

Mathematics ECAT Pre Engineering Chapter 13 Trigonometric Functions and their Graphs Online Test

Sr	Questions	Answers Choice
1	The period of the trigonometric function $y = \sin x \cos x$ is _____	A. 2π B. π C. 4π D. $\pi / 2$
2	The number of x-intercepts of $y = \sin x$ in his period _____	A. 0 B. 1 C. 2 D. 3
3	graph of sine function is bounded between lines _____	A. $y \pm 1 = 0$ B. $x \pm 1 = 0$ C. $x \pm y - 0$ D. None of these
4	graph of trigonometric function $y = \sec x$ does not meet _____	A. x - axis B. y - axis C. both axis D. None of these
5	Domain of $\sin x$ is _____	
6	Domain of $\operatorname{cosec} x$ is _____	
7	Domain of $\cos x$ is _____	
8	Domain of $\sec x$ is _____	
9	Domain of $\tan x$ is _____	
10	Domain of $\cot x$ is _____	
11	Range of $\sin x$ is _____	A. $[-1, 1]$ B. R C. Negative real numbers D. None of these
12	Range of $\operatorname{cosec} x$ is _____	A. $\{-1, 1\}$ B. R C. Negative real numbers D. $R - \{x -1 < x < 1\}$
13	Range of $\cos x$ is _____	A. $[-1, 1]$ B. R C. Negative real numbers D. $R - \{x -1 < x < 1\}$
14	Range of $\sec x$ is _____	A. $[-1, 1]$ B. R C. Negative real numbers D. $R = \{x -1 < x < 1\}$
15	Range of $\tan x$ is _____	A. $[-1, -]$ B. R C. Negative real numbers D. $R - \{x -1 < x < 1\}$
16	Range of $\cot x$ is _____	A. $[-1, 1]$ B. R C. Negative real numbers D. $R - \{x -1 < x < 1\}$
17	Period of $\sin x$ is _____	
18	Period of $\cos x$ is _____	
19	Period of $\tan x$ is _____	
20	Period of $\operatorname{cosec} x$ is _____	
21	Period of $\sec x$ is _____	

- 22 Period of $\cot x$ is _____
- 23 Period of $\sin 3x$ is _____
- 24 Period of $\cos 2x$ is _____
- 25 Period of $\tan 4x$ is _____
- 26 Question Image
- 27 Question Image
- 28 Question Image
- 29 Period of $3 \sin x$ is _____
- 30 Period of $2 \cos x$ is _____
- 31 Question Image
- 32 Domain of $3 \sin x$ is _____
A. $[-3, 3]$
B. \mathbb{R}
C. Positive real numbers
D. None of these
- 33 Domain of $2 \cos x$ is _____
A. $[-2, 2]$
B. \mathbb{R}
C. Negative real numbers
D. None of these
- 34 Range of $2 \tan x$ is _____
A. $[-2, 2]$
B. $-1 < x < 1$
C. \mathbb{R}
D. None of these
- 35 Range of $3 \sin x$ is _____
A. $[-3, 3]$
B. $[-1, 1]$
C. \mathbb{R}
D. None of these
- 36 Range of $3 \cot x$ is _____
A. $[-1, 1]$
B. $[-3, 3]$
C. \mathbb{R}
D. None of these
- 37 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 $f(x + p) =$ _____
A. $f(p)$
B. $f(x)$
C. $f(0)$
D. None of these
- 38 Domain of $\sin \theta$ is _____
A. Set of real numbers
B. Set of complex numbers
C. Set of natural numbers
D. Set of even numbers
- 39 Domain of $\cos \theta$ is _____
A. Set of odd numbers
B. Set of integers
C. Set of real numbers
D. Set of complex numbers
- 40 Range of $\sin \theta$ is _____
- 41 Range of $\cos \theta$ is _____
- 42 Domain of $\cot \theta$ is _____
A. Set of complex numbers
B. Set of real numbers
C. Set of odd numbers
D. Set of positive integers only
- 43 Range of $\tan \theta$ is _____
A. $(-\infty, \infty)$
B. \mathbb{R}
C. \mathbb{Z}
D. \mathbb{N}
- 44 Range of $\cot \theta$ is _____
A. $(-\infty, \infty)$
B. $(-1, 1)$
C. $(-5, 5)$
D. \mathbb{Z}

- 45 Domain of $\sec \theta$ is
- 46 Domain of $\csc \theta$ is
- 47 Range of $\sec \theta$ is
- A. $Z - \{x \mid -1 < x < 1\}$
B. $W - \{x \mid -1 < x < 1\}$
C. $R - \{x \mid -1 < x < 1\}$
D. R
- 48 Range of $\csc \theta$ is
- A. $W - \{y \mid -1 < y < 1\}$
B. $R - \{y \mid -1 < y < 1\}$
C. O - $\{y \mid -1 < y < 1\}$
D. R
-
- 49 Period of Sine and Cosine function is
- A. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\pi</i>$
B. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>2\pi</i>$
C. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\pi</i>$
D. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>2\pi</i>$
-
- 50 Period of Tangent function is
- A. 0°
B. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\pi</i>$
C. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>2\pi</i>$
D. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\pi</i>$
-
- 51 Period of Cotangent function is
- A. π
B. $-\pi$
C. 0
D. -2π
-
- 52 The function sine and Cosine have the closed interval as their range
- A. $[1, 0]$
B. $[-1, 1]$
C. $[0, 1]$
D. $[-1, 2]$
-
- 53 Domain of tangent function is
- A. $<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\infty</i>> y > +<\text{span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\infty</i>$
B. $<\text{span style="font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);"}><i>\infty</i>$

54 The range of $y = \cot x$ = _____

- A. \mathbb{R} , $x \neq \frac{\pi}{2} + k\pi$, $k \in \mathbb{Z}$
B. \mathbb{R} , $x \neq \frac{\pi}{2} + k\pi$, $k \in \mathbb{Z}$
C. \mathbb{R} , $x \neq \frac{\pi}{2} + k\pi$, $k \in \mathbb{Z}$
D. None of above

55 Domain of $y = \cot x$ = _____

- A. $[1, -1]$
B. $[-1, 1]$
C. $[0, -1]$
D. \mathbb{R} , $x \neq \frac{\pi}{2} + k\pi$, $k \in \mathbb{Z}$

56 The range of $y = \sin x$ is _____

- A. Set of real numbers
B. Rational
C. Irrational no.
D. None of above

57 The Domain of $y = \sin x$ is _____

- A. $-\sin x$
B. $-\tan x$
C. $-\cos x$
D. $-\cot x$

58 $\tan(\pi - \theta) =$ _____

59 The period of cosec $10x$ is _____

- A. 2π
B. π
C. $\frac{\pi}{3}$
D. $\frac{\pi}{5}$

60 The period of $\tan(\frac{x}{3})$ is _____

- Size: 24px; color: rgb(34, 34, 34);
text-align: center; background-color: rgb(255, 255, 224);">*<i>π</i>*
**
-
- 61 Tangent is a periodic function and its period is _____
- A. *<i>π</i>*
B. *<i>π</i>*
C. *<i>π</i>*
D. *<i>π</i>*
-
- 62 Sine is a periodic function and its period is _____
- A. *<i>π</i>*
B. s
C. *<i>π</i>*
D.

*<i>4</i>**<i style="text-align: center;">π</i>*
-
- 63 The period of $\tan x/7$ is
- A. 3π
B. 7π
C. 15π
D. 5π
-
- 64 The period of $2 \cos x$ is
- A. 30π
B. 7π
C. 5π
D. 2π
-
- 65 The period of $|\sin(\frac{\pi}{2}x)|$ is
- A. $\pi/2$
B. $-\pi/2$
C. π
D. $\pi/3$
-
- 66 The period of $|\sin(\frac{\pi}{2}x)|$ is
- A. $\pi/2$
B. $-\pi/2$
C. π
D. $\pi/3$
-
- 67 The period of $\cos(7x-5)$ is
- A. $\pi/7$
B. $7\pi/2$
C. $\pi/2$
D. $2\pi/7$
-
- 68 The period of $3 \sin x$ is
- A. 2π
B. 9π
C. 3π
D. 5π
-
- 69 Tangent isfunction
- A. Inverse
B. one-one
C. in-to
D. Periodic
-
- 70 2π is the period of
- A. $\sin \square$
B. $\tan \square$
C. $\cot \square$
D. all circular function
-
- A. all real numbers

- 71 The range of the tangent function is
A. $-1 \leq x \geq 1$
B. natural number
C. $z < \infty$
- 72 The period of the function $\csc x/4$ is
A. $4x$
B. $\pi/4$
C. 8π
D. $\pi/8$
- 73 What is the period of $5 \cot x = ?$
A. π
B. $-\pi$
C. $\pi/2$
D. 2π
- 74 What is the period of $6 \sin x = ?$
A. π
B. $-\pi$
C. $\pi/2$
D. 2π
- 75 What is the period of $\cos 6x = ?$
A. $\pi/2$
B. $\pi/3$
C. $\pi/4$
D. π
- 76 What is the period of $\tan 4/3 x = ?$
A. $\pi/4$
B. $4\pi/3$
C. $7\pi/4$
D. $3\pi/4$
- 77 What is the period of $\sin 2x/3 \cos 4x = ?$
A. π
B. 2π
C. $\pi/2$
D. $\pi/3$
- 78 The period of $\sin x/2 = \cos x/3$ is
A. $2p$
B. $12p$
C. $13p$
D. $7p$
- 79 The period of $\cot 8x$ is
A. $\pi/10$
B. $9\pi/7$
C. $\pi/9$
D. $\pi/8$
- 80 The period of the trigonometric function $y = \sin x \cos x$ is
A. 2π
B. π
C. 4π
D. $\pi/2$
- 81 The number of x-intercepts of $y = \sin x$ in his period
A. 0
B. 1
C. 2
D. 3
- 82 graph of sine function is bounded between lines
A. $y \pm 1 = 0$
B. $x \pm 1 = 0$
C. $x \pm y - 0$
D. None of these
- 83 graph of trigonometric function $y = \sec x$ does not meet
A. x-axis
B. y-axis
C. both axis
D. None of these
- 84 Domain of $\sin x$ is _____
- 85 Domain of $\csc x$ is _____
- 86 Domain of $\cos x$ is _____
- 87 Domain of $\sec x$ is _____
- 88 Domain of $\tan x$ is _____
- 89 Domain of $\cot x$ is _____
- 90 Range of $\sin x$ is _____
A. $[-1, 1]$
B. R
C. Negative real numbers
D. None of these
- 91 Range of $\csc x$ is _____
A. $\{-1, 1\}$
B. R
C. Negative real numbers
D. $R - \{x | -1 < x < 1\}$

A. $[-1, 1]$

- 92 Range of $\cos x$ is _____
B. R
C. Negative real numbers
D. $R - \{x | -1 < x < 1\}$
- 93 Range of $\sec x$ is _____
A. $[-1, 1]$
B. R
C. Negative real numbers
D. $R = \{x | -1 < x < 1\}$
- 94 Range of $\tan x$ is _____
A. $[-1, 1]$
B. R
C. Negative real numbers
D. $R - \{x | -1 < x < 1\}$
- 95 Range of $\cot x$ is _____
A. $[-1, 1]$
B. R
C. Negative real numbers
D. $R - \{x | -1 < x < 1\}$
- 96 Period of $\sin x$ is _____
- 97 Period of $\cos x$ is _____
- 98 Period of $\tan x$ is _____
- 99 Period of $\csc x$ is _____
- 100 Period of $\sec x$ is _____
- 101 Period of $\cot x$ is _____
- 102 Period of $\sin 3x$ is _____
- 103 Period of $\cos 2x$ is _____
- 104 Period of $\tan 4x$ is _____
- 105 Question Image _____
- 106 Question Image _____
- 107 Question Image _____
- 108 Period of $3 \sin x$ is _____
- 109 Period of $2 \cos x$ is _____
- 110 Question Image _____
A. $[-3, 3]$
B. R
C. Positive real numbers
D. None of these
- 111 Domain of $3 \sin x$ is _____
A. $[-2, 2]$
B. R
C. Negative real numbers
D. None of these
- 112 Domain of $2 \cos x$ is _____
A. $[-2, 2]$
B. R
C. Positive real numbers
D. None of these
- 113 Range of $2 \tan x$ is _____
A. $[-2, 2]$
B. $-1 < x < 1$
C. R
D. None of these
- 114 Range of $3 \sin x$ is _____
A. $[-3, 3]$
B. $[-1, 1]$
C. R
D. None of these
- 115 Range of $3 \cot x$ is _____
A. $[-1, 1]$
B. $[-3, 3]$
C. R
D. None of these
- 116 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 $f(x + p) =$ _____
A. $f(p)$
B. $f(x)$
C. $f(0)$
D. None of these
- 117 Domain of $\sin \theta$ is _____
A. Set of real numbers
B. Set of complex numbers
C. Set of natural numbers
D. Set of even numbers
- 118 Domain of $\cos \theta$ is _____
A. Set of odd numbers
B. Set of integers
C. Set of real numbers

- 119 Range of $\sin\theta$ is
- 120 Range of $\cos\theta$ is
- 121 Domain of $\cot\theta$ is
- 122 Range of $\tan\theta$ is
- A. Set of complex numbers
 B. Set of real numbers
 C. Set of odd numbers
 D. Set of positive integers only
- 123 Range of $\cot\theta$ is
- A. (+"><i> ∞ </i>)
 B. (-1 to +1)
 C. (-5 to +5)
 D. Set of even numbers only
- 124 Domain of $\sec\theta$ is
- 125 Domain of $\csc\theta$ is
- 126 Range of $\sec\theta$ is
- A. $Z - \{x \mid -1 < x < 1\}$
 B. $W - \{x \mid -1 < x < 1\}$
 C. $R - \{x \mid -1 < x < 1\}$
 D. R
- 127 Range of $\csc\theta$ is
- A. $W - \{y \mid -1 < y < 1\}$
 B. $R - \{y \mid -1 < y < 1\}$
 C. O - $\{y \mid -1 < y < 1\}$
 D. R
- 128 Period of Sine and Cosine function is
- A. "><i>\pi</i>
 B. 2"><i>\pi</i>
 C. -"><i>\pi</i>
 D. -2"><i>\pi</i>
- 129 Period of Tangent function is
- A. 0°
 B. "><i>\pi</i>
 C. "><i>\pi</i>
 D. 2"><i>\pi</i>

130 Period of Cotangent function is

- A. π
- B. $-\pi$
- C. 0
- D. -2π

131 The function sine and Cosine have the closed internal as their range

- A. $[1, 0]$
- B. $[-1, 1]$
- C. $[0, 1]$
- D. $[-1, 2]$

132 Domain of tangent function is

- A. $-\infty < x < \infty$
- B. $x \neq \frac{\pi}{2}$
- C. $y \neq \frac{\pi}{2}$
- D. None of above

133 The range of $y = \cot x = \underline{\hspace{2cm}}$

- A. $[1, -1]$
- B. $[-1, 1]$
- C. $[0, -1]$
- D. $\{x | x \neq \frac{\pi}{2} + k\pi, k \in \mathbb{Z}\}$

135 The range of $y = \sin x$ is $\underline{\hspace{2cm}}$

- A. Set of real numbers
- B. Rational
- C. Irrational no.
- D. None of above

136 The Domain of $y = \sin x$ is $\underline{\hspace{2cm}}$

- A. $\{x | x \neq \frac{\pi}{2} + k\pi, k \in \mathbb{Z}\}$
- B. $\{x | x \neq 0\}$
- C. $\{x | x \neq \frac{\pi}{2}\}$
- D. $\{x | x \neq \frac{\pi}{2} + k\pi, k \in \mathbb{Z}\} \cup \{0\}$

137 $\tan(\pi - \theta) = \underline{\hspace{2cm}}$

138 The period of cosec $10x$ is _____

D. - cotθ

139 The period of $\tan [x/3]$ is _____

A. 2π

B. 4π

C. 3π

D. 5π

140 Tangent is a periodic function and its period is _____

A. 2π

B. 3π

C. π

D. 4π

141 Sine is a periodic function and its period is _____

A. π

B. s

C. 2π

D. <div style="text-align: start;">4π

142 The period of $\tan x/7$ is

A. 3π
B. 7π
C. 15π
D. 5π

143 The period of $2 \cos x$ is

A. 30π
B. 7π
C. 5π
D. 2π

144 The period of $|\sin 2x|$ is

A. $\pi/2$
B. $-\pi/2$

- 145 The period of $|\sin 2x|$ is
C. π
D. $\pi/3$
A. $\pi/2$
B. $-\pi/2$
C. π
D. $\pi/3$
- 146 The period of $\cos(7x-5)$ is
A. $\pi/7$
B. $7\pi/2$
C. $\pi/2$
D. $2\pi/7$
- 147 The period of $3 \sin x$ is
A. 2π
B. 9π
C. 3π
D. 5π
- 148 Tangent isfunction
A. Inverse
B. one-one
C. in-to
D. Periodic
- 149 2π is the period of
A. $\sin x$
B. $\tan x$
C. $\cot x$
D. all circular function
- 150 The range of the tangent function is
A. all real numbers
B. $-1 \leq x \geq 1$
C. natural number
D. $x > +\infty$
- 151 The period of the function $\csc x/4$ is
A. $4x$
B. $\pi/4$
C. 8π
D. $\pi/8$
- 152 What is the period of $5 \cot x = ?$
A. π
B. $-\pi$
C. $\pi/2$
D. 2π
- 153 What is the period of $6 \sin x = ?$
A. π
B. $-\pi$
C. $\pi/2$
D. 2π
- 154 What is the period of $\cos 6x = ?$
A. $\pi/2$
B. $\pi/3$
C. $\pi/4$
D. π
- 155 What is the period of $\tan 4/3 x = ?$
A. $\pi/4$
B. $4\pi/3$
C. $7\pi/4$
D. $3\pi/4$
- 156 What is the period of $\sin 2x/3 \cos 4x = ?$
A. π
B. 2π
C. $\pi/2$
D. $\pi/3$
- 157 The period of $\sin x/2 = \cos x/3$ is
A. $2p$
B. $12p$
C. $13p$
D. $7p$
- 158 The period of $\cot 8x$ is
A. $\pi/10$
B. $9\pi/7$
C. $\pi/9$
D. $\pi/8$