

**SECTION – A (1 × 5 = 5)**

- If  $r$  is the radius of the sphere, then the volume of the sphere is given by  
(a)  $\frac{2}{3}\pi r^3$  (b)  $\frac{4}{3}\pi r^3$  (c)  $2\pi r^2$  (d)  $4\pi r^2$
- If two dice are thrown in the air, the probability of getting sum as 3 will be  
(a)  $\frac{2}{18}$  (b)  $\frac{3}{18}$  (c)  $\frac{1}{18}$  (d)  $\frac{1}{36}$
- If the mean of frequency distribution is 7.5 and  $\sum f_i x_i = 120 + 3k$ ,  $\sum f_i = 30$ , then  $k$  is equal to:  
(a) 40 (b) 35 (c) 50 (d) 45
- A funnel is in the shape of a right circular cone with a base radius of 3 cm and a height of 4 cm. Find the slant height of the funnel.  
(a) 4 cm (b) 5 cm (c) 7 cm (d) 7.5 cm
- If mean and mode of a data of a data are 12 and 15 respectively then median of the data is  
(a) 12 (b) 14 (c) 15 (d) 16

**SECTION – B (2 × 2 = 4)**

- 2 cubes each of volume  $27 \text{ cm}^3$  are joined end to end. Find the surface area of the resulting cuboid?
- Volume The A bag contains 5 red , 4 green and 3 blue balls. If a ball is drawn at random, what is the probability of getting a red ball?

**SECTION – C (3 × 2 = 6)**

- The radius and height of a solid right circular cone are in the ratio of 5 : 12. If its volume is  $3.14 \text{ cm}^3$  then find its total surface area. [Take  $\pi = 3.14$ ].
- A bag contains a black ball, a red ball and a green ball, all the balls are identical in shape and size. Mohit takes out a ball from the bag, without looking into sit. What is the probability that the ball drawn is :  
(i) green ball (ii) black ball (iii) red ball ?

**SECTION – D (1 × 5 = 5)**

- A toy is in the form of a hemisphere surmounted by a right circular cone of the same base radius as that of the hemisphere. If the radius of base of the cone is  $21 \text{ cm}$  and its volume is  $\frac{2}{3}$  of the volume of the hemisphere, calculate the height of the cone and the surface area of the toy. [Use  $\pi = \frac{22}{7}$ ]

