TRIGONOMETRIC FUNCTIONS AND THEIR GRAPHS

MULTIPLE CHOICE QUESTIONS

(1) Period of $3 \sin \frac{x}{3}$ is:

(a) π (b) 2π

(c) 3π (d) 6π

[Lahore Board 2005]

(2) Range of $7 \sin x$ is:

(a) $[-7, 7]$ (b) $(-7, 7)$

(c) $[-1, 1]$ (d) None of these

[Lahore Board 2005]

(3) Cotangent is periodic function of period:

(a) π (b) 2π

(c) 3π (d) $\frac{\pi}{2}$

[Lahore Board 2005]

(4) Period of $\tan x$ is:

(a) 2π (b) $2n\pi$, $n \in Z$

(c) π (d) None of these

[Gujranwala Board 2005]

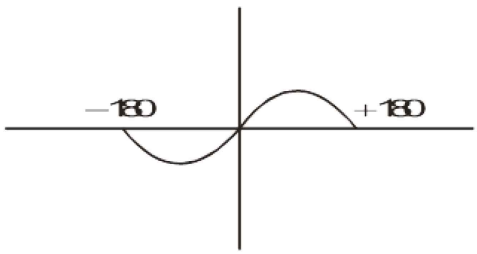
(5) Sine is periodic function whose period is:

(a) π (b) 2π

(c) 3π (d) $\frac{\pi}{2}$

[Gujranwala Board 2005]

(6) The graph



represents the function from −180 to +180

(a) sin x (b) cos x

(c) tan x (d) cot x

[Gujranwala Board 2005, Lahore Board 2015]

(7) Range of sin x is:

(a) π (b) $[-1, 1]$

(c) R (d) None of these

[Gujranwala Board 2005]

(8) The range of cos x is:

(a) $[0, 1]$ (b) R

(c) $[-1, 1]$ (d) $[-1, 0]$

[Gujranwala Board 2006]

(9) Domain of cot θ is:

(a) $\theta \in R$ but $\theta \neq n\pi$, $n \in Z$ (b) $\theta \in R$ but $\theta \neq (2n + 1)\frac{\pi}{2}$, $n \in Z$

(c) $\theta \notin R$ (d) Neon of these

[Gujranwala Board 2006]

(10) The period of $\cos \frac{x}{5}$ is:

(a) 10π (b) $\frac{2\pi}{5}$

(c) 2π (d) None of these

[Gujranwala Board 2006]

(11) The period of $\cot \pi x$ is:

(a) 1 (b) 2

(c) π (d) None

[Gujranwala Board 2006]

(12) Domain of cos x is:

(a) Z (b) Q

(c) R (d) None of these

[Lahore Board 2006]

(13) Period of y = sec x is:

(a) π (b) 2π

(c) 3π (d) $\frac{\pi}{2}$

[Lahore Board 2006]

(14) Period of $\tan\left(\frac{x}{7}\right)$ is:

(a) π (b) $\frac{\pi}{7}$

(c) 7π (d) $\pi + 7$

[Gujranwala Board 2007]

(15) The period of tan4x is:

(a) $\frac{\pi}{4}$ (b) $\frac{\pi}{2}$

(c) π (d) 2π

[Gujranwala Board 2007]

(16) Period of sin3x is:

(a) 3π (b) 2π

(c) $\frac{\pi}{3}$ (d) $\frac{2\pi}{3}$

[Lahore Board 2007]

(17) Domain of y = cos x is:

(a) $-\infty < x < +\infty$ (b) $-1 \leq y \leq 1$

(c) $0 < x < \infty$ (d) $-\infty < x < 0$

[Lahore Board 2008]

(18) Period of sine function is:

(a) π (b) $-\pi$

(c) 2π (d) 0

[Lahore Board 2008]

(19) The period of cos x is:

(a) π (b) 2π

(c) 3π (d) $\frac{\pi}{2}$

[Gujranwala Board 2008]

(20) Range of y = sin x equals:

(a) $-1 < y < 1$ (b) $y \geq 1$ or $y \leq -1$

(c) $-\infty < y < \infty$ (d) $-1 \leq y \leq 1$

[Gujranwala Board 2008]

(21) Domain of $\cot\theta$ =

(a) $-\infty < \theta < \infty$, $\theta \neq n\pi$, $n \in Z$ (b) $-\infty < \theta < \infty$, $\theta \neq \left(\frac{2n+1}{2}\right)\pi$

(c) $-1 < \theta < 1$ (d) $\theta \geq 1$ or $\theta \leq -1$

[Lahore Board 2010]

(22) The range of y = cosx is:

(a) $-1 \leq x \leq 1$ (b) $-\infty < x < +\infty$

(c) $-1 \leq y \leq 1$ (d) $-\infty < y < +\infty$

[Lahore Board 2010]

(23) The smallest positive integer P for which f(P + x) = f(x) is called:

(a) Domain (b) Range

(c) Co-domain (d) Period

[Gujranwala Board 2010]

(24) The domain of sin x is:

(a) [−1, 1] (b) $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$

(c) R (d) Q

[Lahore Board 2011]

(25) The graphs of trigonometric functions, within their domains are:

(a) Continuous (b) Discontinuous

(c) Co-terminal (d) None of these

(26) Domain of y = cos x is:

(a) $-\infty < x < \infty$ (b) $-1 \leq x \leq 1$

(c) $R - \{x|x = n\pi\}$ $n \in z$ (d) $R - \{x|x = 2n\pi\}$ $n \in z$

[Lahore Board 2012]

(27) The period of $\tan \frac{x}{7}$ is:

(a) π (b) 7π

(c) $\frac{\pi}{7}$ (d) $\pi + 7$ **[Lahore Board 2012]**

(28) The period of $\tan \frac{x}{3}$ is:

(a) π (b) 2π

(c) 3π (d) None of these

[Lahore Board 2013]

(29) Period of 3 sin 3x is:

(a) 2π (b) $\frac{2\pi}{3}$

(c) $\frac{3\pi}{2}$ (d) 3π **[Lahore Board 2013]**

(30) In the graphs of tanx ; the dashes lines are:

(a) Horizontal asymptotes (b) Lines

(c) Vertical asymptotes (d) Periodic

(31) Point (30° , 0.87) lies on:

(a) y = cosx (b) y = sinx

(c) y = tanx (d) None of these

(32) Trigonometric function y = cosec x meet x-axis at x =

(a) 30° (b) 60°

(c) 90° (d) None

(33) All the trigonometric functions repeat their value. This behaviour is called:

(a) Period (b) Periodicity

(c) Continuity (d) None of these

(34) $\sin(2\pi + x)$ =

(a) $\sin(x + 4\pi)$ (b) $\sin(x + 3\pi)$

(c) $\cos(2\pi + x)$ (d) $\cos(3\pi + x)$

(35) Period of $\cos \frac{x}{2}$ = _____

(a) π (b) 2π

(c) 4π (d) 6π **[Lahore Board 2014]**

(36) Period of $\sin \frac{x}{3}$ is:

(a) π (b) 3π

(c) $\frac{2\pi}{3}$ (d) 6π **[Lahore Board 2014]**

Answers

(1)	d	*(2)*	a	*(3)*	a	*(4)*	c	*(5)*	b
(6)	a	*(7)*	c	*(8)*	b	*(9)*	a	*(10)*	a
(11)	a	*(12)*	c	*(13)*	b	*(14)*	c	*(15)*	a
(16)	d	*(17)*	a	*(18)*	c	*(19)*	b	*(20)*	d
(21)	a	*(22)*	c	*(23)*	d	*(24)*	c	*(25)*	a
(26)	a	*(27)*	b	*(28)*	c	*(29)*	b	*(30)*	c
(31)	a	*(32)*	d	*(33)*	b	*(34)*	a	*(35)*	c
(36)	d								