

MHT CET 2023 Question Paper with Answers and Solution May 13 Shift 2 (Memory-based)

Question 1. The principal value of $\sin^{-1}(\sin 3\pi/4)$ is?

Question 2. Variance of first $2n$ natural numbers?

Question 3. Find probability of getting a black card on a face card from a well shuffled deck of 52 cards?

Question 4. If $(\tan^{-1} x)^2 + (\cot^{-1} x)^2 = 5x\pi^2/8$, $x=?$

Question 5. Solution of $(1+xy) y \, dx + (1-xy)x \, dy=0$ is?

Question 6. Solution of $\sin x + \sin 5x = \sin 3x$ in $(0, \pi/2)$ are..?

Question 7. Solⁿ of $\sin x + \sin 5x = \sin 3x$ in $(0, \pi/2)$ are?

Question 8. If $x \, dy = y(dx + y \, dy)$, $x(1)=1$, $y(x)>0$, then $y(-3)$ is?

Question 9. Find area bounded by region, $y=3x+1$, $y=4x+1$ and $x=3$?

Question 10. If $1 + (\sqrt{1+x}) \tan x = 1 + (\sqrt{1-x})$ then $\sin 4x$ is..?