9. 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

(1) $3x$ cm (2) x cm (3) $4x$ cm (4) $2x$ cm

10. 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

(1) 3328π cm^3 (2) 3228π cm^3 (3) 3240π cm^3 (4) 3340π cm^3

11. A shuttle cock used for playing badminton has the shape of the combination of

(1) a cylinder and a sphere (2) a hemisphere and a cone
(3) a sphere and a cone (4) frustum of a cone and a hemisphere

12. 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

(1) 2:1 (2) 1:2 (3) 4:1 (4) 1:4

13. The volume (in 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

(1) $\frac{4}{3}\pi$ (2) $\frac{10}{3}\pi$ (3) 5π (4) $\frac{20}{3}\pi$

14. 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

(1) 1 : 3 (2) 1 : 2 (3) 2 : 1 (4) 3 : 1

15. The ratio of the volumes of a cylinder, a cone and a sphere, if each has the same diameter and same height is

(1) 1:2:3 (2) 2:1:3 (3) 1:3:2 (4) 3:1:2