Assignment-1

AI21BTECH11023

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Given,
Radius of cylinder(R)=3 cm
Height of the cylinder(H)= 7 cm
Height of the cone removed(h)=3 cm
Volume of cylinder (V_1)=$\pi R^2 H$
Volume of Cone (V_2)=$\frac{1}{3}\pi R^2 h$
Volume of Hemisphere (V_3)=$\frac{2}{3}\pi R^3$
According to question Hemisphere, Cone are removed from Cylinder
$\therefore$ remaining volume = V_1-V_2-V_3
=$\pi R^2 H$-$\frac{1}{3}\pi R^2 h$-$\frac{2}{3}\pi R^3$
Substituting the values above we get,
$\approx$113.142 cm^3