

X - Mathematics Assignment No-03 - Surface Area and Volumes.

- Q1 Find (i) the volume
 (ii) the lateral S.A.
 (iii) the T.S.A of right circular cylinder whose height is 10cm and radius of the base 7cm.
- Q2. The external diameter of a cylindrical iron pipe 25dm long is 14cm. The thickness of iron is 1.75cm. Find the weight of the pipe if 1 cu.cm of iron weights 10 grams.
- Q3. A well 3.5 m in diameter and 20m deep is to be dug in a rectangular field 20m by 14m. The earth taken out is spread evenly on the field. Find the level of the earth raised in the field.
- Q4. The Volume of cylinder is $648\pi \text{ cm}^3$ and height 7cm. Find the C.S.A and T.S.A
- Q5. The area of the base of a right circular cylinder is 15400 cm^2 and its volume is 92400 cm^3 . Find the area of the curved surface
- Q6. r : h = 5 : 7 of a cylinder and volume = $550\pi \text{ cm}^3$
 Find its radius.

- Q7. The difference between outside and inside Pg-2
 Surfaces of a cylindrical metallic pipe 14cm long is 44 sq.cm. If the pipe is made of 99 Cubic cm of metal, find the outer and inner radii of the pipe.
- Q8. Water is flowing at the rate of 0.70 m/sec. through a circular pipe, whose internal diameter is 2cm into a cylindrical tank, the radius of whose base is 40 cm. Determine the increase in the water level in 1/2 hour.
- Q9. A well 14m inside diameter is dug 15m deep. Earth taken out is spread all around to a width of 7m to form an embankment. Find the height of the embankment.
- Q10. Rain water, which falls in a rectangular surface of 6m x 4m is being transferred into a cylindrical vessel of internal radius 20cm. What will be the height of water in the cylindrical vessel if a rainfall of 1cm has fallen?

ANSWERS:-

$$(Q1) \text{ Vol} = 1540 \text{ cm}^3$$

$$\text{S.A} = 440 \text{ cm}^2$$

$$\text{TSA} = 748 \text{ cm}^2$$

$$(Q2) 437.5 \text{ grams}$$

$$(Q3) 7.11 \text{ dm}$$

$$(Q4) \text{ CSA} = 352 \text{ cm}^2$$

$$\text{TSA} = 754.28 \text{ cm}^2$$

$$(Q5) \text{ CSA} = 2640 \text{ cm}^2$$

$$(Q6) h = 5 \text{ cm}$$

$$(Q7) 2 \text{ cm}, 2.5 \text{ cm}$$

$$(Q8) 0.7875 \text{ m}$$

$$(Q9) 5 \text{ m}$$

$$(Q10) 191 \text{ m (approx)}$$