01. A & B both multiplied 3 a few times. A multiplied it 7 times and B multiplied it 5 times. If both the results are multiplied together, then what will be the result? [A এবং B উভয়ই 3 কে কয়েকবার গুণ করে। A, 7 বার গুণ করে এবং B, 5 বার গুণ করে। উভয় গুণফলকে যদি গুণ করা হয় তাহলে গুণফল কত?]

A. $$3^7$$ B. $$3^12$$ C. $$3^5$$ D. None

02. $$\\\\frac{8^100}{8^99}$$ = ?

A. 2 B. 8 C. 4 D. 888888888

03. If $$(4x)^3$$ = 64, then $$x^3$$ = ?

A. 0 B. 4 C. 2 D. 1

04. If $$(\\\\frac{x}{3})^4$$ = 12, then $$x^4$$ = ?

A. 972 B. 846 C. 342 D. 974

05. What is $$8^3$$?

A. 83 B. 512 C. $$2^8$$ D. Both b & c

06. If $$2^9 = 8^x$$, then what’s x?

A. 3 B. 9 C. $$\\\\frac{1}{3}$$ D. $$\\\\frac{1}{9}$$

07. If $$3^{16} = x^{16}$$, then, x = ?

A. 4 B. 3 C. 2 D. $$\\\\frac{1}{4}$$

08. If $$x^2 – a^2$$ = 4a + 4, then x = ?

A. 4 B. a +2 C. –2 – a D. Both b & c

09. $$x^m$$ = k + 1. If m is an odd integer, then how many values are there for x?

A. 1 B. 2 C. m D. 0

10. $$\\\\text{If } \\\\log\_{10} x = 0, \\\\text{ then } x = ?$$

A. 10 B. 0 C. 1 D. None

11. $$\\\\log\_{5} 10 + \\\\log\_{5} 7= ?$$

A. $$\\\\log\_{5} 35 $$ B. $$\\\\log\_{5} 70 $$ C. $$\\\\log\_{5} 17 $$ D. $$\\\\log\_{25} 70 $$

12. $$\\\\log\_{9} 27 $$ + $$\\\\log\_{9} 3 $$ = ?

A. $$\\\\log\_{9} 27 $$ B. $$\\\\log\_{9} 24 $$ C. $$\\\\log\_{9} 18 $$ D. 1

13. $$\\\\log\_{2} 8 $$ = ?

A. $$\\\\log\_{2} 3 $$ B. 3 log 2 C. 3 D. None

14. $$\\\\log\_6 9 + \\\\log\_6 4 = ?$$

A. 2log6 B. 2 C. $$\\\\log\_{2} 6$$ D. None

15. $$(\\\\log\_p q)^{-1} = ?$$

A. $$\\\\frac{1}{\\\\log\_q p}$$ B. $$p^q$$ C. $$\\\\log\_q p$$ D. 1

16. If lnx = 5, then x = ?

A. 5e B. 5 C. $$e^5$$ D. none

17. How many digits are there on the number $$2^78^5{10}^59^9$$?

A. 19 B. 21 C. 20 D. undefined

18. A number has 30 digits on the left of the decimal point. What is the characteristic of the number’s log?

A. 31 B. 29 C. 30 D. None

19. If $$5^a$$ = 3125, then the value of $$5^(a–3)$$ is

A. 25 B. 125 C. 625 D. 1625

20. $$(2^8 )^(2^3 )$$= ?

A. $$2^11$$ B. $$2^16$$ C. $$2^48$$ D. $$2^64$$

21. $$(9x)^3 = ?$$

A. $$3^{3x}$$ B. $$3^(2+3x)$$ C. $$3^(6x)$$ D. $$729x^3$$

22. $$(2^3)^2 \\\\times 4^{-3} = ?$$

A. $$\\\\frac{1}{8}$$ B. $$\\\\frac{1}{2}$$ C. $$\\\\frac{2}{3}$$ D. 1

23. $$\\\\frac{55^5}{5^{55}} = ?$$

A. $$\\\\frac{11}{5^{50}}$$ B. $$\\\\frac{11}{5^{55}}$$ C. $$\\\\frac{11^5}{5^{50}}$$ D. $$\\\\frac{11^5}{5^{5}}$$

24. The number of digits in $$4^9 × 5^{17}$$, when expressed on usual form is -

A. 16 B. 17 C. 18 D. 19

25. If $$3^x$$ = 81, then x = ?

A. 1 B. 2 C. 3 D. 4

26. $$2^a.2^b.2^c = 256. What is the value of a+b+c ?$$

A. 16 B. 17 C. 8 D. 9

27. The value of √2 upto 3 decimal is ?

A. 1.41 B. 1.412 C. 1.413 D. 1.414

28. $$9^x + 9^x + 9^x + 9^x + 9^x + 9^x = ?$$

A. $$3^{2x+1}$$ B. $$2^{2x}$$ C. $$2 \\\\cdot 3^{2x}$$ D. $$2 \\\\cdot 3^{2x+1}$$

29. $$(9^x + 9^x + 9^x + 9^x + 9^x + 9^x)^k$$ = 1, then k = ?

A. 0 B. 1 C. 2x+1 D. 2

30. $$ \\\\text{If } 2^{abc} = \\\\frac{1}{8}, \\\\text{ then } a, b, c = ?$$

A. 1, –1, 3 B. $$\\\\frac{1}{2}$$, 2, –3 C. 3, 1, –1 D. All

31. $$ \\\\sqrt[m]{a^n} = ?$$

A. $$a^{\\\\frac{n}{m}}$$ B. $$\\\\frac{1}{a^{-\\\\frac{n}{m}}}$$ C. $$a^{mn}$$ D. Both a & b

32. $$(\\\\sqrt{11})^6 = ?$$

A. 33 B. 121 C. 1771561 D. 1331

33. $$\\\\frac{129^n}{129^{n-1}} = ?$$

A. $$129^{2n}$$ B. $$129^{2n-1}$$ C. $$129$$ D. $$\\\\frac{1}{129}$$

34. $$\\\\log\_4 5 × \\\\log\_5 4 = ?$$

A. 1 B. $$\\\\log\_5 4$$ C. $$5^4$$ D. None

35. $$log\_3 (\\\\frac{1}{27}) = ?$$

A. 3 B. $$\\\\frac{1}{3}$$ C. -3 D. none

36. $$log\_{\\\\sqrt{3}} 81 = ?$$

A. 6 B. 4 C. 8 D. 0

37. What is the 7 based logarithm of 7√7?

A. 7√7 B. 7 C. $${7^(\\\\frac{3}{2})$$ D. $$\\\\frac{3}{2}$$

38. If the logarithm of 144 is 4, then what is the base?

A. 6 B. 3√2 C. 2√3 D. 1

39. If $$\\\\log\_{10} x = –3$$, then x = ?

A. 3 B. 1000 C. 0.01 D. 0.001

40. $$3log\_{10} 3 + 2log\_{10} 2 + log\_{10} 2 = ?$$

A. $$\\\\log\_{10} 30$$ B. $$\\\\log\_{10} 5$$ C. $$\\\\log\_{10} 216$$ D. none

41. What is the characteristic of the common log of the number 32935632.923 ?

A. 8 B. 9 C. 0 D. 7

42. How many digits are there in the number 2^{10}5^{13}9^{5}8^{6} ?

A. 23 B. 22 C. 21 D. none

43. How many digits are there in the number $$99^{21}$$ ?

A. 41 B. 42 C. 40 D. none