Class : XIIth BOARD

DPP NO 13

DPP # 13

Q1. Find the principle value of each of the following:

(i) $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ (ii) $\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$ (iii) $\cos^{-1}\left(\sin\frac{4\pi}{3}\right)$

For Q. 2 to 4 :
For the principal values, evaluate each of the following :

Q2. $\cos^{-1}\frac{1}{2}+2\sin^{-1}\frac{1}{2}$

Q3. $\cos^{-1}\left(\frac{1}{2}\right)-2\sin^{-1}\left(-\frac{1}{2}\right)$

Q4. $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)+\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

For Q. 5 to 6 :
For the following values, evaluate each of the following:

Q5 $\tan^{-1}\left\{2\cos\left(2\sin^{-1}\frac{1}{2}\right)\right\}$

Q6. $\cot^{-1}\left[\sin^{-1}\left\{\cos(\tan^{-1}1)\right\}\right]$

Q7. Find the principal values, of each of the following :

(i) $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)$ (ii) $\tan^{-1}\left(2\cos\frac{2\pi}{3}\right)$

Q8. For the principal values, evaluate each of the following :

(i) $\tan^{-1}(-1)+\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$ (ii) $\tan^{-1}\left\{2\sin\left(4\cos^{-1}\frac{\sqrt{3}}{2}\right)\right\}$

For Q. 9 to 10 :
Evaluate each of the following :

Q9. $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)+\tan^{-1}\left(-\sqrt{3}\right)+\tan^{-1}\left(\sin\left(-\frac{\pi}{2}\right)\right)$

Q10. $\tan^{-1}\left(\tan\frac{5\pi}{6}\right)+\cos^{-1}\left\{\cos\left(\frac{13\pi}{6}\right)\right\}$

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