

Choose the correct answer.

1. Domain of  $\cos ecx$  is
 

|                           |  |
|---------------------------|--|
| (a) $\mathbb{R}$          | (b) $\mathbb{R} - \{x \mid x = n\pi, n \in \mathbb{Z}\}$ |
| (c) negative real numbers | (d) none of these  |
2. Domain of  $\tan x$  is
 

|   |  |
|---|--|
| (a) $\mathbb{R}$  | (b) $\mathbb{R} - \{x \mid x = n\pi, n \in \mathbb{Z}\}$ |
| (c) $\mathbb{R} - \{x \mid x = (2n+1)\frac{\pi}{2}, n \in \mathbb{Z}\}$ | (d) none of these  |
3. Domain of  $\cot x$  is
 

|  |   |
|--|---|
| (a) $\mathbb{R} - \{x \mid x = n\pi, n \in \mathbb{Z}\}$ | (b) $\mathbb{R} - \{x \mid x = (2n+1)\frac{\pi}{2}, n \in \mathbb{Z}\}$ |
| (c) set of real numbers                                  | (d) none of these   |
4. Range of  $\cos ecx$  is
 

|              |                  |                       |  |
|--------------|------------------|-----------------------|--|
| (a) $[-1,1]$ | (b) $\mathbb{R}$ | (c) negative real no. | (d) $\mathbb{R} - \{x \mid -1 < x < 1\}$ |
|--------------|------------------|-----------------------|--|
5. Range of  $\cos x$  is
 

|              |                  |                       |  |
|--------------|------------------|-----------------------|--|
| (a) $[-1,1]$ | (b) $\mathbb{R}$ | (c) negative real no. | (d) $\mathbb{R} - \{x \mid -1 < x < 1\}$ |
|--------------|------------------|-----------------------|--|
6. Range of  $\cot x$  is
 

|              |                  |                       |  |
|--------------|------------------|-----------------------|--|
| (a) $[-1,1]$ | (b) $\mathbb{R}$ | (c) negative real no. | (d) $\mathbb{R} - \{x \mid -1 < x < 1\}$ |
|--------------|------------------|-----------------------|--|
7. Period of  $\cos x$  is
 

|                     |           |            |            |
|---------------------|-----------|------------|------------|
| (a) $\frac{\pi}{2}$ | (b) $\pi$ | (c) $2\pi$ | (d) $4\pi$ |
|---------------------|-----------|------------|------------|
8. Period of  $\tan x$  is
 

|                     |           |            |            |
|---------------------|-----------|------------|------------|
| (a) $\frac{\pi}{2}$ | (b) $\pi$ | (c) $2\pi$ | (d) $4\pi$ |
|---------------------|-----------|------------|------------|
9. Period of  $\cos ecx$  is
 

|                     |           |            |            |
|---------------------|-----------|------------|------------|
| (a) $\frac{\pi}{2}$ | (b) $\pi$ | (c) $2\pi$ | (d) $4\pi$ |
|---------------------|-----------|------------|------------|
10. Period of  $\sin 3x$  is
 

|                     |                      |           |            |
|---------------------|----------------------|-----------|------------|
| (a) $\frac{\pi}{3}$ | (b) $\frac{2\pi}{3}$ | (c) $\pi$ | (d) $2\pi$ |
|---------------------|----------------------|-----------|------------|
11. Period of  $\tan 4x$  is
 

|           |                     |                     |            |
|-----------|---------------------|---------------------|------------|
| (a) $\pi$ | (b) $\frac{\pi}{2}$ | (c) $\frac{\pi}{4}$ | (d) $2\pi$ |
|-----------|---------------------|---------------------|------------|
12. Period of  $\cot \frac{x}{2}$  is
 

|           |                     |                     |            |
|-----------|---------------------|---------------------|------------|
| (a) $\pi$ | (b) $\frac{\pi}{2}$ | (c) $\frac{\pi}{4}$ | (d) $2\pi$ |
|-----------|---------------------|---------------------|------------|
13. Period of  $\sin \frac{x}{3}$  is
 

|           |            |                      |            |
|-----------|------------|----------------------|------------|
| (a) $\pi$ | (b) $3\pi$ | (c) $\frac{2\pi}{3}$ | (d) $6\pi$ |
|-----------|------------|----------------------|------------|

14. Period of  $\cos ec \frac{x}{5}$  is  
 (a)  $\pi$  (b)  $5\pi$  (c)  $10\pi$  (d)  $2\pi$
15. Period of  $2 \cos x$  is  
 (a)  $\frac{\pi}{2}$  (b)  $\pi$  (c)  $2\pi$  (d)  $4\pi$
16. Curves of the Trigonometric functions repeat after fixed intervals because trigonometric functions are  
 (a) simple (b) linear (b) quadratic (d) periodic
17. Domain of  $3 \sin x$  is  
 (a)  $[-3,3]$  (b)  $\mathbb{R}$  (c) positive real no. (d) none of these
18. Range of  $3 \sin x$  is  
 (a)  $[-3,3]$  (b)  $\mathbb{R}$  (c) positive real no. (d) none of these
19. Range of  $2 \tan x$  is  
 (a)  $\mathbb{R}$  (b)  $[-1,1]$  (c)  $\left[-\frac{1}{2}, \frac{1}{2}\right]$  (d) none of these
20. 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 that  $f(x + p) =$   
 (a)  $f(p)$  (b)  $f(x)$  (c)  $f(0)$  (d) none of these
21. For the graph of the trigonometric functions the measures of the angles are taken along the  
 (a)  $x$ -axis (b)  $y$ -axis (c)  $z$ -axis (d) none of these
22. For the graph of the trigonometric functions the values of the trigonometric functions are taken along  
 (a)  $x$ -axis (b)  $y$ -axis (c)  $z$ -axis (d) none of these
23. The graph of  $y = \cos x$  lies between the horizontal lines  $y = -1$  and  
 (a)  $y = +1$  (b)  $y = 0$  (c)  $y = 2$  (d)  $y = -2$
24. The period of  $\cot 8x$  is  
 (a)  $\pi$  (b)  $\frac{\pi}{2}$  (c)  $\frac{\pi}{4}$  (d)  $\frac{\pi}{8}$
25. The graph of  $y = \sin x$  lies between the horizontal lines  $y = +1$  and  
 (a)  $y = +2$  (b)  $y = 0$  (c)  $y = 2$  (d)  $y = -1$

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