OBJECTIVE TYPE (1 Mark)							
Q.1. $cos^{-1}\left(cos\frac{2\pi}{3}\right) + sin^{-1}\left(sin\frac{2\pi}{3}\right) =$ is						CBSE 2011	
A	$\frac{4\pi}{3}$	B	π	C	$\frac{2\pi}{3}$	D	$-\pi$
Q.2. *The value of* $tan^{-1}\sqrt{3} - cot^{-1}(-\sqrt{3})$ is						CBSE 2018	
A	$-\frac{\pi}{2}$	B	$\frac{\pi}{6}$	C	$\frac{2\pi}{3}$	D	0
Q.3. *The value of* $tan^{-1}\left[\left(\sin(-\frac{\pi}{2})\right)\right]$ is						CBSE 2014	
A	$\frac{\pi}{4}$	B	0	C	$-\frac{\pi}{4}$	D	$\frac{3\pi}{4}$
Q.4. $tan\left[sin^{-1}\frac{3}{5} + tan^{-1}\frac{3}{4}\right] =$						CBSE 2020	
A	$\frac{7}{24}$	B	$\frac{24}{7}$	C	$\frac{3}{2}$	D	$\frac{3}{4}$
Q.5. *If* $tan^{-1}(\sqrt{3}) + cot^{-1}(x) = \frac{\pi}{2}$, *then* x=						CBSE 2010	
A	$\frac{1}{\sqrt{3}}$	B	$\frac{1}{\sqrt{2}}$	C	1	D	$\sqrt{3}$
Fill in the blanks(1mark)							
Q6. *Value of* $\left[tan^{-1}(1) + cos^{-1}\left(-\frac{1}{2}\right)\right] =$............						CBSE 2013	
Q7. *The principal value of* $\left(cos^{-1}(cos\frac{7\pi}{6}\right) =$..........						CBSE 2011	
Q8. If $sin^{-1}\left(sin\frac{3\pi}{5}\right) =$ _____.						CBSE 2013	

Q9.	If $\left(tan^{-1}\left(\frac{1}{1+1\times2}\right) + tan^{-1}\left(\frac{1}{1+2\times3}\right) + tan^{-1}\left(\frac{1}{1+3\times4}\right) + \cdots tan^{-1}\left(\frac{1}{1+x(x+1)}\right)\right) = tan^{-1}\theta$, then $\theta = \ldots\ldots\ldots\ldots$	CBSE 2015
Q10.	If $tan^{-1}x + 2cot^{-1}x = \frac{2\pi}{3}$, then x = _____	CBSE 2014

VSA (1 mark)

Q11.	Write the principal value of $cos^{-1}(cos680^0)$.	CBSE 2014
Q12.	$Simplify$: $sin^{-1}[3x - 4x^3], -\frac{1}{2} \le x \le \frac{1}{2}$	CBSE 2018
Q13.	If $tan^{-1}x + tan^{-1}y = \frac{\pi}{4}, xy < 1$ then write the value of $x + y + xy$.	CBSE 2019
Q14.	$Evaluate$: $cot^{-1}\left(\frac{xy+1}{x-y}\right) + cot^{-1}\left(\frac{yz+1}{y-z}\right) + cot^{-1}\left(\frac{zx+1}{z-x}\right)$, $0 < xy, yz, zx$.	CBSE 2015
Q15.	$Evaluate$: $2sin^{-1}\left(\frac{3}{5}\right) - tan^{-1}\left(\frac{17}{31}\right)$.	CBSE 2014

SECTION B (2 or 4marks)

Q16.	$Solve\ for\ x$: $sin^{-1}(4x) + sin^{-1}(3x) = -\frac{\pi}{2}$.	CBSE 2020
Q17.	$Solve$: $tan^{-1}(4x) + tan^{-1}(6x) = \frac{\pi}{4}$.	CBSE 2019
Q18.	Prove: $sin^{-1}\frac{4}{5} + tan^{-1}\frac{5}{12} + cos^{-1}\frac{63}{65} = \frac{\pi}{2}$.	CBSE 2019
Q19.	Solve for x : $sin^{-1}\frac{5}{x} + sin^{-1}\frac{12}{x} = \frac{\pi}{2}, x > 0$.	CBSE 2020
Q20.	Prove: $tan^{-1}\frac{1}{4} + tan^{-1}\frac{2}{9} = \frac{1}{2}sin^{-1}\frac{4}{5}$.	CBSE 2020

••

ANSWERS TO BE UPLOADED ON 7TH MAY 2020.