

## ONE MARK TEST

**P. ELANGO VAN, B.T. Assistant (Mathematics)**  
**GOVERNMENT HIGHER SECONDARY SCHOOL**  
**KOLIYANUR – VILLUPURAM DISTRICT**



**ENGLISH MEDIUM**

**LESSON – 7**

**TEST - 3**

- 1 The height and radius of the cone of which the frustum is a part are  $h_1$  units and  $r_1$  units respectively. Height of the frustum is  $h_2$  units and radius of the smaller base is  $r_2$  units. If  $h_2 : h_1 = 1 : 2$  then  $r_2 : r_1$  is  
(A) 1 : 3                      (B) 1 : 2                      (C) 2 : 1                      (D) 3 : 1
- 2 A shuttle cock used for playing badminton has the shape of the combination of  
(A) a cylinder and a sphere                      (B) a hemisphere and a cone  
(C) a sphere and a cone                      (D) frustum of a cone and a hemisphere
- 3 If the radius of the base of a cone is tripled and the height is doubled then the volume is  
(A) made 6 times      (B) made 18 times      (C) made 12 times      (D) unchanged
- 4 A solid sphere of radius  $x$  cm is melted and cast into a shape of a solid cone of same radius. The height of the cone is  
(A)  $3x$  cm                      (B)  $x$  cm                      (C)  $4x$  cm                      (D)  $2x$  cm
- 5 A spherical ball of radius  $r_1$  units is melted to make 8 new identical balls each of radius  $r_2$  units. Then  $r_1 : r_2$  is  
(A) 2:1                      (B) 1:2                      (C) 4:1                      (D) 1:4
- 6 A frustum of a right circular cone is of height 16cm with radii of its ends as 8cm and 20cm. Then, the volume of the frustum is  
(A)  $3328\pi$  cm<sup>3</sup>      (B)  $3228\pi$  cm<sup>3</sup>      (C)  $3240\pi$  cm<sup>3</sup>      (D)  $3340\pi$  cm<sup>3</sup>
- 7 If two solid hemispheres of same base radius  $r$  units are joined together along their bases, then curved surface area of this new solid is  
(A)  $4\pi r^2$  sq. units      (B)  $6\pi r^2$  sq. units      (C)  $3\pi r^2$  sq. units      (D)  $8\pi r^2$  sq. units

- 8 The volume (in  $\text{cm}^3$ ) of the greatest sphere that can be cut off from a cylindrical log of wood of base radius 1 cm and height 5 cm is
- (A)  $\frac{4}{3}\pi$                       (B)  $\frac{10}{3}\pi$                       (C)  $5\pi$                       (D)  $\frac{20}{3}\pi$
- 9 The height of a right circular cone whose radius is 5 cm and slant height is 13 cm will be
- (A) 12 cm                      (B) 10 cm                      (C) 13 cm                      (D) 5 cm
- 10 In a hollow cylinder, the sum of the external and internal radii is 14 cm and the width is 4 cm. If its height is 20 cm, the volume of the material in it is
- (A)  $5600\pi \text{ cm}^3$                       (B)  $1120\pi \text{ cm}^3$                       (C)  $56\pi \text{ cm}^3$                       (D)  $3600\pi \text{ cm}^3$