

VITEEE 2021 Memory Based Questions and Answers for 31 May Slot 4

Q: For $\frac{1}{x} \leq x \leq 1$, the value of $\cos^{-1}\left(\frac{x}{2} + \frac{1}{2}\sqrt{3-3x^2}\right) - \pi\pi^{-1}x$ is equal to

1. $\pi/3$
2. $\pi/6$
3. $-\pi/3$
4. $-\pi/6$

$$(x - y + 2) \frac{dy}{dx} = 1 \text{ for } x = e, y = 1 \text{ is}$$

Q: The particular solution of the differential equation

1. $x = y - 1 - e^y$
2. $x = y - 1 + e^{-y}$
3. $x = y - 1 + e^y$
4. $x = y + 1 + e^{-y}$

Q: If $\int_0^3 x\sqrt{2-x} dx = k\sqrt{2}$, then the value of k is

1. $15/16$
2. $-16/15$
3. $16/15$
4. $64/15$