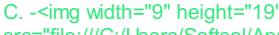


Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	$\cos^{-1}(\cos x) =$	A. x B. $\cos x$ C. $x = 1/x$ D. $\cos^{-2} x$
2	$\cos^{-1}(x) =$	A. $\cos x$ B. x C. $\tan^{-1}(-x)$ D. $\sec^{-1}(1/x)$
3	$\cos^{-1}(-x) =$	A. -x B. $1/x$ C. $\tan^{-1} x$ D. $\pi - \cos^{-1} x$
4	If $\pi \leq x \leq 2\pi$, then $\cos^{-1}(\cos x) =$	A. $\cos x$ B. -x C. $1/x$ D. -x
5	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. $2/3, -2/3$
6	$\cos(\cos 4\pi/3) =$	A. $\pi/2$ B. $\pi/3$ C. $2\pi/3$ D. $-\pi/3$
7	The exact degree value of the function $\sin^{-1}(-\sqrt{3}/2)$ is	A. 70° B. 50° C. 90° D. 60°
8	What is the value of $\cos(\cos^{-1} 2)$?	A. $\sqrt{2}$ B. $1/2$ C. undefined D. 0
9	The value of $\cos(\cos^{-1} 1/2)$ is	A. $1/2$ B. $\sqrt{3}/2$ C. $-1/2$ D. $1/\sqrt{2}$
10	What is the value of $\cos^{-1}(1/2)$?	A. $\pi/3$ B. $\pi/4$ C. $3\pi/2$ D. $\pi/6$
11	$\sin^{-1} x =$	A. $\tan^{-1} x$ B. $\operatorname{cosec}^{-1} x$ C. $\operatorname{Cosec} x$ D. $\operatorname{cosec}^{-1}(1/x)$
12	$\sin^{-1}(-x) =$	A. x B. -x C. $-\sin^{-1} x$ D. $\cos^{-1} x$
13	$\sin^{-1}(\sin 2\pi/3) =$	A. $\pi/2$ B. $2\pi/3$ C. $-3\pi/2$ D. $\pi/3$
14	$\sin(2\sin^{-1} 0.8)$	A. 0.56 B. 0.69 C. -0.16 D. 0.96
15	$\sin^{-1} x =$	A. $\sin(\pi/2 - x)$ B. $\sin^{-1}(\pi/2 - x)$ C. $\pi/2 - \cos^{-1} x$ D. $\pi/2 + \cos^{-1} x$

16	$\sin(\sin^{-1}(1/2)) =$	A. 0 B. 2 C. ∞ D. $1/2$
17	The principal value of $\sin^{-1}[-\sqrt{3}/2]$ is	A. $5\pi/3$ B. $-2\pi/3$ C.  D. $\pi/3$
18	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. $2 \cos^{-1} 24/25$
19	The value of $\sin^{-1} 5/13$ is equal to	A. $\cos 5/13$ B. $\tan^{-1} 5/12$ C. $\cos^{-1} 5/12$ D. $2 \cos^{-1} 4/5$
20	The Principal value of $\sin^{-1}(-1/2)$	A. $\pi/2$ B. $-\pi/2$ C. π D. $-\pi$
21	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
22	$x = \sin^{-1} 3$, then the value of $\sin x$ is	A. $\sqrt{3/2}$ B. 3 C. Not possible D. -1
23	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. $-1 \leq x \leq 1$
24	The principal value of $\sin^{-1}(-1/2)$	A. $\pi/3$ B. $\pi/4$ C. $\pi/6$ D. $-\pi/6$
25	The principal value of $\sin^{-1}\sqrt{3/2}$ is	A. $-\pi/3$ B. $\pi/3$ C. $2\pi/3$ D. $\pi/2$
26	The law of sines can be used to solve oblique triangle when following information is given:	A. Two angles and a side B. Two sides and an angle opposite one of the given sides C. Two sides and the angle between two sides D. Option a and b
27	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. hexagon
28	If sides of $\triangle ABC$ are 16, 20, and 33, then the value of the greatest angle is	A. $150^\circ 20'$ B. $132^\circ 35'$ C. $101^\circ 25'$ D. $160^\circ 50'$
29	If $\triangle ABC$ is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Pythagorean theorem D. Hero's formula
30	In triangle ABC, in which $b=95$, $c=34$, $a=52$ then the value of $A=$	A. 18 cm B. 18.027 cm C. 20.7 cm D. 19 cm