

### Inverse Trigonometric Functions

1. Find the principal value of  $\sin^{-1}\left(-\frac{1}{2}\right)$ .
2. Find the principal value of  $\operatorname{cosec}^{-1}(2)$ .
3. Find the principal value of  $\tan^{-1}(-\sqrt{3})$ .
4. Find the principal value of  $\operatorname{cosec}^{-1}(-\sqrt{2})$ . (M-17)
5. Find the principal value of  $\cos^{-1}\left(-\frac{1}{2}\right)$ . (J-14)(M-19)
6. Find the principal value of  $\tan^{-1}(-1)$ .
7. Find the principal value of  $\sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$ .
8. Find the principal value of  $\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$ . (A 21)(MQP-2)
9. Find the principal value of  $\cot^{-1}\left(-\frac{1}{\sqrt{3}}\right)$ .
10. Find the value of  $\tan^{-1}(1) + \cos^{-1}\left(-\frac{1}{2}\right) + \sin^{-1}\left(-\frac{1}{2}\right)$ .
11. Evaluate  $\cos^{-1}\left(\frac{1}{2}\right) + 2\sin^{-1}\left(\frac{1}{2}\right)$ .
12. Evaluate  $\sin\left[\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right]$ . (M-14)
13. Find the value of  $\tan^{-1}\sqrt{3} - \sec^{-1}(-2)$ . (MQP-5)
14. Find the value of  $\sin^{-1}\left(\sin\frac{2\pi}{3}\right)$ . (J-16)
15. Find the value of  $\sin^{-1}\left(\sin\frac{3\pi}{5}\right)$ . (M 20)(J-17)
16. Find the value of  $\cos^{-1}\left(\cos\frac{13\pi}{6}\right)$ . (J-18)