

Experiment Details

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| Department Name | Civil Engineering |
| Class | Final Year B. Tech |
| Semester | VII |
| Subject Name | Quantity Survey and Valuation |
| Experiment No. | 01 |
| Experiment Name | Mode of Measurement |

Version History

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| **Sr.**  **No.** | **Version Number** | **Created By** | **Approved By** | **Date** |
| **1** | **v1.0** | **BA Name** | **Faculty Name** | **DD/MM/YYYY** |
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# AIM:

Understand the rule for measurement of each item as per IS 1200

# THEORY:

BASIC UNITS OF MEASUREMENT

1. The SI System of Measurement has to be followed in all Estimation.
2. There are FIVE BASIC UNITS OF MEASUREMENT
   1. CUBIC MEASUREMENT: All Mass, Voluminous and thick works has to be taken in terms of Cubic or Volume Measurement (As a thumb rule, for any item of work whose thickness is greater than 100mm, the quantity has to be measured in Cubic Measurement). Its unit will be CUBIC METER.
   2. AREA MEASUREMENT: Shallow, thin and surface works has to be taken in terms of Area Measurement (As a thumb rule, for any item of work whose thickness is between 20mm to 100mm, the quantity has to be measured in Area Measurement). Its unit will be SQUARE METER.
   3. RUNNING METERS MEASUREMENT: Long, slender and very thin works has to be taken in terms of Running Meters Measurement (As a thumb rule, for any item of work whose thickness is very very small when compared to its length, the quantity has to be measured in Running Meters Measurement). Its unit will be METER.
   4. NUMBERS MEASUREMENT: Piecework, job work, items of work has to be measured in Numbers. Its unit will be NUMBER.
   5. WEIGHT MEASUREMENT: All Loadings has to be taken in terms of Weight Measurement. Its unit will be either KILOGRAM or METRIC TONNE.

# PRE TEST:

1. area of a building is the area of verandahs, passage, corridors, balconies, porches, etc.
   1. Floor area
   2. Horizontal circulation area
   3. Vertical circulation area
   4. Verandah area (Answer: b)



1. of building is the useful area or liveable area or lettable area. This is the total floor area minus the circulation area, verandahs, corridors, passages, staircase, lifts, entrance hall, etc. minus other non-useable areas.
   1. Plinth area
   2. Floor area
   3. Carpet area
   4. Circulation area (Answer: c)
2. The plinth area of a building not includes
   1. Area of the walls at the floor level
   2. Internal shaft for sanitary installations up to 2 sq m. in area
   3. Lift and wall including landing
   4. Area of cantilevered porch (Answer: d)
3. The floor area includes the area of the balcony up to a) 100%

b) 75%

c) 50%

d) 25%.

(Answer: c)

# PROCEDURE:

Write step by step detail procedure of experiment (Steps that will be carried out in simulator)



# POST TEST:

1. Brick walls are measured in sq. m if the thickness of the wall is lessthan
   1. 10 cm
   2. 15cm
   3. 20cm
   4. None of these (Answer: a)
2. While estimating the quanties for the construction of a building, the correct metric unit is
   1. Meter for length
   2. Cubic metre for area
   3. Square meters for volume
   4. Liter for capacity (Answer: a)
3. The brick work is not measured in cu m in case of
   1. One or more than one brick wall
   2. Brick work in arches
   3. Reinforced brick work
   4. Half brick wall (Answer: d)
4. Accorcling-Indian Standards Institute, the actual -Size of modulni-bricks is
   1. 23 cm x 11.5 cm x 7.5 cm
   2. 25 cm x 13 cm x 7.5 cm
   3. 19 cm x 9 cm x 9 cm
   4. 20 cm x 10 cm x 10 cm. (Answer: c)
5. The order of booking dimensions is
   1. Length, breadth, height
   2. Breadth, length, height
   3. Height, breadth, length
   4. None of these. (Answer: a)



1. The measurement is not made in square metres in case of
   1. D.P.C. (Damp proof course)
   2. Form works
   3. Concrete Jaffries
   4. R.C. Chhajja. (Answer: d)
2. The measurement is made for stone work in square metre in case of
   1. Wall facing
   2. Columns, lintels, copings
   3. Dressed stones in Chajja
   4. All of the above. (Answer: d)

# REFERENCES:

1. Estimating and Costing – Dutta. Dhanpat Rai & Sons. 1682, Nai Sarak, Delhi-110006
2. Estimating and Costing – Birdi Dhanpat Rai & Sons 1682, Nai Sarak, Delhi- 110006
3. Estimating, Costing and Specification in civil engineering – Chakroborty M.21b, Bhabananda.