Key Notes

Chapter –15
Visualising Solid Shapes

- The circle, the square, the rectangle, the quadrilateral and the triangle are examples of **plane figures;** the cube, the cuboid, the sphere, the cylinder, the cone and the pyramid are examples of **solid shapes.**

- Plane figures are of **two-dimensions (2-D)** and the solid shapes are of three-dimensions (**3-D).**

- The corners of a solid shape are called its vertices; the line segments of its skeleton are its **edges;** and its flat surfaces are its **faces.**

- A net is a skeleton-outline of a solid that can be folded to make it. The same solid can have several types of nets.

- Solid shapes can be drawn on a flat surface (like paper) realistically. We call this **2-D representation of a 3-D solid.**

- Two types of sketches of a solid are possible:

  (a) An **oblique** sketch does not have proportional lengths. Still it conveys all important aspects of the appearance of the solid.

  (b) An **isometric sketch** is drawn on an isometric dot paper, a sample of which is given at the end of this book. In an isometric sketch of the solid the measurements kept proportional.

- **Visualising solid** shapes is a very useful skill. You should be able to see 'hidden' parts of the solid shape.

- Different sections of a solid can be viewed in many ways:

  (a) One way is to view by cutting or slicing the shape, which would result in the cross-section of the solid.

  (b) Another way is by observing a 2-D shadow of a 3-D shape.

  (c) A third way is to look at the shape from different angles; the front-view, the **side-view** and the top view can provide a lot of information about the shape observed.