

This Question Paper contains 8 printed pages.

(Section - A, B, C & D)

Sl.No. 0392

12 (E)

(JULY, 2018)

(NCERT SRT)

Time : 3 Hours]

[Maximum Marks : 80

Instructions :

- 1) There are four sections and total 30 questions.
 - 2) All the questions are compulsory. Internal options are available in certain questions.
 - 3) Draw figure, wherever necessary. Maintain the lines and arcs of the construction.
 - 4) Use of calculator is not permitted.
-

SECTION - A

■ Question numbers 1 to 6 carry one mark each:

- 1) $0.\bar{6} = \frac{2}{3}$, both $0.\bar{6}$ & $\frac{2}{3}$ are rational numbers. Express $0.\bar{6}$ into p/q form. [1]
- 2) If -4 is a zero of the polynomial $x^2 - x - (2 + 2k)$ then find the value of k . [1]
- 3) If k , $2k-1$ and $2k+1$ are three consecutive terms of an A.P., find the value of k . [1]

- 4) Write the formula for the area of a sector of a circle, with radius r and sector angle θ . [1]
- 5) The volumes of two spheres are in the ratio 27:8, find the ratio of their radii. [1]
- 6) A die is thrown once. Find the probability of getting a number which is not a factor of 36. [1]

SECTION - B

■ Question numbers 7 to 12 carry 2 marks each:

- 7) Find the least positive integer divisible by first five natural numbers. [2]
- 8) If the sum of two positive numbers is 108 and the difference of these numbers is 8 then find the numbers. [2]
- 9) If the product of zeros of the polynomial $ax^2 - 6x - 6$ is 4 then find the value of a . Also find the sum of zeros of the polynomial. [2]
- 10) Find the area of the shaded portion in the given figure, where AB and CD are diameters, $\angle COB = 30^\circ$ and $OC = 2.1$ cm. [2]



