

GATE Aptitude Practice Questions Logarithm

Q.No. 1 The radius as well as the height of a circular cone increases by 10%. The percentage increase in its volume is _____.

- (A) 17.1 (B) 21.0 (C) 33.1 (D) 72.8

Q.No. 2 The value of the expression $\frac{1}{1+\log_u vw} + \frac{1}{1+\log_v wu} + \frac{1}{1+\log_w uv}$ is _____.

- (A) -1 (B) 0 (C) 1 (D) 3

Q.No. 3 For non-negative integers, a, b, c , what would be the value of $a + b + c$ if $\log a + \log b + \log c = 0$?

- (A) 3 (B) 1 (C) 0 (D) -1

Q.No. 4 Given that $\frac{\log P}{y-z} = \frac{\log Q}{z-x} = \frac{\log R}{x-y} = 10$ for $x \neq y \neq z$, what is the value of the product PQR ?

- (A) 0 (B) 1 (C) xyz (D) 10^{xyz}

Q.No. 5 If $pqr \neq 0$ and $p^{-x} = \frac{1}{q}, q^{-y} = \frac{1}{r}, r^{-z} = \frac{1}{p}$, what is the value of the product xyz ?

- (A) -1 (B) $\frac{1}{pqr}$ (C) 1 (D) pqr

Q.No. 6 What is the value of x when $81 \times \left(\frac{16}{25}\right)^{x+2} \div \left(\frac{3}{5}\right)^{2x+4} = 144$?

- (A) 1 (B) -1 (C) -2 (D) Cannot be determine

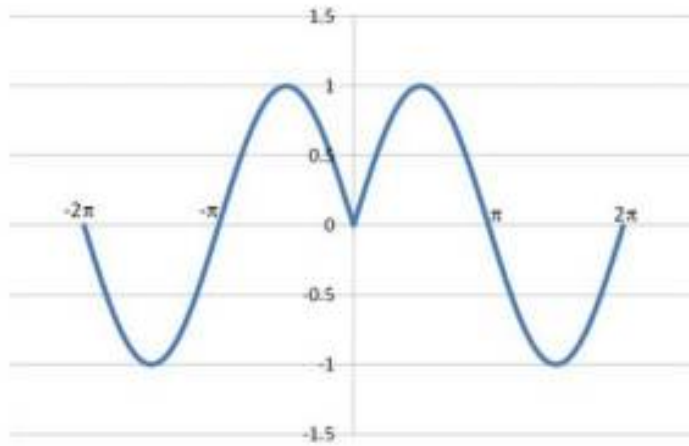
Q.No. 7 If the radius of a right circular cone is increased by 50%, its volume increases by

- (A) 75% (B) 100% (C) 125% (D) 237.5%

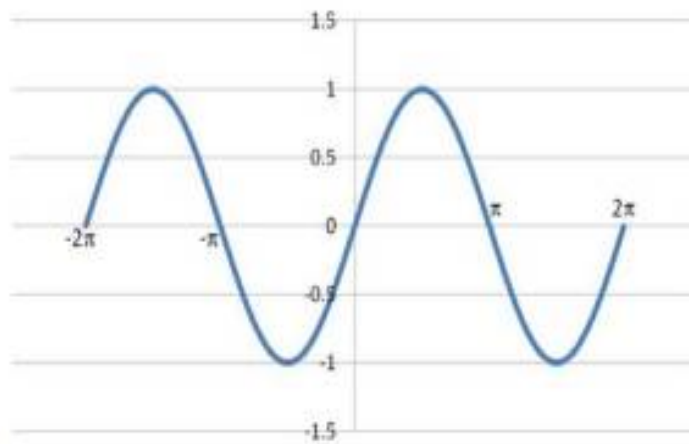
Q.No. 8 If $q^{-a} = \frac{1}{r}$ and $r^{-b} = \frac{1}{s}$ and $s^{-c} = \frac{1}{q}$, the value of abc is ____.

- (A) $(rqs)^{-1}$ (B) 0 (C) 1 (D) $r+q+s$

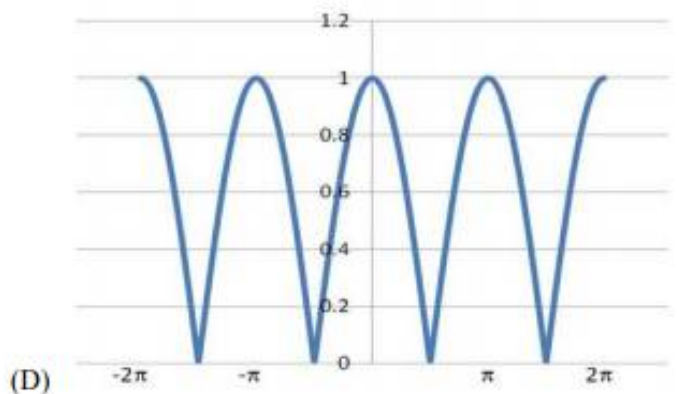
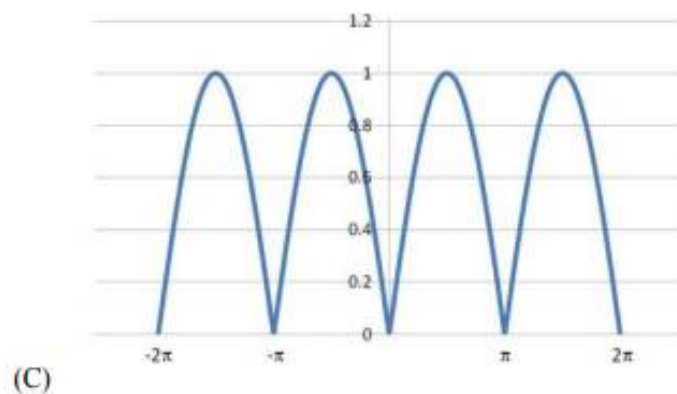
Q.No. 9 Which of the following curves represents the function $y = \ln(|e^{|\sin(x)|}|)$ for $|x| < 2\pi$?
 Here, x represents the abscissa and y represents the ordinate.



(A)



(B)



Q.No. 10 If $\log_x (5/7) = -1/3$, then the value of x is

- (A) 343/125
- (B) 125/343
- (C) -25/49
- (D) -49/25

Q.No. 11 $\log \tan 1^\circ + \log \tan 2^\circ + \dots + \log \tan 89^\circ$ is....

- (A) 1
- (B) $1/\sqrt{2}$
- (C) 0
- (D) -1

Q.No. 12 A value of x that satisfies the equation $\log x + \log (x - 7) = \log (x + 11) + \log 2$ is

(A) 1

(B) 2

(C) 7

(D) 11

Q.No. 13 If $(1.001)^{1259} = 3.52$ and $(1.001)^{2062} = 7.85$, then $(1.001)^{3321} =$

(A) 2.23

(B) 4.33

(C) 11.37

(D) 27.64

Answer Key

Q. No.	Ans.
1	C
2	C
3	A
4	B
5	C
6	B
7	C
8	C
9	C
10	A
11	C
12	D
13	D



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