

## ECAT Mathematics Chapter 13 Trigonometric Functions & Their Graphs

Sr	Questions	Answers Choice
1	A function $f(x)$ is said to be the periodic function if for all $x$ in the domain of $f$ , there exists a smallest positive number $p$ such the $f(x + p) = \underline{\hspace{2cm}}$	A. $f(p)$ B. $f(x)$ C. $f(0)$ D. None of these
2	Domain of $\sec x$ is $\underline{\hspace{2cm}}$	A. $\{x \mid x \neq \frac{\pi}{2} + n\pi, n \in \mathbb{Z}\}$ B. $\{x \mid x \neq n\pi, n \in \mathbb{Z}\}$ C. $\{x \mid x \neq \frac{\pi}{2} + 2n\pi, n \in \mathbb{Z}\}$ D. $\{x \mid x \neq n\pi + \pi, n \in \mathbb{Z}\}$
3	Period of Sine and Cosine function is $\underline{\hspace{2cm}}$	A. $2\pi$ B. $\pi$ C. $\frac{\pi}{2}$ D. $\frac{\pi}{4}$
4	Domain of $\cot x$ is $\underline{\hspace{2cm}}$	A. $\{x \mid x \neq n\pi, n \in \mathbb{Z}\}$ B. $\{x \mid x \neq \frac{\pi}{2} + n\pi, n \in \mathbb{Z}\}$ C. $\{x \mid x \neq n\pi + \pi, n \in \mathbb{Z}\}$ D. $\{x \mid x \neq \frac{\pi}{2} + 2n\pi, n \in \mathbb{Z}\}$
5	Range of $\sec x$ is $\underline{\hspace{2cm}}$	A. $[-1, 1]$ B. $\mathbb{R}$ C. Negative real numbers D. $\mathbb{R} = \{x \mid -1 \leq x \leq 1\}$
6	What is the period of $\sin 2x/3 \cos 4x$ ?	A. $\pi$ B. $2\pi$ C. $\pi/2$ D. $\pi/3$
7	Period of $\operatorname{cosec} x$ is $\underline{\hspace{2cm}}$	A. $2\pi$ B. $\pi$ C. $\frac{\pi}{2}$ D. $\frac{\pi}{4}$
8	The period of $\tan [x/3]$ is $\underline{\hspace{2cm}}$	A. $3\pi$ B. $\pi$ C. $\frac{\pi}{3}$ D. $5\pi$
		A. $-\sin \theta$ B. $-\tan \theta$ C. $\sin \theta$ D. $\tan \theta$

9	$\tan(\pi - \theta) = \underline{\hspace{2cm}}$	<p>34, 34); font-family: &amp;quot;Times New Roman&amp;quot;; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"&gt;&lt;i&gt;&lt;/i&gt;&lt;/span&gt;  C. - cos&lt;span style="color: rgb(34, 34, 34); font-family: &amp;quot;Times New Roman&amp;quot;; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"&gt;&lt;i&gt;&lt;/i&gt;&lt;/span&gt;  D. - cot&lt;span style="color: rgb(34, 34, 34); font-family: &amp;quot;Times New Roman&amp;quot;; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"&gt;&lt;i&gt;&lt;/i&gt;&lt;/span&gt;</p>
10	$2\pi$ is the period of	<p>A. <math>\sin x</math>  B. <math>\tan x</math>  C. <math>\cot x</math>  D. all circular function</p>
11	The period of $\sin x/2 = \cos x/3$ is	<p>A. <math>2\pi</math>  B. <math>12\pi</math>  C. <math>13\pi</math>  D. <math>7\pi</math></p>
12	Range of $\sin x$ is _____	<p>A. <math>[-1, 1]</math>  B. <math>\mathbb{R}</math>  C. Negative real numbers  D. None of these</p>
13	The period of $2 \cos x$ is	<p>A. <math>30\pi</math>  B. <math>7\pi</math>  C. <math>5\pi</math>  D. <math>2\pi</math></p>
14	Period of $\sin 3x$ is _____	
15	Period of $\tan 4x$ is _____	
16	Domain of $3 \sin x$ is _____	<p>A. <math>[-3, 3]</math>  B. <math>\mathbb{R}</math>  C. Positive real numbers  D. None of these</p>
17	Domain of $\sin \theta$ is	<p>A. Set of real numbers  B. Set of complex numbers  C. Set of natural numbers  D. Set of even numbers</p>
18	Range of $\tan \theta$ is	<p>A. Set of complex numbers  B. Set of real numbers  C. Set of odd numbers  D. Set of positive integers only</p>
19	Domain of $\operatorname{cosec} x$ is _____	
20	Period of $\cos 2x$ is _____	