MODEL QUESTION
PAPER (Unsolved)

Time Allowed: 3 hours   **Max. Marks: 80**

General Instructions: Same as given in Model Question Paper-1 (Solved).

SECTION–A

1. Is π a rational number? Justify your answer.
2. Define zero polynomial. Write its degree.
3. In which quadrants, the points $P(2, -3)$ and $Q(-3, 2)$ lie?
4. Define terms point and line.
5. Check whether $\dfrac{7}{6}$ can be an empirical probability or not? Give reasons.
6. In Fig. 1, AB and CD are two chords equidistant from the centre O. OP is the perpendicular drawn from centre O to AB. If $CD = 6$ cm, find PB.
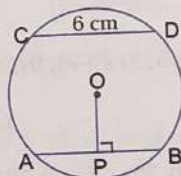

Fig. 1

SECTION–B

7. Simplify: $\dfrac{454 \times 441 - 454 \times 21}{(877)^2 - (423)^2}$

8. Find the value of k, if $x = 2, y = 1$ is a solution of the equation $2x + 3y = k$.
9. Solve the equation $2x + 1 = x - 3$, and represent the solution(s) on
   (i) the number line and
   (ii) the Cartesian plane.

10. Does Euclid's fifth postulate imply the existence of parallel lines? Explain.

11. Find the total surface area of a cone whose radius is $\dfrac{r}{2}$ and slant height is $2l$.

12. The points scored by a basketball team in a series of matches are as follows:
    17, 2, 7, 27, 5, 14, 18, 10.
    Find the median.