjusted by hand shall not be allowed except where the beam scale is enclosed in a glass case.

40.—(1) Beam scales shall for the purposes of testing be divided into the following three classes, that is to say:—

Verifica-  
tion of  
beam  
scales.

*Class A.* Fine balances, bullion and assay balances, having means for relieving all the knife-edges and bearings;

*Class B.* Chemists', druggists', jewellers' and gold buyers' beam scales and any beam scales for laboratory use which are submitted for stamping;

*Class C.* Beam scales other than those specified in Class A or B.

(2) In testing and certificating beam scales an inspector shall apply the tolerances set out in the tables of error appropriate to the class of beam scale under test. The owner or user may in special circumstances request an inspector to apply the tolerances for a higher class than would normally be applied.

(3) At half-load no appreciable difference in the indications of a beam scale shall result from the movement of the knife-edges or bearings laterally or backwards and forwards.

(4) The instrument shall be correct whether the load is on the middle or near the edge of the pans.

(5) The errors permissible on beam scales are as specified in Tables XI to XIII to these Regulations.

41. Beam scales shall be stamped on a lead plug or stud securely inserted in the beam. This shall not apply to Class A beam scales or any beam scales where small size or delicate construction renders it impracticable. In such cases stamping shall be in such manner as the superintendent may approve.

Stamping  
of beam  
scales.

#### PART VIII—SIMPLE COUNTER MACHINES

42. This Part of these Regulations shall apply to simple counter machines.

Applica-  
tion of  
Part VIII.

43. The expression "simple counter machine" means an equal armed weighing instrument not exceeding 112 lb. or 50 kg. in capacity, the pans of which are above the beam, and designed for use on a counter, bench or table.

Definition  
of "Counter  
Machine".

44.—(1) The beam shall be rigid and where the beam or body has two sides they shall be connected by two cross bars. Centre forks shall be fixed so that they cannot twist or get out of place.

Examination  
of simple  
counter  
machines,  
and  
conditions  
for  
acceptance  
for verifica-  
tion.

(2) The only permitted balancing device shall be one balance box to hold loose lead not in excess of one per cent of the marked capacity of the scale. The balance box shall be secured by not less than two screws.

(3) The points of contact of all stays, hooks and loops shall be of hard steel.

(4) Loose interchangeable pans shall not be permitted unless they are identified permanently by a number with the instrument and interchange of the pans shall not cause any change in the balance.

(5) No sliding weight for taring, balancing or weighing shall be permitted on any simple counter machine except that an inspector may, if requested, accept for verification scales designed for baby weighing having sliding poises, but no counter steelyard shall be accepted.



(6) No instrument of the Beranger type shall be accepted for verification unless it is of a type approved by the superintendent and no type of Beranger balance shall be approved unless the working parts are adequately enclosed in, and protected by, a box or frame.

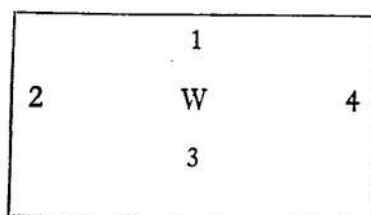
Verification  
of simple  
counter  
machine.

45.—(1) The beam shall have fall both ways from the horizontal. The minimum fall in each direction from the horizontal shall be :—

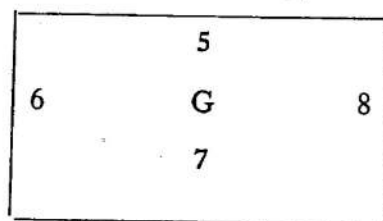
Capacity	Fall
Not exceeding 4 lb. or (2 kg. if metric) ..	0.5 cm.
Above 4 lb. to 50 lb. (2 kg. to 25 kg. if metric) ..	1 cm.
50 lb. and above (25 kg. if metric) ..	1.5 cm.

(2) Instruments to which this section applies shall not be stamped or certificated unless they satisfy the following tests :—

(a) half the full load shall be applied on each of the following positions :—



Weights Pan



Goods Pan

W & G : 3 & 5 : 2 & 8

1 & 5 : 3 & 7 : 4 & 8

1 & 7 : 2 & 6 : 4 & 6

In applying this test the inspector shall not allow the weights to overhang the edge of the pan or plate and shall apply the test in a reasonable and practical manner having regard to the use for which the instrument is designed and the construction thereof and the extreme difference between the indications of the instrument, on this test for variation, shall not exceed the limits of error at full load specified in Table XV to these Regulations.

(b) At half-load no appreciable difference shall result from the movement of the knife edges or bearings laterally or backwards and forwards ;

(c) At full load the error and sensitivity allowances shall not exceed the limits specified in Table XV to these Regulations.

46. The stamp in respect of simple counter machines shall be impressed on a conspicuous part of the main beam of the instrument.

Stamping  
of simple  
counter  
machines.

#### PART IX.—SELF-INDICATING AND SEMI-SELF-INDICATING COUNTER MACHINES

47. This part of these Regulations shall apply to weighing machines designed for counter use (other than spring balances) of less than 1 cwt. or 50 kg. capacity which have visual indicating devices for automatically

Applica-  
tion of  
Part IX.

showing the weight in whole or in part of the article weighed. Instruments having difference charts and instruments designed to calculate and indicate the price of the article weighed are included.

48.—(1) Except where the instrument is "level proof" all instruments accepted for verification shall be fitted with an adequate spirit-level and levelling feet with locknuts and have instructions as to the use of the instruments clearly marked in English with a warning that the instruments must be kept level.

(2) Charts shall be uniformly graduated into divisions which shall not appear to be less than 1.6 millimetres apart.

(3) Save in the case of instruments used in Post Offices the minimum weight corresponding to the interval between consecutive graduation marks shall be in accordance with the following table :—

<i>Capacity of Chart or Dial</i>	<i>Weight corresponding to the interval between consecutive graduations must not exceed</i>
Up to 1 lb.	2 Drams
Above 1 lb. to 7 lb.	4 Drams
Above 7 lb. to 15 lbs	8 Drams
Above 15 lb. to 30 lb.	1 oz.
Above 30 lb. to 112 lb.	2 ozs.
Up to 500 grammes	5 Grammes
Above 500 Grammes to 5 kg.	10 Grammes
Above 5 kg. to 10 kg.	20 Grammes
Above 10 kg. to 20 kg.	50 Grammes
Above 20 kg. to 50 kg.	100 Grammes

Examination of self-indicating and semi-self-indicating counter machines, and conditions for acceptance for verification.

(4) Instruments shall be fitted with a damping device which shall cause the indicator to come to rest after not more than five movements.

(5) Taring devices shall not be fitted to instruments for use in retail trade.

(6) The tip of the indicator shall not exceed 1 millimetre in width nor shall it be more than 2.5 millimetres from the chart.

(7) The indicating mechanism shall be adequately closed against tampering and shall be protected from the ingress of dust and moisture.

(8) Instruments which are designed to calculate and indicate the price of the article weighed shall have the weight indicated in accordance with these Regulations.

(9) The only permitted balancing device shall be one balance box to hold loose lead not in excess of one per cent of the marked capacity of the scale. The balance box shall be secured by not less than two screws.

49.—(1) From the extreme positions from which it is possible to read the indication without distortion the difference in reading shall not exceed the value of the smallest subdivision.

(2) The error permitted at full load shall be the weight corresponding to one of the smallest divisions on the chart in excess or deficiency.

(3) The tests for simple counter machines in regulation forty-five shall be applied as far as is practicable and each numbered graduation shall be tested. In addition to the ordinary tests instruments described as "level proof" shall be correct when tilted one inch out of level lengthways or sideways.

Verification of self-indicating and semi-self-indicating machines.



(4) In the case of instruments designed to calculate and indicate the price in money the inspector shall, in addition to the tests specified in regulation forty-five ascertain that the price is indicated correctly. All numbered graduations on the price chart shall be tested.

Stamping  
of self-  
indicating  
and  
semi-self  
indicating  
machines.

50.—(1) Stamping shall be on a lead plug on a conspicuous part of the housing.

(2) An inspector would be justified in refusing to stamp or certificate an instrument to which this part of these regulations apply if the instrument is not supported on a level rigid counter or bench.

#### PART X.—SPRING BALANCES

Applica-  
tion of  
Part X.

51. This part of these regulations shall apply to spring balances, that is to say, weighing instruments in which the load is carried by one or more springs by themselves or in combination with a system of levers, stays or struts except precision platform weighing machines in which a spring resistant indicating device is incorporated and having not less than four hundred divisions on the dial.

Examination  
of spring  
balances,  
and  
conditions  
for  
acceptance  
for verifica-  
tion.

52.—(1) "Straight-down" spring balances in which all the indications are on a vertical scale shall not be accepted for verification but spring balances in which part of the load is indicated on a vertical slide and part on a circular dial may be accepted.

(2) In spring balances of over 100 lb. capacity (or 50 kg.) the effective diameter of the dial shall be at least 225 millimetres.

(3) The index finger on a spring balance shall not exceed 1 mm. in width and shall not be more than 2.5 mm. from the dial.

(4) The dial of a spring balance shall be graduated into approximately equal parts and the minimum width apart of graduations shall not be less than 1.6 mm.

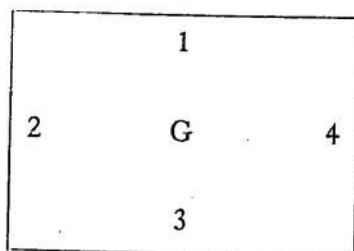
(5) Save in the case of spring balances used in Post Offices (charts of which balances shall be of a type approved for the purpose by the superintendent of weights and measures) the weights corresponding to the interval between consecutive graduation marks shall conform to the following table—

Capacity	Weight corresponding to interval between consecutive graduations must not exceed
1 lb. . . . .	2 Drams
2 lb. to 7 lb. . . . .	4 Drams
10 lb. to 15 lb. . . . .	8 Drams
20 lb. . . . .	1 oz.
40 lb. . . . .	2 ozs.
100 lb. and over . . . . .	1/200 of the capacity
1 kg. . . . .	10 Grammes
5 kg. . . . .	20 Grammes
10 kg. . . . .	50 Grammes
15 kg. . . . .	50 Grammes
20 kg. to 30 kg. . . . .	100 Grammes
50 kg. and over . . . . .	1/200 of the capacity

Capacities between one and one hundred pounds and one and fifty kilogrammes other than those included in the above table shall not be permitted.

53.—(1) Balancing devices shall be capable of operation only by means of a key or screwdriver and the range of adjustment shall not exceed one per cent of the capacity of the instrument. Where an adjustable indicator is provided the range of adjustment shall not exceed one per cent of the capacity of the instrument.

(2) When the goods pan is above the spring, half the full load shall be applied in the following positions :—



Goods Pan

In applying this test the inspector shall not allow the weight to overhang the edge of the pan or plate and shall apply the test in a reasonable and practical manner having regard to the use for which the instrument is designed and the construction thereof. The extreme difference between the indications of the instrument shall not exceed the limits of error at full load specified in Table XVI to these Regulations.

(3) Where the instrument has a pan or hook below the spring the instrument shall indicate correctly within the limits of error wherever the load is placed on the pan or hook.

(4) The inspector may test as many numbered graduations and intermediate graduations as he thinks fit but shall test at least those graduations representing quarter, half, three-quarters and full load. He may test for spring fatigue and make a backward test.

(5) At full load the error shall not exceed the limits specified in Table XVI to these Regulations.

54. Every spring balance submitted for stamping shall be fitted with a lead plug or seal to receive the inspector's stamp and such plug or seal shall effectively seal the dial to the frame of the instrument and shall absolutely prevent any tampering or internal adjustment of the machine without destroying the inspector's stamp.

Stamping  
of spring  
balances.

#### PART XI—STEELYARDS

55.—(1) This part of these regulations shall apply to steelyards.

Applica-  
tion of  
Part XI.

(2) The expression "steelyard" means a simple unequal armed weighing instrument intended for use suspended and having the goods hook hanging below the lever.

56.—(1) The shank of a steelyard accepted for verification shall be rigid and perfectly straight and shall not flex when the instrument is loaded to full capacity.

Examination  
of  
steelyards,  
and  
conditions  
for  
acceptance  
for verifica-  
tion.

(2) A zero stop shall be fitted which shall prevent the sliding poise or poises from travelling behind the zero graduation. There shall be a stop or end nut to prevent the poise riding off the steelyard arm and a stop or other device to prevent excessive amplitude of oscillation.

(3) Steelyards graduated in both metric and imperial weight systems shall have the systems marked upon opposite sides of the shank. Each set of notches on the shank shall be cut in one plane and be at right angles to the shank.

(4) No detachable chains or hooks for supporting the goods shall be permitted.

(5) No adjustable balancing devices shall be fitted to a steelyard. Any adjustment of balance shall be made to the extreme end of the shank by altering the weight of the travel limit stop nut, or by adding to or subtracting from the lead in the fixed counter weight.

(6) The following types of steelyard shall not be accepted for verification—

- (a) reversible steelyards with three hooks ;
- (b) any steelyard not having a zero graduation ; and
- (c) any steelyard for use on a counter, table or bench.

Verifica-  
tion of  
steelyards.

57.—(1) The inspector shall test each numbered graduation and the instrument shall be correct whether the test is made forwards or backwards.

(2) The instrument shall be correct when pumping pressure is applied not more than half way along the shank from the fulcrum.

(3) At full load error and sensitivity shall be within the limits specified in Table XVII to these Regulations.

Stamping  
of  
steelyards.

58. Steelyards shall be stamped on a plug or stud of soft metal securely inset in the shoulder of the steelyard.

## PART XII—DEAD WEIGHT MACHINES

Applica-  
tion of  
Part XII.

59.—(1) This part of these regulations shall apply to dead weight machines.

(2) "Dead weight machine" means a weighing instrument similar in principle of construction to a simple counter machine, but having a capacity of 112 lbs. avoirdupois or 50kg. metric or over, including low pattern instruments with the connecting stays and hooks above the weighing platform and high pattern instruments with the weighing platform at a convenient height and the stays and hooks below the beam or a combination of high and low patterns.

Examination  
of dead  
weight  
machines,  
and  
conditions  
for  
acceptance  
for verifica-  
tion.

60.—(1) The weighing platforms of dead weight machines accepted for verification shall not exceed in length the length of the beam and in width double the width of the beam. Where folding wings are fitted they shall not increase such dimensions by more than one-third in either direction.

(2) The only permitted balancing device shall be one balance box to hold loose lead not in excess of one per cent of the marked capacity of the instrument.

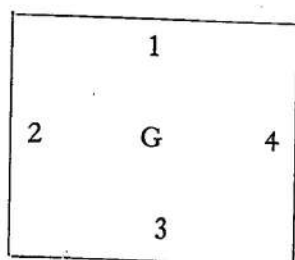
(3) The beam shall have fall both ways from the horizontal. The minimum fall in each direction shall be 1.5 cms.

(4) The bearing surfaces and points of contact of all stays, hooks, loops and adjustable slides shall be of hard steel.

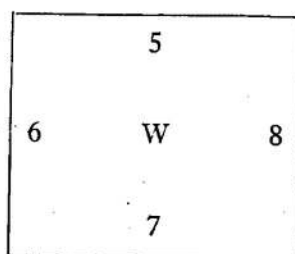
61.—(1) Instruments to which this section applies shall not be stamped or certificated unless they satisfy the following test, that is to say—

Verifica-  
tion of  
dead weight  
machines.

One quarter the full load shall be applied in each of the following positions :



Goods Pan



Weight Pan

W & G : 3 & 5 : 2 & 8  
1 & 5 : 3 & 7 : 4 & 8  
1 & 7 : 2 & 6 : 4 & 6

(2) In applying this test the inspector shall not allow the weight to overhang the edge of the pan or plate and shall apply the test in a reasonable and practical manner having regard to the use for which the instrument is designed and the construction thereof.

(3) The extreme difference between the indications of the instrument, on this test for variation, shall not exceed the limits of error specified in Table XVIII to these Regulations.

(4) The error and sensitivity shall be within the limits specified in Table XVIII to these Regulations.

62. Subject to regulation sixty-one, the stamp in respect of dead weight machines shall be impressed on a plug or stud of soft metal conspicuously attached to the main beam of the instrument.

Stamping  
of  
dead weight  
machines.

### PART XIII—PLATFORM SCALES

63. This part of these regulations shall apply to the following instruments having a capacity of 1 cwt (or 50kg.) and above, that is to say—

Applica-  
tion of  
Part XIII.

(i) weighbridges and ordinary platform scales, dormant or portable, having "no loose weight" or "loose weight" steelyard indicators ;

(ii) weighbridges and platform scales (other than spring balances as defined by regulation fifty-one) in which the weight is automatically indicated either wholly or partially by a pointer and chart or drum or other device whether mechanical or electrical. Weighbridges and platform machines having ticket printing or recording devices are included ;

(iii) overhead lever platform scales, carcase weighers and cattle weighbridges ;

(iv) personal platform weighing scales including coin freed scales.

64.—(1) All the instruments specified in paragraphs (i), (ii) and (iii) of regulation sixty-three shall have a balancing device capable of operation only with a detachable key. The range of balance shall not exceed one per cent of the maximum capacity of the machine except in the case of weighbridges for cattle weighing when the range may be two per cent.

(2) All travelling poises shall be prevented by a stop from travelling behind the zero graduation.

Examination  
of platform  
scales, and  
conditions  
for  
acceptance  
for verifica-  
tion.

(3) In instruments having "loose weight" steelyard indicators, proportional weights shall be clearly denominated, *e.g.*, " $=1$  cwt". Proportional weights shall be permanently marked with a number identifying them with the instrument. Metric proportional weights shall be hexagonal in shape.

(4) In instruments having "no loose weight" steelyard indicators the sliding poises shall incorporate a device for sealing against unofficial adjustment. Any lead inserted in sliding poises for adjustment shall be in one piece and no loose pieces of lead or other loose material shall be permitted.

(5) Platform scales and weighbridges with automatic mechanical or electrical indicating devices as defined in paragraph (ii) of regulation sixty-three shall comply with the following requirements, that is to say—

(i) The minimum width apart of the graduations as appearing to the user shall be not less than 3 millimetres.

(ii) Except in the case of semi self-indicating instruments and instruments embodying weight depositing mechanism, the weight corresponding to the interval between consecutive graduations shall not exceed  $1/400$ th of the capacity.

(iii) Tare bars except on weighing machines for factory use, shall not exceed half the capacity of the dial and the sub-divisions on the bar shall agree with those on the dial.

(iv) Oscillation of the indicator shall be effectively damped so that the indicator comes to rest after not more than 5 movements.

(v) Every instrument shall have a zero graduation or other means of checking the balance unloaded.

(vi) Indicating mechanisms shall be effectively sealed against the ingress of dust and moisture.

(vii) Indicating heads shall be secured against tampering and unofficial adjustment. Ticket printing mechanisms may be locked by a detachable key but shall not be sealed by an inspector's stamp.

(6) In overhead lever platform scales and carcase weighers the coupling rods between the load unit and the indicating unit shall be adequately protected by guards. Turnbuckles in such coupling rods shall be securely locked.

(7) Divisions on the dials and tickets of personal platform weighing instruments shall be at least 1.6mm. apart and shall not exceed  $\frac{1}{2}$ kg. or 1 lb. in value. The inspector shall ascertain as far as possible that personal weighing machines are not used for buying or selling.

65.—(1) The inspector shall test loose counterpoises and all major numbered graduations on instruments to which this part of these regulations applies.

(2) One quarter the maximum load shall be applied in the following positions or as many of them as are considered practicable and necessary :—

2		5
3	1	6
4		7

Platform

In applying this test the inspector shall not allow the weight to overhang the platform and shall apply the test in a reasonable and practical manner, having regard to the use for which the instrument is designed and the constru-



tion thereof. The extreme difference between the indications of the instrument shall not exceed the limits of error at full load specified in Tables XIX and XX to these Regulations.

(3) Where folding wings are fitted to extend the platform, the opening of these wings shall not cause variations in the indications of the instrument.

(4) At full load the error or sensitivity shall not exceed the limits specified in Tables XIX and XX to these Regulations.

66.—(1) Stamping of a weighing instrument to which this part of these regulations applies shall be on a plug securely inset in the steelyard or dial.

Stamping of platform scales.

(2) Personal platform weighing instruments may be stamped and certificated by an inspector but any certificate issued in respect of a personal weighing instrument shall be clearly marked "APPROVED FOR PERSONAL WEIGHING ONLY".

(3) In instruments having "loose weight" steelyard indicators proportional weights shall be stamped by the inspector on the lead in the adjusting hole.

(4) In instruments having "no loose weight" steelyard indicators the inspector shall impress his stamp on the adjusting lead and on the sealing device for the sliding poise or poises.

#### PART XIV—CRANE WEIGHING MACHINES

67. This part of these regulations shall apply to crane weighing machines.

68. In this part the expression "crane weighing machine" means a weighing instrument designed for use in connection with a crane or other lifting apparatus and having the hook suspended below the weighing mechanism.

Application of Part XIV.  
Definition of crane weighing machines.  
Examination of crane machines, and conditions for acceptance for verification.

69.—(1) Instruments accepted for verification may be constructed on the spring, lever, hydraulic or other principle approved by the superintendent of weights and measures.

(2) All working parts shall be suitably protected from the ingress of damp and dust.

(3) The range of balancing or adjusting arrangements shall not exceed two per cent of the marked capacity of the instrument.

(4) The indicating mechanism shall work freely and return to its initial starting point after the load is removed.

(5) Crane weighing machines constructed upon the hydraulic principle in the use of which it is necessary to twist the load hook in order to get a correct indication of weight, shall have a prominent notice to that effect permanently affixed to the machine.

70.—(1) Where practicable each numbered division up to the full weighing capacity shall be tested.

Verification of crane machines.

(2) At full load the error, and in the case of lever machines the sensitivity shall not exceed the limits specified in Table XXI to these Regulations.

71. Stamping of weighing instruments to which this part applies shall be on a plug or stud inset in the steelyard or dial of the instrument.

Stamping of crane machines.

#### PART XV.—AUTOMATIC WEIGHING INSTALLATIONS

72.—(1) Subject to paragraph (2) of this regulation this part shall apply to automatic weighing installations, that is to say, installations in which self-acting machinery is introduced to effect one or more of the following processes—

Application of Part XV.

(a) The rapid weighing of pre-determined loads ;

- (b) The registration and summation of pre-determined loads weighed ;
- (c) The registration and summation of loads in motion on a conveyor belt or rail track ;
- (d) The registration and summation of loads lifted by a crane.

(2) Installations in which the loads are ascertained by reference to volume and in which there is no measurement of weight shall be excluded from the application of this part of these regulations.

73. The owner or user of an automatic weighing installation for the weighing of pre-determined loads shall keep and maintain in accurate condition an independent weighing instrument suitable for check weighing the output of the installation.

74. The adjusting mechanism shall be suitably secured or protected so that it cannot be readily tampered with.

75.—(1) The weighing mechanism of an automatic weighing installation shall be tested, where practicable, in accordance with the requirements of these regulations, but in any case the accuracy of an automatic weighing installation shall be ascertained by the inspector under practical working conditions.

(2) Where the installation is designed to weigh pre-determined loads, not less than 20 continuous loads shall be checked on an independent accurate weighing instrument.

(3) Where the installation is for the registration and summation of loads, known quantities of the material which the installation is designed to handle shall be used to check the indications and recordings.

(4) The errors permissible on the verification of automatic weighing installations shall be specified in each case by the superintendent who shall have regard to the purposes for which the installation is designed and the materials handled. The superintendent shall also direct the inspector as to the method of testing to be applied.

76.—(1) Subject to paragraph (2) of this regulation automatic machines shall be stamped on the beam, shank or dial of the instrument, or where this is impracticable on some conspicuous part of the installation as near as possible to the indicator or recorder.

(2) No type of automatic weighing installation shall be stamped or certified by an inspector without the approval of the superintendent. The superintendent shall have due regard to regulation twenty-one of these regulations when considering automatic weighing installations incorporating load cells or other electrical devices for the measurement of weight.

#### PART XVI.—LIQUID FUEL AND LUBRICATING OIL INSTRUMENTS

77. This part of these regulations shall apply to all measuring instruments used for the measurement of liquid fuel and lubricating oils in individual quantities not exceeding 100 gallons or 500 litres.

78.—(1) All measuring instruments accepted for verification shall be so disposed that the purchaser can obtain a clear and unobstructed view of all the operations of measurement and delivery.

(2) No measuring instrument shall be accepted for verification unless :—

(a) it is of a type approved by the superintendent of weights and measures ;

(b) it is complete with all parts and attachments concerned in the operations of measurement and delivery ;

Duty of owner of an automatic weighing installation.

Examination of automatic weighing installations.

Verification of automatic weighing installations.

Stamping of automatic weighing installations.

Application of Part XVI.

Examination of liquid fuel etc. instruments, and conditions for acceptance for verification.



(c) the flexible discharge hose does not exceed 4 metres in length except it is an instrument for fuelling aircraft or ships, or is an instrument for the measurement of lubricating oil only.

(d) the nozzle is of a form that cannot trap any portion of the measured liquid.

(3) Markings having reference to the quantity delivered and special instructions necessary as to the method of operation of any measuring instrument shall be prominently and permanently marked on the instrument. Container pumps and piston pumps having a hose which empties itself on delivery shall be marked "HOSE MUST BE DRAINED FOR CORRECT MEASURE".

(4) Measuring instruments of the piston or container type shall be fitted with adequate sight glasses, observation windows or other methods approved by the superintendent for showing clearly that the instrument is charging and discharging properly.

(5) All adjustable parts of the mechanism which are liable to affect the accuracy of the delivery must be fitted with a sealing device.

(6) The individual sales indicator of the instrument must be such that it is not possible to advance the indicator by other means than the proper operation of the instrument. If the instrument is fitted with dual individual sales indicators, both indicators shall be correctly synchronised.

(7) No measuring instrument used for the measurement of petrol in the presence of a purchaser shall be arranged to deliver measured quantities at more than one outlet.

79.—(1) Every measuring instrument shall be tested under practical working conditions with the liquid fuel or oil that the instrument is intended to deliver.

Verification  
of liquid  
fuel, etc.,  
instruments.

(2) Before conducting any test for accuracy the inspector shall wet his measures and allow them to drain for a period equivalent to half a minute per gallon. When testing instruments used for dispensing liquids of high viscosity the standard should be cleaned after each delivery.

(3) Measuring instruments shall be tested for accuracy at different capacities by transferring liquid directly from the nozzle to the standard. This shall include tests at 5 gallons, 1 gallon and  $\frac{1}{2}$  gallon.

(4) Indications shall be correct within the limits of error specified in Table XXII to these Regulations when tested at various speeds. Instrument shall, where practicable, be tested at speeds from 2 gallons per minute up to the maximum speed at which the instrument will discharge.

(5) If an instrument is fitted with a pre-setting mechanism the instrument shall be correct with or without the use of such mechanism.

(6) In the case of instruments fitted with any type of cut-off device the inspector shall test the efficiency of such device.

(7) Instruments designed for mixing oil and petrol shall be correct for quantity when tested with different ratios of oil and petrol.

(8) If the inspector suspects the instrument is leaking, he shall fully prime the instrument, and after a period of one hour ascertain that the deficiency does not exceed 1 fl. oz. when testing the smallest individual quantity measured.

(9) An inspector shall forthwith return any liquid fuel or lubricating oil withdrawn from any tank or container for the purposes of his tests to the tank or container from which it was withdrawn, or any other container

nominated by the owner or user of the instrument and if he is requested he shall furnish to the person in charge of the instrument a signed statement of the quantities so withdrawn and returned.

Stamping  
of liquid  
fuel etc.,  
instruments.

80.—(1) When a measuring instrument complies with the requirements of this part of these regulations an inspector shall fix his stamp in such a manner as to seal all measure adjusting devices and such other parts of the instrument as may be directed by the superintendent of weights and measures.

(2) In the case of instruments with price computing mechanism the instruments shall not be stamped or certificated unless the price indications are correct.

#### PART XVII.—OFFENCES

Forgery.

81. Any person who replaces or transfers a stamp affixed by an inspector of weights and measures shall be deemed to have committed an offence of forgery under Section sixteen of the Act.

Removal  
of stamps.

82. Where any weighing or measuring instrument is required to be stamped in more than one place, the removal or destruction of any of the stamps shall render the instrument unstamped contrary to paragraph (b) of subsection (1) of section twenty-three of the Act.

Obstruc-  
tion of  
inspector.

83. Any person who refuses an inspector the use of liquid fuel or lubricating oil necessary for the purpose of testing any measuring instrument, or fails to unlock any tank or container connected with the measuring instrument, shall be guilty of an offence of obstruction contrary to Section eleven of the Act.

#### MISCELLANEOUS

Interpre-  
tation.

84. In these regulations unless the context otherwise requires—

“Act” means the Weights and Measures Act, 1962 ;

“capacity” means in reference to a weighing instrument the maximum load which it is constructed to weigh ;

“correct” means in reference to a weight, measure or instrument correct within the limits of error specified in the Tables appended to these regulations ;

“error” in reference to a weighing instrument includes deficiency in sensitivity ;

“instrument” means a weighing instrument or a measuring instrument.

Revocation,  
citation  
and extent.

85.—(1) The Weights and Measures Regulations (24 of 1922) are hereby revoked.

(2) These Regulations may be cited as the Weights and Measures Regulations, 1965, and shall apply throughout the Federation.

(3) These Regulations shall come into operation on such date as the Minister may by order appoint.

*TABLE I*  
PERMISSIBLE ABBREVIATIONS OF DENOMINATIONS OF  
WEIGHTS AND MEASURES

<i>Weights</i>		<i>Length</i>	
Hundredweight	.. —cwt.	Yard	.. .. —Yd.
Pound	.. .. —lb.	Foot	.. .. —ft.
Ounce (avoirdupois)	—oz.		
Ounce (troy)	.. —oz. tr.	Inch	.. .. —in
Ounce (Apothecaries)	—oz. Apoth.		
Dram	.. .. —dr.	<i>Capacity</i>	
Grain	.. .. —gr.	Gallon	.. .. —gal.
Pennyweight	.. —dwt.	Quart	.. .. —qt.
		Pint	.. .. —pt.
		Fluid Ounce	.. .. —fl.oz.
		Fluid drachm	.. .. —fl.dr.
		Minim	.. .. —min.
Kilogramme	.. —kilog. or Kg.	Metre	.. .. —m.
		Decimetre	.. .. —dm.
Gramme	.. .. —grm.	Centimetre	.. .. —cm.
Decigramme	.. —dg.	Millimetre	.. .. —mm.
Centigramme	.. —cg.	Cubic Centimetre	.. —c.c.
Milligramme	.. —mg.	Cubic Millimetre	.. —c.mm.
Metric Carat	.. —C.M.	<i>Capacity</i>	
		Litre	.. .. lit.
		Decilitre	.. .. —dl.
		Centilitre	.. .. —cl.
		Millilitre	.. .. —mil.

**TABLE II**  
**AVOIRDUPOIS WEIGHTS ALLOWANCES**

<i>Denomination</i>	<i>Error in excess or deficiency</i>	
	<i>Iron Weights</i>	<i>Non-Iron Weights</i>
From $\frac{1}{2}$ dr. to 8 dr. .. .. .	—	0.5 grains
1 oz. and 2 ozs. .. .. .	—	1 grain
From 4 ozs. to 1 lb. .. .. .	4 grains	2 grains
2 lbs. .. .. .	6 grains	3 grains
From 4 lbs. to 7 lbs. .. .. .	10 grains	5 grains
10 lbs. .. .. .	16 grains	8 grains
14 lbs. and 20 lbs. .. .. .	20 grains	10 grains
28 lbs. .. .. .	30 grains	15 grains
50 lbs. .. .. .	40 grains	20 grains
56 lbs. .. .. .	50 grains	25 grains
100 lbs. .. .. .	60 grains	30 grains

**TABLE III**  
**GRAIN WEIGHTS ALLOWANCES**

<i>Denomination</i>	<i>Error in excess or deficiency</i>
0.01, 0.02, 0.03, 0.05 grains .. .. .	0.001 grains
0.1, 0.2, 0.3 grains .. .. .	0.005 grains
0.5, 1.0, 2.0 grains .. .. .	0.01 grains
3, 5, 10 grains .. .. .	0.02 grains
20, 30, 50, 100 grains .. .. .	0.05 grains
200, 300 grains .. .. .	0.1 grains
500, 1000 grains .. .. .	0.2 grains
2000 grains .. .. .	0.3 grains
4000 grains .. .. .	0.5 grains
10, 5 pennyweights .. .. .	0.1 grains
3, 2, 1 pennyweights .. .. .	0.05 grains

**TABLE IV**  
**APOTHECARIES' WEIGHTS ALLOWANCES**

<i>Denomination</i>	<i>Error in excess or deficiency</i>
$\frac{1}{2}$ , 1, 2 grains .. .. .	.01 grains
3, 4, 5, 6, 10 grains .. .. .	.02 grains
1, $1\frac{1}{2}$ , 2 scruples .. .. .	.05 grains
1 drachm .. .. .	.05 grains
2, 4 drachms .. .. .	0.1 grain
1, 2 ozs. apoth. .. .. .	0.2 grains
4, 6 ozs. apoth. .. .. .	0.3 grains
8, 10 ozs. apoth. .. .. .	0.5 grains

*TABLE V*  
TROY BULLION WEIGHTS ALLOWANCES

<i>Denomination (Ounces Troy)</i>				<i>Error in excess only</i>
				<i>Grains</i>
500, 400, 300	..	..	..	5
200, 100	..	..	..	4
50, 40	..	..	..	2
30, 20	..	..	..	1
10	..	..	..	0.7
5	..	..	..	0.5
4, 3	..	..	..	0.4
2	..	..	..	0.3
1	..	..	..	0.2
.5, .4, .3, .2, .1	..	..	..	0.1
.05, .04, .03, .02	..	..	..	0.05
.01	..	..	..	0.02
.005 to .001	..	..	..	0.01

Troy bullion weights will be adjusted to agree with the Nigerian Trade Standards upon special request.

*TABLE VI*  
METRIC WEIGHTS ALLOWANCES

<i>Denomination</i>	<i>Error in excess or deficiency</i>	
	<i>Irons Weights</i>	<i>Other than Iron Weights</i>
	<i>Milligrammes</i>	<i>Milligrammes</i>
1 milligramme	—	0.1
2 mg. and 5 mg.	—	0.2
1 centigramme	—	0.5
2 centigramme	—	1.0
5 cgs. to 1 gramme	—	2
2 grammes to 10 grammes	—	5
<i>Grammes</i>		
20	—	10
50	—	15
100	40	20
200	100	50
500	200	100
<i>kilogrammes</i>		
1	400	200
2	600	300
5	1,000	500
10	2,000	750
20	3,000	1,000

TABLE VII

## METRIC CARAT WEIGHTS ALLOWANCES

<i>Denomination</i>	<i>Error in excess or deficiency milligramme</i>
.005C.M., .01C.M., .02C.M.	0.02
.05C.M.	0.05
.1C.M.	0.1
.2C.M.	0.2
.5C.M.	0.5
1C.M., 2C.M., 5C.M.	0.5
10C.M., 20C.M.	1.0
50C.M., 100C.M.	2.0
200C.M., 500C.M.	3.0

Metric carat weights will be adjusted to agree with the Nigerian Trade Standards upon special request.

TABLE VIII

## MEASURES OF LENGTH ALLOWANCES

END MEASURES	
<i>Denomination</i>	<i>Error in excess or deficiency inch</i>
Up to 1 foot	.02
Over 1 ft and under 3 ft.	.05
3 ft	.1
Over 3 ft. and under 10 ft.	.2
10 ft. to under 50 ft.	.5
50 ft. to 100 ft.	1
	<i>millimetre</i>
Under 1 metre	1
1 metre	2
2 metre	5
10 metre	15
20 metre	25

## LINE MEASURES

<i>Denomination</i>	<i>Error in excess or deficiency</i>
	<i>inch</i>
Up to 1 foot	.005
Over 1 ft. and not exceeding 3 ft.	.02
Over 3 ft. and not exceeding 10 ft.	.1
10 ft. and over	As for end measures

The superintendent may fix allowances more precise than the above for line measures of high accuracy intended for any special purpose and submitted for verification under the Act. Such measures will be verified only at the Headquarters of the Weights and Measures Section under such conditions as the superintendent shall direct.

TABLE IX

## LIQUID MEASURES OF CAPACITY ALLOWANCES

<i>Denomination</i>	<i>Errors in excess or deficiency</i>
	<i>minims.</i>
$\frac{1}{4}$ gill	7 $\frac{1}{2}$
$\frac{1}{2}$ gill	15
gill	30
$\frac{1}{2}$ pint	45
pint	fl. dr.
quart	1
$\frac{1}{2}$ gallon	2
gallon	3
2, 3 gallons	4
4, 5 gallons	5
Above 5 gallons	6
	1 fl. dr. per gallon
	<i>cc.</i> <i>litre</i>
0.001 litre or millilitre	0.025 or 0.000025
0.002 litre	0.05 or 0.00005
0.005 litre	0.125 or 0.000125
0.01 litre or centilitre	0.25 or 0.00025
0.02 litre	0.5 or 0.0005
0.05 litre	1 or 0.001
0.1 litre or decilitre	1 or 0.001
0.2 litre	2.5 or 0.0025
0.5 litre	5 or 0.005
1 litre	7.5 or 0.0075
2 litres	10 or 0.01
5 litres	15 or 0.015
10 litres or dekalitre	20 or 0.02
20 litres	25 or 0.025

The superintendent may fix allowances more precise than the above for glass graduated measures intended for special purposes (e.g. laboratory work) and submitted for verification under the Act. Such measures shall be verified at the Headquarters of the Weights and Measures Section under such conditions as the superintendent shall direct.



*TABLE X*  
 DRY MEASURES OF CAPACITY ALLOWANCES

<i>Denomination</i>	<i>Errors in excess or deficiency</i>	
$\frac{1}{2}$ pint	$1\frac{1}{2}$	fl. dr.
pint	2	"
quart	4	"
$\frac{1}{2}$ gallon	6	"
gallon	8	"
peck	10	"
$\frac{1}{2}$ bushel	12	"
bushel	20	"
<i>Litre</i>	<i>ccs.</i>	<i>litre.</i>
0.2	5	or 0.005
0.5	10	or 0.01
1	15	or 0.015
2	20	or 0.02
5	30	or 0.03
10	40	or 0.04
20	50	or 0.05

*TABLE XI*  
 BEAM SCALES CLASS A. ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
	<i>grains</i>	<i>grains</i>
1 oz	0.05	0.1
2 oz	0.1	0.2
8 oz	0.2	0.4
1 lb	0.25	0.5
7 lb	1	2
56 lb	5	10
	<i>milligrammes</i>	<i>milligrammes</i>
25 grammes	3	6
50 grammes	6	12
100 grammes	10	20
500 grammes	15	30
1 kilog	25	50
5 kilog	50	100
10 kilog	100	200
25 kilog	250	500

Allowances on beam scales of capacities not specified above shall be in proportion.

TABLE XII

## BEAM SCALES CLASS B. ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
	<i>grains</i>	<i>grains</i>
1 oz	0.2	0.2
2 oz	0.4	0.4
8 oz	1	1
1 lb	2	2
2 lb	4	4
4 lb	8	8
7 lb	12	12
10 lb	20	20
	<i>drams</i>	<i>drams</i>
14 lb	1	1
20 lb	1½	1½
28 lb	2	2
56 lb	3	3
1 cwt	6	6
2 cwt	8	8
5 cwt	1 oz.	1 oz.
10 cwt	2 oz	2 oz
	<i>milligrammes</i>	<i>milligrammes</i>
100 grammes	30	30
200 grammes	60	60
500 grammes	125	125
1 kilog	250	250
2 kilog	500	500
	<i>grammes</i>	<i>grammes</i>
5 kilog	1	1
10 kilog	2	2
25 kilog	5	5
50 kilog	10	10
100 kilog	15	15
200 kilog	25	25
500 kilog	50	50

Allowances on beam scales of capacities not indicated above shall be in proportion.

TABLE XIII

## BEAM SCALE CLASS C.—ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
<i>oz.</i>	<i>grains</i>	<i>grains</i>
1	1	1
2	2	2
8	4	4
<i>lb.</i>		
1	8	8
2	16	16
	<i>drams</i>	<i>drams</i>
4	1	1
7	2	2
10	3	3
14	4	4
20	6	6
28	8	8
56	12	12
<i>cwt.</i>	<i>oz.</i>	<i>oz.</i>
1	1½	1½
2	2	2
5	4	4
10	8	8
<i>grammes</i>	<i>milligrammes</i>	<i>milligrammes</i>
100	100	100
200	250	250
500	500	500
<i>kilog.</i>	<i>grammes</i>	<i>grammes</i>
1	1	1
2	2	2
5	4	4
10	8	8
25	20	20
50	40	40
100	60	60
200	100	100
500	200	200

Allowances on beam scales of capacities not specified above shall be in proportion.

TABLE XIV

## HAND BEAM SCALES CLASS C ALLOWANCES

*(for Use of Itinerant and Street Traders)*

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
1 lb.	16 grains	16 grains
2 lbs	1 dram	1 dram
4 lbs	2 drams	2 drams
500 gramme	1 gramme	1 gramme
1 kg.	2 gramme	2 gramme
2 kg.	4 gramme	4 gramme

TABLE XV

## SIMPLE COUNTER MACHINE ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
<i>lb.</i>	<i>drams</i>	<i>drams</i>
1	2	2
2	3	2
4	4	4
7	6	6
10	7	7
14	8	8
20	12	12
28	1 oz	1 oz
40	1 oz 4 drams	1 oz 4 drams
56	1 oz 8 drams	1 oz 8 drams
84	1 oz 12 drams	1 oz 12 drams
112	2 oz	2 oz
<i>grammes</i>	<i>grammes</i>	<i>grammes</i>
500	3	3
<i>kilog</i>		
1	5	5
2	7	7
5	10	10
7	15	15
10	20	20
15	25	25
20	35	35
25	40	40
50	50	50

Allowances on counter machines of capacities not specified above shall be in proportion.

TABLE XVI

## SPRING BALANCE MACHINE ALLOWANCES

<i>Capacity</i>	<i>Error at full load*</i>
<i>lb.</i>	<i>drams</i>
1	4
2	6
4	8
7	12 oz.
10	14
15	1 oz.
20	1 oz 8 drams
40	2 oz 8 drams
100	8 oz
150	12
200	1 lb
300	1 lb 8 oz.
400	2 lb
500	2 lb 8 oz.
1,000	5 lb

<i>grammes</i>	<i>grammes</i>
500	5
<i>kilog.</i>	
1	10
2	15
5	20
10	40
15	60
20	80
25	100
50	250
75	375
100	500
125	625
200	1,000
250	1,250
500	2,500

\*The errors permissible at intermediate loads shall be in proportion to the load applied, provided that from zero to half load, half the errors prescribed at full load may be allowed at any point (See Regulation 36 (2) ).

TABLE XVII

## STEELYARD ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load*</i>
<i>lb.</i>	<i>oz.</i>	<i>oz.</i>
56	2	2
84	3	3
112	4	4
150	6	6
200	8	8
250	10	10
300	12	12
400	1 lb	1 lb
500	1 lb 4 oz.	1 lb 4 oz.

<i>kilog</i>	<i>grammes</i>	<i>grammes</i>
25	50	50
50	100	100
90	180	180
100	200	200
125	250	250
150	300	300
200	400	400
250	500	500

Allowances on steelyards of capacities not specified above shall be in proportion.

\* The errors permissible at intermediate loads shall be in proportion to the load applied provided that from zero to half load, half the errors prescribed at full load may be allowed at any point (see Regulation 36 (2)).

TABLE XVIII

## DEAD WEIGHT MACHINE ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load</i>
1 cwt	2 oz	2 oz
2 cwt	3 oz	3 oz
3 cwt	4 oz	4 oz
4 cwt	6 oz	6 oz
5 cwt	8 oz	8 oz
7 cwt	12 oz	12 oz
10 cwt	1 lb	1 lb
12 cwt	1 lb 4 oz	1 lb 4 oz
15 cwt	1 lb 8 oz	1 lb 8 oz
20 cwt	2 lb	2 lb
50 cwt	5 lb	5 lb

<i>kilogrammes</i>	<i>grammes</i>	<i>grammes</i>
50	50	50
100	100	100
150	150	150
200	200	200
250	250	250
500	500	500
1,000	1 kilog.	1 killog.
2,000	2 kilog.	2 kilog.

Allowances on deadweight machines of capacities not specified above shall be in proportion.



*TABLE XIX*  
PLATFORM MACHINE ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load *</i>
<i>cwts</i>		
1	2 oz	2 oz
2	4 oz	4 oz
3	8 oz	8 oz
4	12 oz	12 oz
5	1 lb	1 lb
7	1 lb 8 oz	1 lb 8 oz
10	2 lb	2 lb
12	2 lb 2 oz	2 lb 2 oz
15	2 lb 4 oz	2 lb 4 oz
20	2 lb 8 oz	2 lb 8 oz
30	2 lb 12 oz	2 lb 12 oz
40	3 lb	3 lb
50	3 lb 4 oz	3 lb 4 oz
<i>kilog.</i>	<i>grammes</i>	<i>grammes</i>
50	50	50
100	100	100
125	150	150
150	250	250
200	400	400
250	500	500
500	750	750
1,000	1,000	1,000
1,250	1,125	1,125
1,500	1,250	1,250
1,750	1,375	1,375
2,000	1,500	1,500

Allowances on platform machines of capacities not specified above shall be in proportion.

\* The errors permissible at intermediate loads shall be in proportion to the load applied, provided that from zero to half load, half the errors prescribed at full load may be allowed at any point (*see Regulation 36 (2)*).

	<i>Error up to <math>\frac{1}{2}</math> load</i>	<i>Error over <math>\frac{1}{2}</math> load to full load</i>
Self-indicating and semi- self indicating platform machines as defined in para. (ii) of Regulation 63.	$\frac{1}{2}$ smallest sub-division of chart or dial in ex- cess or deficiency.	one smallest sub-divi- sion of chart or dial in excess or defi- ciency.

TABLE XX  
WEIGHBRIDGE ALLOWANCES

<i>Capacity</i>	<i>Sensitiveness when fully loaded</i>	<i>Error at full load*</i>
<i>tons</i>	<i>lb.</i>	<i>lb.</i>
1	3	3
2	4	4
5	8	8
10	10	12
20	14	20
25	18	22
30	20	24
50	21	28
100	42	56
200	84	112
<i>kilog.</i>	<i>kilog.</i>	<i>kilog.</i>
2,000	2	2
10,000	3	5
20,000	6	10
30,000	8	12
40,000	9	14
50,000	10	16
60,000	12	18
100,000	15	25

Allowances on weighbridges of capacities not specified above shall be in proportion.

\*The errors permissible at intermediate loads shall be in proportion to the load applied, provided that from zero to half load, half the errors prescribed at full load may be allowed at any point (See Regulation 36 (2) ).

Self-indicating and semi-self indicating weighbridges as defined in para. (ii) of Regulation 63.	<i>Error up to <math>\frac{1}{2}</math> load.—<math>\frac{1}{2}</math> smallest sub-division of chart or dial in excess or deficiency.</i>	<i>Error over <math>\frac{1}{2}</math> load to full load.—one smallest sub-division of chart or dial in excess or deficiency.</i>
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TABLE XXI

## CRANE MACHINE ALLOWANCES

Capacity	Error at full load*	
	<i>Sensitiveness when fully loaded, Lever Machines</i>	<i>Lever and Spring Machines</i>
		<i>Hydraulic Machines</i>
1 cwt.	4 oz.	4 oz.
5 cwt.	8 oz.	8 oz.
10 cwt.	1 lb.	1 lb.
ton	lb.	lb.
1	3	3
2	4	4
5	8	8
10	10	12
20	14	20
25	18	22
50	21	28
75	35	42
100	42	56
200	84	112

A weight represented by the interval between consecutive graduation marks.

<i>kilog.</i>	<i>grammes</i>	<i>grammes</i>
50	100	100
100	200	200
200	300	300
500	500	500
<i>kilog.</i>	<i>kilog.</i>	<i>kilog.</i>
1,000	1	1
2,000	2	2
10,000	3	5
20,000	6	10
30,000	8	12
40,000	9	14
50,000	10	16
60,000	12	18
100,000	15	25

A weight represented by the interval between consecutive graduation marks.

Allowances on crane machines of capacities not specified above shall be in proportion.

\*The errors permissible at intermediate loads shall be in proportion to the load applied, provided that from zero to half load, half the errors prescribed at full load may be allowed at any point (See Regulation 36 (2)).

TABLE XXII

LIQUID FUEL AND LUBRICATING OIL INSTRUMENT  
ALLOWANCES

<i>Quantity delivered</i>				<i>Error in excess or deficiency</i>
Up to 1 Pint	..	..	..	1 fluid drachm
Above 1 Pint to below 1 gallon	..	..	..	2 fluid drachm
1 gallon	..	..	..	$\frac{1}{2}$ fluid ounce
Above 1 gallon	..	..	..	$\frac{1}{2}$ fluid ounce per gallon
Up to 0.5 litre	..	..	..	5 ccs. or 0.005 litre
Above 0.5 litre to below 5 litres	..	..	..	10 ccs. or 0.01 litre
5 litres	..	..	..	15 ccs. or 0.015 litre
Above 5 litres	..	..	..	3 ccs. per litre or 0.003 litre per litre