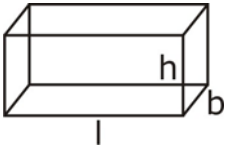
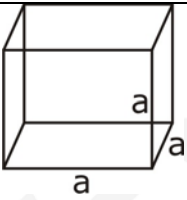

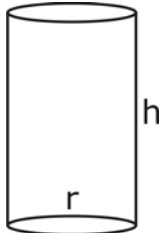
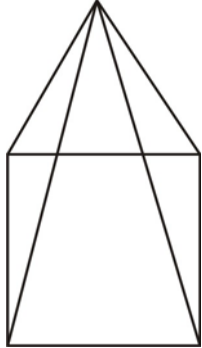
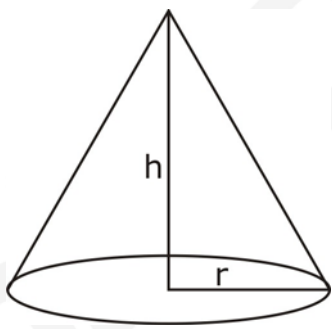


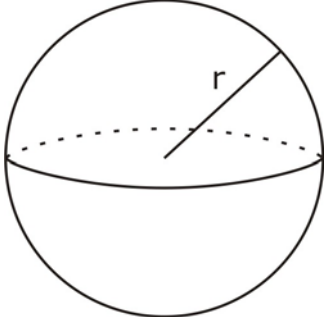
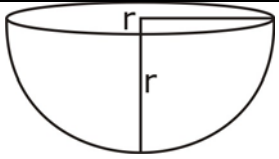
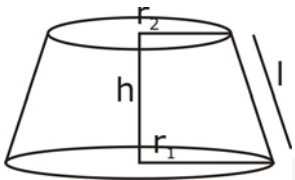
## CHAPTER – 13

### SURFACE AREAS AND VOLUMES

#### FORMULAE:

Name of the Solid	Figure	Lateral/ Curved Surface area	Total Surface Area	Volume	Nomenclature
Cuboid		$2h(l + b)$	$2(lb + bh + hl)$	$lbh$	l : length b : breadth h : height
Cube		$4a^2$	$6a^2$	$a^3$	a : side of the cube
Right prism		Perimeter of Base x height	Lateral Surface area + 2(area of one end)	Area of base x height	-

Right circular cylinder		$2\pi rh$	$2\pi r(r + h)$	$\pi r^2 h$	r : radius of the base h : height
Right pyramid		$\frac{1}{2}$ (perimeter of base) x slant height	Lateral surface area + Area of the base	$\frac{1}{3}$ (Area of the base x height	-
Right circular cone		$\pi r l$	$\pi r(l + r)$	$\frac{1}{3} \pi r^2 h$	r : radius of the base h : height l : slant height

Sphere		$4\pi r^2$	$4\pi r^2$	$\frac{4}{3}\pi r^3$	r : radius
Hemisphere		$2\pi r^2$	$3\pi r^2$	$\frac{2}{3}\pi r^3$	r : radius
Frustum		LSA $\pi l (r_1 + r_2)$	TSA $\pi l (r_1 + r_2) + \pi r_1^2 + \pi r_2^2$	VOLUME $\frac{1}{3}\pi h (r_1^2 + r_1 r_2 + r_2^2)$	