

VITEEE 2021 Memory Based Questions and Answers for 31 May Slot 1

Q: Perpendicular distance of the point P (3, 5, 6) from y-axis is:

1. $\sqrt{7}$
2. 7
3. 6
4. $\sqrt{45}$

Q: For what values of 'a' the function

$F(x) = -x^3 + 4ax^2 + 2x - 5$ is decreasing for all real x

1. (3, 4)
2. (-1, 1)
3. No value of a
4. (1, 2)

Q: Find the independent solution of the differential equation:

$$\frac{d^2y}{dx^2} - 3\frac{dy}{dx} - 4y = 0$$

Q: The solution of the equation $\frac{dy}{dx} - e^{x-y} = 1$ is

1. $(x+c)e^{x-y} - 1 = 0$
2. $(x+c)e^{x-y} = 0$
3. $(x+y)e^{x-y} = 0$
4. $(x+c)e^{x-y} + 1 = 0$

Q: $p \rightarrow (p \rightarrow q)$ logically equivalent to?

Q: The truth table shown below is which gate?

A	B	Y
1	1	0
1	0	1
0	1	1
0	0	1

1. NAND

2. XOR
3. AND

Q: Find $\cos 8^\circ \cos 10^\circ \cos 12^\circ - \sin 8^\circ \sin 10^\circ \cos 12^\circ = \sin 18^\circ \sin 12^\circ$

$$(1+x^2)\frac{dy}{dx} = x(1-y), y(0) = \frac{4}{3}$$

Q: then, $y(\sqrt{8}) - \frac{1}{3} = ?$

1. 3
2. 1
3. 5
4. 7