

Objective Types Questions

Q.1: Encircle the correct one of the given answers in each item.

1. An equation involving one or more derivatives of a function is called.
(a) Quadratic (b) Linear (c) Differential (d) Cubic
2. Order of differential equation $\left(\frac{d^3y}{dx^3}\right)^2 + \frac{dy}{dx} + y = 0$ is
(a) 2 (b) 1 (c) 0 (d) 3
3. Degree of differential equation $\frac{d^2y}{dx^2} + \left(\frac{dy}{dx}\right)^3 = 0$ is
(a) 3 (b) 2 (c) 0 (d) 1
4. Solution of differential equation $\frac{dy}{dx} = 1$ is
(a) $y = x$ (b) $y = x + c$ (c) $y = c$ (d) $y = x^2 + c$
5. Solution of differential equation $x dy + y dx = 0$ is
(a) $y = c x$ (b) $y = x$ (c) $xy = c$ (d) $y^2 = x^2 + c$
6. Solution of differential equation $\frac{dy}{dx} = -y$ is
(a) $y = C e^{-x}$ (b) $y = c e^x$ (c) $y = e^x + c$ (d) $y = e^{-x} + c$
7. If $x dy + y dx = 0$ is the differential equation, Then its variables separable form is
(a) $y dy + x dx = 0$ (b) $\frac{1}{y} dy = \frac{1}{x} dx$ (c) $\frac{1}{y} dy = -\frac{1}{x}$ (d) $x dy = -y dx$
8. $y = \ln x + c$ is the solution of differential equation
(a) $x dy = dx$ (b) $x dx = dy$ (c) $dy = \frac{1}{x}$ (d) $dy = dx$
9. Order of the differential equation $\frac{d^2y}{dx^2} + \frac{dy}{dx} + y = 0$ is
(a) 1 (b) 2 (c) 0 (d) 3
10. Degree of differential equation $x \left(\frac{d^3y}{dx^3}\right)^2 = 1$ is
(a) 0 (b) 1 (c) 2 (d) 3

ANSWERS

Q.1:

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|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | a | 3. | d | 4. | b | 5. | c |
| 6. | a | 7. | c | 8. | a | 9. | b | 10. | c |