MTH-401 QUIZ 1

Question 1



The differential equation of orthogonal trajectory to the family of curves

$$x^2 + y^2 = C^2$$

is _____.

Select the correct option

Reload Math Equations

- $\frac{dy}{dx} = \frac{x}{y}$
- $\frac{dy}{dx} = \frac{y}{x}$
- $\frac{dy}{dx} = -\frac{x}{y}$
- $\frac{dy}{dx} = -\frac{y}{x}$

MTH-401 QUIZ 1

Question 2



The differential equation

$$y(1 + 2xy)dx + x(1 - 2xy)dy = 0$$

is

Select the correct option

Reload Math Equations

- Separable
- Homogeneous
- Exact
- None of these

MTH-401 QUIZ 1

Question 3



The family of curve

$$x^2 + y^2 = C^2$$

represents a family of circles centered at _____.

Select the correct option

Reload Math Equations

- (1,0)
- (0,1)
- (0,0)
- (1,1)

MTH-401 QUIZ 1

Question 4



The differential equation of orthogonal trajectory to the family of curves

$$x - 2y = c$$

is

Select the correct option

Reload Math Equations

- $\frac{dy}{dx} = -\frac{1}{2}$
- $\frac{dy}{dx} = \frac{1}{2}$
- $\frac{dy}{dx} = 2$
- $\frac{dy}{dx} = -2$

MTH-401 QUIZ 1

Question 5



The differential equation
$\frac{{dy}}{{dx}} - y = {y^3}$
may be called as linear equation of

Select the correct option

- Bernoulli's
- Homogeneous
- Cauchy
- Bessel