Spardhaguru India Private Limited
Surds & Indices

1) Find the value of (256 x 4096)/(400 x 125 x 64) = ?
a) $7^5/8^7$ b) $8^5/6^7$
c) $4^5/5^5$ d) $7^5/6^7$

2) $(17)^{3.5} \times (17)^{?} = 17^8$
a) 2.29 b) 2.75
c) 4.25 d) 4.5

3) Given that $10^{0.48} = x$, $10^{0.70} = y$ and $x^z = y^2$, then the value of z is close to:
a) 145 b) 1.88
c) 2.9 d) 3.7

4) If $5^a = 3125$, then the value of $5^{(a-3)}$ is:
a) 25 b) 125
c) 625 d) 1625

5) If $3^{(x-y)} = 27$ and $3^{(x+y)} = 243$, then x is equal to:
a) 0 b) 2
c) 4 d) 6

6) Simplify $3^{-2} \times 81^{\frac{3}{4}} \div (729)^{\frac{-1}{3}}$
a) 9 b) 27
c) 81 d) None of the Above

7) $5^{2x-2} = 625$, find x
a) 1 b) 2
c) 3 d) 4

8) $\frac{14^{n+4}+7^{n+3}\times 2^{n+3}}{13\times 14^{n-1}+14^n}$
a) 2940 b) 2490
c) 2049 d) None of these

9) If $17^x = 4913$, find the value of 2^{2x-1}.
a) 16 b) 32
c) 64 d) 128

10) .If $5^{2x} = 15625$, find x^2
a) 9 b) 27
c) 81 d) None of these

11) $(\sqrt{3})^5 \times 9^2 = 3^x \times 3\sqrt{3}$, *then x equals*
a) 2 b) 3
c) 4 d) 5

12) If $2^{x-1}+2^{x+1}=320$,then x is equal to
a) 6 b) 8
c) 5 d) 7

13) If $a^{\frac{1}{m}} = b^{\frac{1}{n}} = c^{\frac{1}{p}}$ *and* $abc = 1$, *then* $m + n + p$ *is equal to*
a) 0 b) 2
c) 1 d) -2

14) The value of $x^{1/2}.y^{-1}.z^{2/3}$, when x = 9, y = 3, and z = 8 is
a) 18 b) 12
c) 6 d) 4

15) If m and n are whole numbers such that, $m^n = 121$, then the value of $(m-1)^{n+1}$ is
a) 1 b) 10
c) 121 d) 1000

16) The value of $\sqrt[8]{1+\sqrt{2}}.\sqrt[6]{3-2\sqrt{2}}$ equal to
a) $2-\sqrt{2}$ b) $\sqrt{2}-2$
c) $3-2\sqrt{2}$ d) 1

17) $(\frac{x^a}{x^b})^{(a+b)} \times (\frac{x^b}{x^c})^{(b+c)} \times (\frac{x^c}{x^a})^{(c+a)} = ?$
a) 0 b) x^{abc}
c) $x^{(a+b+c)}$ d) 1

18) $\frac{1}{1+x^{(b-a)}+x^{(c-a)}} + \frac{1}{1+x^{(a-b)}+x^{(c-b)}} + \frac{1}{1+x^{(b-c)}+x^{(a-c)}} = ?$
a) x^{a-b-c} b) 1
c) 0 d) 3

19) $\sqrt[3]{\sqrt[3]{a^3}}$ is equal to
a) a b) 1
c) $a^{1/3}$ d) a^3

20) The value of $5^{1/4} \times (125)^{0.25}$ is
a) $\sqrt{5}$ b) $5\sqrt{5}$

www.spardha.guru
No 8, 24th Block Manasi Nagar Beside of Bliss serviced Apartment, Mysuru, Karnataka 570029
info@spardha.guru
90711 54445, 90711 64446, 90711 74447

c) 5 d) 25

21) If $4^{2x} = \frac{1}{32}$ *then x is*

a) 5/4 b) 4/5

c) 3/5 d) None of these

22) $\frac{(0.6)^0-(0.1)^{-1}}{(\frac{3}{2^3})^{-1}.(\frac{3}{2})^3+(-\frac{1}{3})^{-1}}$ *is equal to*

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

c) $\frac{2}{3}$ d) $\frac{2}{3}$

23) $\frac{2^{n+4}-2.2^n}{2.2^{n+3}} + 2^{-3}$ *is equal to*

a) 2^{n+1} b) $-2^{n+1} + \frac{1}{8}$

c) $\frac{9}{8} - 2^n$ d) 1

24) If $3^{(x-y)} = 27$ *and* $3^{(x+y)} = 243$ *then x is equal to*

a) 0 b) 2

c) 4 d) 6

25) If $(\frac{a}{b})^{x-1} = (\frac{b}{a})^{x-3}$, *then the value of x is*

a) 3 b) 8

c) 2 d) 4

www.spardha.guru
No 8, 24th Block Manasi Nagar Beside of Bliss serviced Apartment, Mysuru, Karnataka 570029
info@spardha.guru
90711 54445, 90711 64446, 90711 74447