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HOME WORK SEC - A, SCHOOL NO - 4659

CHAPTER-2 PHYSICAL QUANTITIES
AND MEASUREMENT

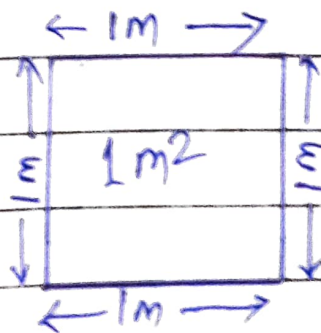
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Q1. Ans:- Each object has a surface. For example, a brick, a matchbox, a leaf, a piece of paper, etc all have a surface. A brick and a matchbox have the surface consisting of six faces. A leaf and a piece of paper have the surface consisting of two faces.

The total surface occupied by an object is called its surface area or simply the area.

Q: Ans:-> units of area:- The S.I. unit of area is square meter or meter which in short form is written as m^2 .

One square meter is the area of a square of each side of 1 meter,



A square of area = $1 m^2$

Multiple and submultiple units of area:— The square meter is a convenient unit to express the area of a room or the area of a plot of land for a building, ~~etc~~ etc. But to express the area of a big agricultural field or a city, we use the bigger units of area called the ~~decameter~~ ^{hectare} and square kilometer.

Decameter square (are): One square decameter (or are) is the area of a ~~square~~ square of each side ~~1 decameter~~ ~~10 meters~~ 1 decametre, i.e. 10 metre. Thus,
 $1 \text{ decametre}^2 = 10 \text{ metre} \times 10 \text{ metre}$
 $= 100 \text{ metre}^2 \text{ or } 1 \text{ decametre}^2 \text{ (or } 1 \text{ are)}$
 $= 100 \text{ m}^2.$

Square kilometre:— One square kilometre is the area of a square of each side 1 kilometre. Thus, $1 \text{ km}^2 = 1 \text{ km} \times 1 \text{ km} = 1000 \text{ m} \times 1000 \text{ m} = 10^6 \text{ m}^2$
 But to express the area of small objects such as book, match box, pin head, pencil etc. small units such as square decimetre (dm^2) square centimetre (cm^2) and square millimetre

- (mm^2) are used.

Square decimeter: - one square decimetre is the area of a square of each side ~~1 centimetre~~ 1 decimetre ($= 10\text{cm}$). Thus;
 $1\text{dm}^2 = 10\text{cm} \times 10\text{cm} = 100\text{cm}^2$

Square centimetre: - one square centimetre is the area of a square of each side 1 centimetre. Thus; $1\text{cm}^2 = \left(\frac{1}{100}\text{m}\right) \times \left(\frac{1}{100}\text{m}\right) = \frac{1}{10000}\text{m}^2 = 10^{-4}\text{m}^2$

Similarly $1\text{mm}^2 = 1\text{mm} \times 1\text{mm}$
 $= \frac{1}{1000}\text{m} \times \frac{1}{1000}\text{m}$
 $= 10^{-6}\text{m}^2$

Q: \rightarrow B. Match the following columns:-

column A

column B

- | | |
|------------------------------|---------------------|
| (a) Length of a housing plot | (i) Clock |
| (b) Breadth of a book | (ii) Beam balance |
| (c) mass of an apple | (iii) Thermometer |
| (d) period of time for study | (iv) Measuring tape |
| (e) Temperature of a body | (v) Graph paper |
| (f) Surface area of a leaf | (vi) Meter ruler |

ans:- (a) - (iv), (b) - (vi), (c) - (ii), (d) - (i), (e) - (iii),
 (f) - (v)

Q: → 4. select the correct alternative:

(a) The symbol of degree celsius is:

ans: - (i) °C.

(b) 10 mm is equal to:

ans: - (i) 1 cm

(c) The amount of surface occupied by an object is called its:

ans: - (ii) area

(d) A metre ruler is graduated in:

ans: (iii) mm

(e) A thermometer is graduated in:

ans: (ii) °C

