APPLICATION OF INTEGRALS

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Q01. Find the area of the region lying in the first quadrant and enclosed by the x-axis, the line $y = x$ and the circle $x^2 + y^2 = 32$.

Q02. Find the area of the region $\{(x, y) : y \le |x| + 2,\ y \ge x^2\}$, using integration.

Q03. Using integration, find the area of the parabola $y^2 = 4ax$ bounded by its latus rectum.

Q04. If the area between the curves $x = y^2$ and $x = 4$ is divided into two equal parts by the line $x = a$, then find the value of 'a' using integration.

Q05. Find the area of the region bounded by the curves $x^2 + y^2 = 4$, $y = \sqrt{3}x$ and x-axis in the first quadrant.

Q06. Find the area of the ellipse $x^2 + 9y^2 = 36$ using integration.

Q07. Using integration, find the area bounded by the circle $x^2 + y^2 = 9$.

Q08. Find the area bounded by the curve $y = |x - 1|$ and $y = 1$, using integration.

Q09. Find the area of the region $\{(x, y) : x^2 \le y \le x + 2\}$, using integration.

Q10. Using integration, find the area of the region : $\{(x, y) : 0 \le y \le x^2,\ 0 \le y \le x,\ 0 \le x \le 2\}$.

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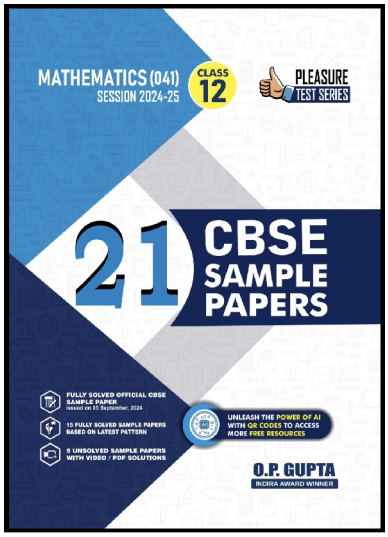

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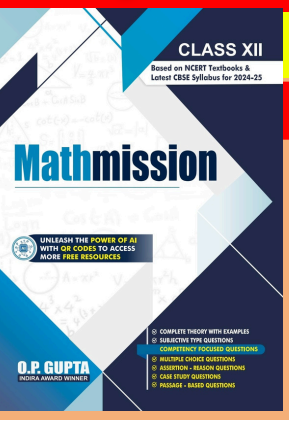

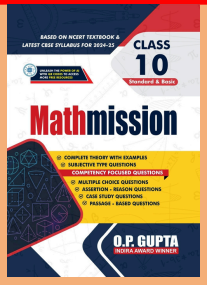

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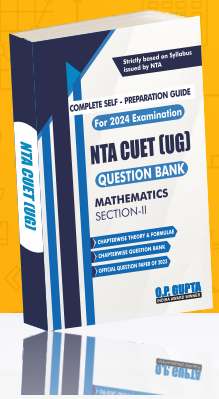

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