Q.No.	DAY - 24
135	**Example 4.9** Find (i) $\tan^{-1}\left(-\sqrt{3}\right)$ (ii) $\tan^{-1}\left(\tan\frac{3\pi}{5}\right)$ (iii) $\tan\left(\tan^{-1}(2019)\right)$
136	**Example 4.11** Prove that $\tan\left(\sin^{-1}x\right)=\frac{x}{\sqrt{1-x^2}}$, $-1<x<1$.
137	**EXERCISE 4.3** 1. Find the domain of the following functions : (i) $\tan^{-1}\left(\sqrt{9-x^2}\right)$ (ii) $\frac{1}{2}\tan^{-1}\left(1-x^2\right)-\frac{\pi}{4}$.
138	3. Find the value of (i) $\tan\left(\tan^{-1}\left(\frac{7\pi}{4}\right)\right)$ (ii) $\tan\left(\tan^{-1}(1947)\right)$ (iii) $\tan\left(\tan^{-1}(-0.2021)\right)$.
139	4. Find the value of (i) $\tan\left(\cos^{-1}\left(\frac{1}{2}\right)-\sin^{-1}\left(-\frac{1}{2}\right)\right)$ (ii) $\sin\left(\tan^{-1}\left(\frac{1}{2}\right)-\cos^{-1}\left(\frac{4}{5}\right)\right)$. (iii) $\cos\left(\sin^{-1}\left(\frac{4}{5}\right)-\tan^{-1}\left(\frac{3}{4}\right)\right)$.

140	**Example 4.12** Find the principal value of (i) $\operatorname{cosec}^{-1}(-1)$ (ii) $\sec^{-1}(-2)$.
141	**Example 4.14** If $\cot^{-1}\left(\frac{1}{7}\right)=\theta$, find the value of $\cos\theta$.
142	**Example 4.15** Show that $\cot^{-1}\left(\frac{1}{\sqrt{x^2-1}}\right)=\sec^{-1}x$, $\lvert x\rvert>1$
143	2. Find the value of (i) $\tan^{-1}\left(\sqrt{3}\right)-\sec^{-1}(-2)$ (ii) $\sin^{-1}(-1)+\cos^{-1}\left(\frac{1}{2}\right)+\cot^{-1}(2)$ (iii) $\cot^{-1}(1)+\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)-\sec^{-1}\left(-\sqrt{2}\right)$
End of the chapter 4	