

MATHS ACADEMY-BY PRACHI MA'AM
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XI

Log MCQs

1. The value $\left(5\frac{1}{16}\right)^{-\frac{3}{4}}$ is
a) $\frac{4}{9}$ b) $\frac{9}{4}$ c) $\frac{27}{8}$ d) $\frac{8}{27}$
2. $\sqrt[4]{\sqrt[3]{2^2}}$ is equal to
a) $2^{-\frac{1}{6}}$ b) 2^{-6} c) $2^{\frac{1}{6}}$ d) 2^6
3. The product $\sqrt[3]{2} \cdot \sqrt[4]{2} \cdot \sqrt[12]{32}$ equals
a) $\sqrt{2}$ b) 2 c) $^{12}\sqrt{2}$ d) $^{12}\sqrt{32}$
4. The value $\sqrt[4]{(81)^{-2}}$ is
a) $\frac{1}{9}$ b) $\frac{1}{3}$ c) 9 d) $\frac{1}{81}$
5. Value of $(256)^{0.16} \times (256)^{0.09}$ is
a) 4 b) 16 c) 64 d) 256.25
6. Which of the following is equal to x ?
a) $x^{\frac{12}{7}} - x^{\frac{5}{7}}$ b) $\sqrt[12]{(x^4)^{\frac{1}{3}}}$ c) $(\sqrt{x^3})^{\frac{2}{3}}$ d) $x^{\frac{12}{7}} \times x^{\frac{7}{12}}$
7. If $\log_{\sqrt{3}} 27 = x$, then the value of x is
a) 3 b) 4 c) 6 d) 9
8. If $\log_5(0.04) = x$, then the value of x is
a) 2 b) 4 c) -4 d) -2
9. If $\log_{0.5} 64 = x$, then the value of x is
a) -4 b) -6 c) 4 d) 6
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10. If $\log_{\sqrt[3]{5}} x = -3$, then the value of x is

- a) $\frac{1}{5}$ b) $-\frac{1}{5}$ c) -1 d) 5

11. If $\log(3x + 1) = 2$, then the value of x is

- a) $\frac{1}{3}$ b) 99 c) 33 d) $\frac{19}{3}$

12. The value $2 + \log_{10}(0.01)$ is

- a) 4 b) 3 c) 1 d) 0

13. The value of $\frac{\log 8 - \log 2}{\log 32}$ is

- a) $\frac{2}{5}$ b) $\frac{1}{4}$ c) $-\frac{2}{5}$ d) $\frac{1}{3}$

14. Characteristic of $\log 0.0003798$ is

- a) 3 b) $\bar{3}$ c) 3 d) $\bar{4}$

15. Characteristic of $\log 48.75$ is

- a) 1 b) 2 c) 3 d) 4

16. If $\log 0.0007392 = -3.1313$, then $\log 73.92$ is

- a) 1.1313 b) 1.8687 c) 2.1313 d) 2.8687

FILL IN THE BLANKS:

17. The value of $\frac{x^{-1}y^{-1}}{x^{-1}+y^{-1}}$ is equal to _____

18. The value of $\left[(64)^{\frac{2}{3}} \cdot 2^{-2} \div 8^0 \right]^{-\frac{1}{2}}$ = _____

19. $(\sqrt{32} - \sqrt{5})^{\frac{1}{3}} (\sqrt{32} + \sqrt{5})^{\frac{1}{3}}$ = _____

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20. The value of $\sqrt[lm]{\frac{x^l}{x^m}} \cdot \sqrt[mn]{\frac{x^m}{x^n}} \cdot \sqrt[nl]{\frac{x^n}{x^l}} =$ _____
21. If $\sqrt{\left(8^0 + \frac{2}{3}\right)} = (0.6)^{2-3x}$, then $x =$ _____
22. If $\log_{10} x = a$ and $\log_{10} y = b$, then $xy =$ _____
23. If $2 \log_{10} x + \frac{1}{2} \log_{10} y = 1$, then y in terms of $x =$ _____
24. If $\frac{\log x}{2} = \frac{\log y}{3}$, then the value of $\frac{y^4}{x^6}$ is _____
25. If $\log_3(x + 1) - 1 = 3 + \log_3(x - 1)$, then $x =$ _____
26. Standard form of 0.0001359 is _____
27. Usual form of 7.39×10^5 is _____
17. If $\log 0.0009265 = \bar{4}.9668$, then $\log 9265 =$ _____

LOG AND INDICES

ANSWER KEY

1 (d)	2 (c)	3 (b)	4 (a)	5 (a)
6 (c)	7 (c)	8 (d)	9 (b)	10 (a)
11 (c)	12 (d)	13 (a)	14 (d)	15 (a)
16 (b)				