ST. LAWRENCE HIGH SCHOOL

A Christian Jesuit minority Institution

Subject: Mathematics **Class: X** **Date:05/07/2021**

Answer key of Worksheet-6

Chapter- Sphere

Topic - Whole surface area and volume of a sphere

1. **Choose the correct alternative. 1x15=15**

a)Volume of a sphere with radius 4 cm is Ans ii) 268.19 cubic cm
b) Volume of a sphere with 10m diameter is Ans i) 523.599 cubic m
c)Ratio of curved surface area of 2 spheres is 16:9. Then ratio of their volume is Ans i) 64/27
d) If the numerical value of curved surface area and 3 times the volume of the sphere are same . Then radius is Ans iii) 1 unit
e)Volume of a sphere with 2r unit radius is Ans iii) $\frac{32}{3}\Pi r^3$ **cubic unit**
f) If radius of a sphere becomes twice then volume will become Ans i) 8 times
g) If ratio of volume of 2 spheres is 1:8 ,then ratio of curved surface area is Ans ii) 1:4
h)If whole surface area of a sphere is 2464 sq m. Then diameter of the sphere is Ans ii) 28 m
i) How much leather is needed to make a ball with 42 cm diameter i) 5544 sq cm Ans iii) 5544cubic cm
j)If a ball with 28 cm diameter is fully immersed in a pot full of water, amount of water flown out of the pot is Ans ii) 11498.67 cubic cm
k) Whole surface area of a sphere with 10.5 cm radius is Ans iii) 1386 sq cm
l)After melting 3 spheres with radius 3cm , 4 cm amd 5 cm respectively a big sphere is formed. The length of the radius of the big sphere is Ans i) 6 cm
m) Radius of a balloon expanded from 7 cm o 21 cm .Ratio of the whole surface area of these 2 states is Ans iii) 1:9
n) A cupper sphere with 14 cm diameter is melted and a number of new spheres with 3.5 cm are formed . The number of new spheres are Ans i) 64
o)A sphere with 8 cm radius is melted and a number of new spheres with 1cm radius are formed. Number of new spheres that can be formed is Ans ii) 512

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