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Paper – 6 (Parabola)

- If the tangents to the parabola $y^2 = 4ax$ at (x_1, y_1) and (x_2, y_2) meet at (x_3, y_3) , then
 - x_1, x_2, x_3 are in G.P. and y_1, y_2, y_3 are in A.P.
 - x_1, x_2, x_3 are in A.P.
 - y_1, y_2, y_3 are in G.P.
 - y_1, y_2, y_3 are in A.P.
- If the line $3x - 4y + 5 = 0$ is a tangent to the parabola $y^2 = 4ax$, then a is equal to
 - $\frac{15}{16}$
 - $\frac{4}{5}$
 - $-\frac{4}{3}$
 - $-\frac{5}{4}$
- The equation of the parabola with focus at $(0, 3)$ and the directorix $y + 3 = 0$ is
 - $y^2 = 12x$
 - $y^2 = -12x$
 - $x^2 = 12y$
 - $x^2 = -12y$
- The point on the parabola $y^2 = 8x$ whose distance from the focus is 8, has x co-ordinate as
 - 0
 - 2
 - 4
 - 6
- A line touches the circle $x^2 + y^2 = 2a^2$ and also the parabola $y^2 = 8ax$. Its equation is
 - $y = \pm x$
 - $y = \pm(x + c)$
 - $y = \pm(x + 2a)$
 - $y = \pm(x - 2a)$
- The parabola $y^2 = 4ax$ passes thro' the point $(2, -6)$, then the length of its latus rectum is
 - 18
 - 9
 - 6
 - 16
- The line $y = 2x + c$ is a tangent to the parabola $y^2 = 16x$, if c equals
 - 2
 - 1
 - 0
 - 2
- The tangents at the points $(at_1^2, 2at_1)$ $(at_2^2, 2at_2)$ on the parabola $y^2 = 4ax$ are at right angles if
 - $t_1 t_2 = -1$
 - $t_1 t_2 = 1$
 - $t_1 t_2 = 2$
 - $t_1 t_2 = -2$
- If $(at^2, 2at)$ are the co-ordinates of one end of a focal chord of the parabola $y^2 = 4ax$, then the co-ordinates of the other end are
 - $(at^2, -2at)$
 - $-(at^2, -2at)$
 - $(\frac{a}{t^2}, \frac{2a}{t})$
 - $(\frac{a}{t^2}, -\frac{2a}{t})$
- The co-ordinates of a point on the parabola $y^2 = 8x$, whose focal distance is 4, are
 - $(\frac{1}{2}, \pm 2)$
 - $(1, \pm 2\sqrt{2})$
 - $(2, \pm 4)$
 - N.O.T.

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Answer Key will be available in next paper.

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Answer Key Paper 5 (Cirlce)

01.C	02.B	03.C	04.A	05.B
06.B	07.D	08.C	09.A	10.C

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