G. N. National Public School, Gorakhnath, Gkp.
Class- IX Maths Chapter-13 Surface areas and volumes
Assignment Part - 9

Q.1- The radius of the base and the height of a cylinder are in the ratio 2:3. If its volume is $1617\ cm^3$, find the total surface area of the cylinder.

Q.2- The total surface area of a solid cylinder is $231\ cm^2$ and its curved surface area is $\frac{2}{3}$ of the total surface area. Find the volume of the cylinder.

Q.3- The barrel of a fountain pen, cylindrical in shape, is 7cm long and 5mm in diameter. A full barrel of ink in the pen will be used up on writing 330 words on an average. How many words would use up a bottle of ink containing one fifth of a litre?

Q.4→ A well with inside diameter 10m is dug 8.4m deep. Earth taken out of it is spread all around it to a width of 7.5m to form an embankment. Find the height of the embankment.

Q.5- How many litres of water flows out of a pipe having an area of cross section of $5\ cm^2$ in 1 minute, if the speed of water in the pipe is 30 cm/sec?

Q.6- The volume of a metallic cylindrical pipe is $748\ cm^3$. Its length is 14 cm and its external radius is 9 cm. Find its thickness.

CL-13 Surface Areas and Volumes Assignment Part-10

Q.7- A cylindrical water tank of diameter 1.4m and height 2.1m is being fed by a pipe of diameter 3.5 cm through which water flows at the rate of 2m per second. In how much time will the tank be filled?

Q.8- A cylindrical container with diameter of base 56cm contains sufficient water to submerge a rectangular solid of iron with dimensions (32 cm × 22 cm × 14 cm). Find the rise in the level of water when the solid is completely submerged.

Q.9- A rectangular sheet of paper 44 cm × 20 cm is rolled along its length and a cylinder is formed. Find the volume of the cylinder formed. (Take $\pi = \frac{22}{7}$)

Q.10- ~~Rain water~~, Rainwater, which falls on a flat rectangular roofstop of dimensions 22m by 10m, is transferred into a cylindrical vessel of internal radius 50 cm through a circular pipe. A certain day recorded a rainfall of 2.5cm. Find the (i) volume and (ii) height of the water, filled in the cylindrical vessel.