

## Mathematics ECAT Pre Engineering Chapter 15 Inverse Trigonometric Functions Online Test

Sr	Questions	Answers Choice
1	The exact value of $\cos^{-1}(-1) + \cos^{-1}(1) =$	A. $\pi$ B. $-\pi$ C. $\pi/2$ D. $\pi/3$
2	The exact value of $\cos^{-1}(0)$ is	A. $\pi/2$ B. $-\pi/2$ C. $3\pi$ D. $\pi - \pi/6$
3	$\cos^{-1} 12/13 =$	A. $\tan^{-1} 3/5$ B. $\cot^{-1} 13/12$ C. $\sec^{-1} 13/12$ D. $\sin^{-1} 5/13$
4	$\cos^{-1}(\cos x) =$	A. $x$ B. $\cos x$ C. $x = 1/x$ D. $\cos^{-2} x$
5	$\cos^{-1}(x) =$	A. $\cos x$ B. $x$ C. $\tan^{-1}(-x)$ D. $\sec^{-1}(1/x)$
6	$\cos^{-1}(-x) =$	A. $-x$ B. $1/x$ C. $\tan^{-1} x$ D. $\pi - \cos^{-1} x$
7	If $\pi \leq x \leq 2\pi$ , then $\cos^{-1}(\cos x) =$	A. $\cos x$ B. $-x$ C. $1/x$ D. $-x$
8	If $\cos(2 \sin^{-1} x) = 1/9$ , then what is the value of $x$ ?	A. $1/3$ B. $-2/3$ C. $2/3$ D. $2/3, -2/3$
9	$\cos(\cos 4\pi) =$	A. $\pi/2$ B. $\pi/3$ C. $2\pi/3$ D. $-\pi/3$
10	The exact degree value of the function $\sin^{-1}(-\sqrt{3}/2)$ is	A. $70^\circ$ B. $50^\circ$ C. $90^\circ$ D. $60^\circ$
11	What is the value of $\cos(\cos^{-1} 2)$ ?	A. $\sqrt{2}$ B. $1/2$ C. undefined D. 0
12	The value of $\cos(\cos^{-1} 1/2)$ is	A. $1/2$ B. $\sqrt{3}/2$ C. $-1/2$ D. $1/\sqrt{2}$
13	What is the value of $\cos^{-1}(1/2)$ ?	A. $\pi/3$ B. $\pi/4$ C. $3\pi/2$ D. $\pi/6$
14	$\sin^{-1} x =$	A. $\tan^{-1} x$ B. $\operatorname{Cosec}^{-1} x$ C. $\operatorname{Cosec} x$ D. $\operatorname{cosec}^{-1}(1/x)$
15	$\sin^{-1}(-x) =$	A. $x$ B. $-x$ C. $-\sin^{-1} x$ D. $\cos^{-1} x$

- 16  $\sin^{-1}(\sin 2\pi/3) =$   
A.  $\pi/2$   
B.  $2\pi/3$   
C.  $-3\pi/2$   
D.  $\pi/3$
- 17  $\sin^{-1}(2\sin -10.8)$   
A. 0.56  
B. 0.69  
C. -0.16  
D. 0.96
- 18  $\sin^{-1} x =$   
A.  $\sin(\pi/2-x)$   
B.  $\sin^{-1}(\pi/2-x)$   
C.  $\pi/2 - \cos^{-1}x$   
D.  $\pi/2 + \cos^{-1}x$
- 19  $\sin(\sin^{-1}(1/2)) =$   
A. 0  
B. 2  
C.  $\infty$   
D.  $1/2$
- 20 The principal value of  $\sin^{-1}[-\sqrt{3}/2]$  is  
A.  $5\pi/3$   
B.  $-2\pi/3$   
C.   
D.  $\pi/3$
- 21 The value of  $\sin^{-1} 24/25$  is equal to  
A.  $\csc^{-1} 25/24$   
B.  $\sec^{-1} 24/25$   
C.  $2 \tan^{-1} 4/5$   
D.  $2 \cos^{-1} 24/25$
- 22 The value of  $\sin^{-1} 5/13$  is equal to  
A.  $\cos 5/13$   
B.  $\tan^{-1} 5/12$   
C.  $\cos^{-1} 1/5$   
D.  $2 \cos^{-1} 4/5$
- 23 The Principal value of  $\sin^{-1}(-1/2)$   
A.  $\pi/2 < o:p></o:p>$   
B.  $-\pi/2 < o:p></o:p>$   
C.  $\pi < o:p></o:p>$   
D.  $-\pi < o:p></o:p>$
- 24 In the interval  $0 \leq x \leq \pi$ , the sine is  
A. Not a function  
B. Not defined  
C. Infinity  
D. Not one-to-one function
- 25  $x = \sin^{-1} 3$ , then the value of  $\sin x$  is  
A.  $\sqrt{3}/2$   
B. 3  
C. Not possible  
D. -1
- 26 The domain of the function  $y = \sin x$ , is  
A.  $-\pi/2 \leq x \leq \pi/2$   
B.  $\pi/2 \leq x \leq \pi$   
C.  $-2\pi \leq x \leq 2\pi$   
D.  $-1 \leq x \leq 1$
- 27 The principal value of  $\sin^{-1}(-1/2)$   
A.  $\pi/3$   
B.  $\pi/4$   
C.  $\pi/6$   
D.  $-\pi/6$
- 28 The principal value of  $\sin^{-1}\sqrt{3}/2$  is  
A.  $-\pi/3$   
B.  $\pi/3$   
C.  $2\pi/3$   
D.  $\pi/2$
- 29  $\sec^{-1} x =$   
A.  $\cos^{-1} 1/x$   
B.  $\cosec^{-1} 1/x$   
C.  $\cos^{-1}(-x)$   
D.  $\tan^{-1} x$
- 30  $\sin^{-1}(-x) =$   
A.  $\cos^{-1} 1/x$   
B.  $-\sin^{-1} x$   
C.  $\cot^{-1} 1/x$   
D. None of these