



spardhaguru2022



Spardhaguru Current affairs



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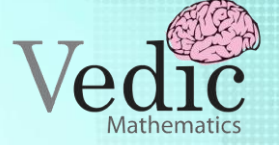
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1) If $a = 7 - 4\sqrt{3}$, the value of $a^{\frac{1}{2}} + a^{-\frac{1}{2}}$ is :

- a) 4 b) $2\sqrt{3}$
c) 7 d) $3\sqrt{3}$

2) $4^{61} + 4^{62} + 4^{63} + 4^{64}$ is divisible by:

- a) 3 b) 13
c) 11 d) 17

3) If $x = 3^{\frac{1}{3}} - 3^{-\frac{1}{3}}$, then $(3x^3 + 9x)$ is equal to :

- a) 6 b) 8
c) 7 d) 5

4) If $2^{x+4} - 2^{x+2} = 3$, then the value of 'x' is :

- a) 2 b) -2
c) -1 d) 0

5) Arrange the following in ascending order

$3^{34}, 2^{51}, 7^{17}$ we get:

- a) $7^{17} > 2^{51} > 3^{34}$ b) $2^{51} > 3^{34} > 7^{17}$
c) $3^{34} > 7^{17} > 2^{51}$ d) $3^{34} > 2^{51} > 7^{17}$

6) The unit digit in the product

$(2467)^{153} \times (341)^{72}$ is :

- a) 3 b) 1
c) 9 d) 7

7) a tap is dripping at a constant rate into a container. The level (L cm) of the water in the container is given by the equation $L = 2 - 2^t$, where t is time taken in hours. Then the level of water in the container at the state is :

- a) 1cm b) 4cm
c) 2cm d) 0cm

8) If $\sqrt{3n} = 2187$ then the value of n is:

- a) 14 b) 16
c) 15 d) 13

9) If $3^{x+8} = 27^{2x+1}$, the value of x is :

- a) 3 b) 1
c) -2 d) 7

10) What will be the remainder when $252^{126} + 244^{152}$ is divisible by 10?

- a) 6 b) 8
c) 0 d) 4

11) Which of the following number is not a factor of $5^p 7^q$ ($p \neq 0, q \neq 0$)

- a) 175 b) 735
c) 1225 d) 35

12) If $m^n = 169$, what is the value of $(m+1)^{(n-1)}$?

- a) 13 b) 170
c) 196 d) 14

13) If $27^{2x-1} = (243)^3$ then the value of x is :

- a) 6 b) 9
c) 7 d) 3

14) $(36)^{\frac{1}{6}}$ is equal to :

- a) 6 b) $\sqrt[3]{6}$
c) $\sqrt{6}$ d) 1

15) If $2^x = 3^y = 6^{-z}$ then $\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}\right)$ is equal to :

- a) 1 b) $-\frac{1}{2}$
c) $\frac{3}{2}$ d) 0

16) If $3^{2x-y} = 3^{x+y} = \sqrt{27}$, then the value of 3^{x-y} will be:

- a) $\frac{1}{\sqrt{3}}$ b) $\frac{1}{\sqrt{27}}$
c) $\sqrt{3}$ d) 3

17) The value of

$(3 + 2\sqrt{2})^{-3} + (3 - 2\sqrt{2})^{-3}$ is :

- a) 180 b) 189
c) 108 d) 198





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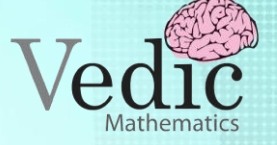
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18) If $(2000)^{10} = 1.024 \times 10^k$, then the value of k is :

- a) 30 b) 31
c) 34 d) 33

19) $\left(\frac{8}{125}\right)^{-\frac{4}{3}}$ Simplifies to :

- a) $\frac{625}{8}$ b) $\frac{16}{625}$
c) $\frac{625}{32}$ d) $\frac{625}{16}$

20) If $\left(x + \frac{1}{x}\right) = 2$, then the value of $\left(x^{99} + \frac{1}{x^{99}} - 2\right)$

is :

- a) 0 b) 4
c) 2 d) - 2

