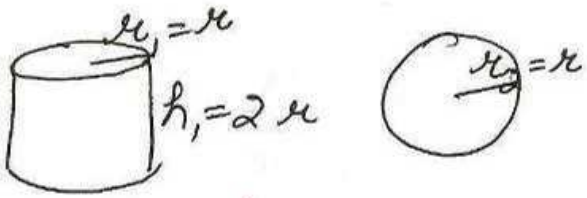
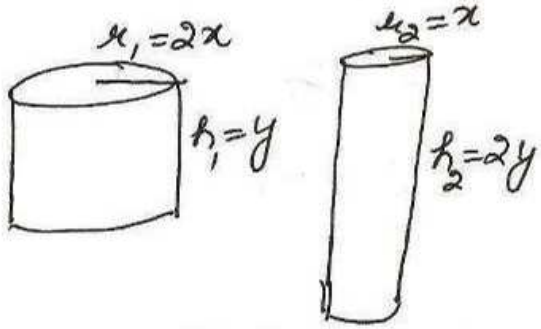
① 

$$\frac{V_c}{V_s} = \frac{\pi r_1^2 h_1}{\frac{4}{3}\pi r_2^3}$$

$$= \frac{r \times r \times 2r}{2 \times \frac{4}{3} \times r \times r \times r}$$

$$= \frac{3}{2}$$

$$V_s = \frac{2}{3} V_c$$ True

② 

$$\frac{V_1}{V_2} = \frac{\pi r_1^2 h_1}{\pi r_2^2 h_2}$$

$$= \frac{2x \times 2x \times y}{x \times x \times 2y}$$

$$= 2$$

$$V_1 = 2V_2$$ False

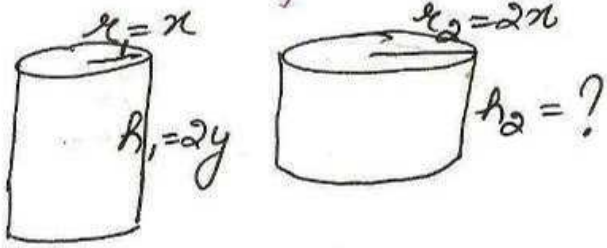
or

$$V_2 = \frac{1}{2} V_1$$

③ $\because l^2 = r^2 + h^2$

False

where l - slant height
r - radius
h - height

④ 

$$CSA_1 = CSA_2$$

$$2\pi r_1 h_1 = 2\pi r_2 h_2$$

$$x \times 2y = 2x \, h_2$$

$$\Rightarrow h_2 = y$$

$\therefore$ height is halved

True

⑤

radius of cone base $= \frac{2r}{2}$
$= r$ units

height of cone $= 2r$

volume $= \frac{1}{3}\pi r^2 h$

$= \frac{1}{3}\pi r^2 \times 2r$

$= \frac{2}{3} r^3$

$=$ vol. of h.s.

True