

#### Practical No.4: Record dimensions of given bricks.

- I. **Practical Significance-** Recording the dimensions of given bricks has practical outcomes that include efficient material usage, improved quality control, precise construction planning, adherence to standards, and enhanced precision in masonry work. These factors collectively contribute to the success and reliability of construction projects.
- II. **Industry or Employer Expected Outcome-**  
Undertake safe building construction practices with relevant building materials.
- III. **Course Level Learning Outcome-**  
Identify relevant type of construction materials for the given type of building.
- IV. **Laboratory Learning Outcome-**  
Record dimensions of given bricks.
- V. **Relevant Affective domain related Outcome**
  1. Follow safety practices
  2. Practice good housekeeping
- VI. **Relevant Theoretical Background**

A brick is building material used to construct walls, pavements and other elements in masonry construction

#### There are Two Main Types of Bricks.

1. **Traditional Bricks-** The commonly adopted nominal size of traditional brick is 23cm x 11.4cm x 7.6cm. The length varies from 20 to 25 cm.
2. **Modular Bricks-** The actual size of the brick is 19 cm x 9cm x 9cm. Masonry modular bricks are economical to manufacture, require less area for drying, and staking and requires less brick work for the same surface area of the wall in comparison to conventional bricks. Modular brick is also classified as a) Unburnt Bricks b) Burnt Bricks.

#### VII. Actual Diagram with equipment specification

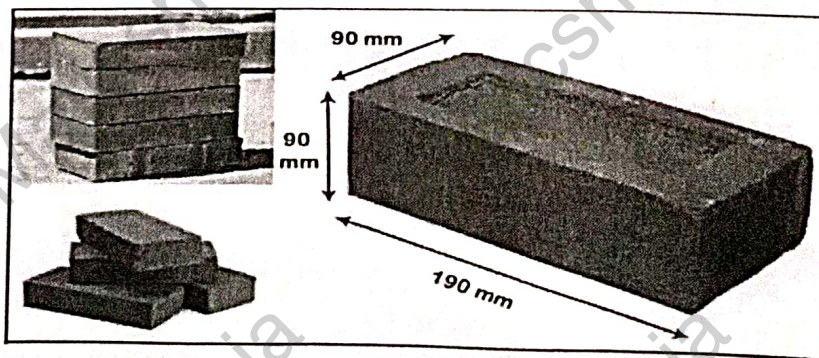


Figure 4.1: Bricks



**VIII. Resources required**

Sr.No.	Particulars	Specification	Quantity	Remark
1	Weighing balance	With an accuracy of 0.01 gm	1 No.	Per batch
2	Pan	---	1 No.	Per batch
3	Bricks and blocks of different sizes	---	10 nos.	Per batch

**IX. Precautions to be followed**

1. Handle the particular Brick sample very carefully so that it will not break at any stage.
2. There should not be any marking with pen or pencil on the given Brick sample.

**X. Procedure**

1. Teacher should explain the detailed information of bricks.
2. Select five bricks at random.
3. Student should observe the bricks sample available in laboratory.
4. Their size, shape, and color.
5. Find the properties of brick.

**XI. Observation Table**

Sr.No.	Type of Brick	Size of brick	Color	Other Physical Properties
1	Red Brick	20.5 x 7 x 9.5	brown red	Hard uniform texture
2	Red Brick	21 x 6.5 x 10	brown red	smooth surface light weight
3	white Brick	12 x 6.5 x 10	grey white	porous, good, inset
4	white Brick	21 x 7 x 1.5	grey white	Hard, dense.



**XII. Result**

The study on building materials & construction provide key insights into the properties and types of bricks used in construction the following observation were observed.

**XIII. Interpretation of results**

The result obtained from the study of building material specifically bricks, provide valuable insight into their suitability for various construction application.

**XIV. Conclusions and Recommendations (if any)**

The study on building materials and construction particularly bricks provided valuable insight into their properties and application based on the observation and interpretations.

**XV. Practical Related Questions**

**Note:** Below given are few sample questions for reference. Teachers must design more such questions so as to ensure the achievement of identified CO. Write answers of minimum three questions.

1. Define Brick.
2. State the importance of Bricks in Civil Engineering.
3. State four physical properties of Bricks.
4. Explain Types of Bricks.
5. What is first class brick?
6. Which type of brick used for decorative purpose.

Q. 1 → ?

Ans:- A brick rectangular block made of clay concrete or other materials typically used in construction bricks are commonly based for field in a to a harder than and build walls.

Q.2 → ?

Ans:- Bricks play a crucial role in C.E due to their veriability durability & for off active

Q.31 → ?

Ans:- bricks have several physical properties that determine their quality and suitability for construction physical properties

#### XVI. References/ suggestions for further Reading

Sr.No.	Links	Discription
1	<a href="https://youtu.be/gF79hv14uw4?si=hI9DLt12BUDxbBm9">https://youtu.be/gF79hv14uw4?si=hI9DLt12BUDxbBm9</a>	Dimensions of given bricks
2	<a href="https://youtu.be/QexqM4k7-yE?si=LLGM2jmkAv2WbWUo">https://youtu.be/QexqM4k7-yE?si=LLGM2jmkAv2WbWUo</a>	Dimensions of given bricks

#### XVII. Suggested Assessment Scheme

Performance Indicators		Weightage (%)
<b>Process related: 15 Marks</b>		<b>60%</b>
1	Identification of type of Brick	30%
2	Recording of Observations	30%
<b>Product related: 10 Marks</b>		<b>40%</b>
1	Interpretation of result	10%
2	Answer to practical related questions.	20%
3	Submission of report in time	10%
<b>Total : 25 Marks</b>		<b>100%</b>