**Surds and Indices**

1. C:\Users\tsuser.PC\Desktop\final.png7 x 73  ÷ 7-3/2 = 7?/2a) 10 b) 12 c) 6 d) 3
2. C:\Users\tsuser.PC\Desktop\final.png2562.5 x 164.5 ÷ 641.6 = 4?   
   a) 12.4 b) 16.24 c) 14.2 d) 14
3. C:\Users\tsuser.PC\Desktop\final.png2x-1 + 2x+1 = 2560 , x = ?   
   a) 10 b) 16 c) 12 d) 13
4. C:\Users\tsuser.PC\Desktop\final.png= ?   
   a) 7 b) 6 c) 4 d) 9
5. C:\Users\tsuser.PC\Desktop\final.pngIf 2x = 3y = 6-z ; then + + = ?   
   a) 0 b) 1 c) d)
6. C:\Users\tsuser.PC\Desktop\final.pngIf 8a = 10, 10b = 12, 12c = 14, 14d = 16, then find the value of abcd   
   a) b) c) d)
7. C:\Users\tsuser.PC\Desktop\final.pngWhat is the simplest value of + + +   
   a) – 1) b) () c) d)
8. C:\Users\tsuser.PC\Desktop\final.pngIf = 1.4142, find the value of 2 + + +   
   a) 1.4142 b) 2.8284 c) 28.284 d) 14.142
9. C:\Users\tsuser.PC\Desktop\final.pngIf x = , then the value of + = ?   
   a) b) c) 2 d)
10. C:\Users\tsuser.PC\Desktop\final.pngFind the value of - +   
    a) b) 0 c) 2 d)
11. If 2x = , then x equal to :   
    a) 5 b) 3 c) d)
12. If 3(x-y)  = 27 and 3(x+y) = 243, then x equal to:   
    a) 0 b) 2 c) 4 d) 6
13. If abc = 1, then ( + + ) = ?   
    a) 0 b) 1 c) d) ab
14. Number of prime factors in   
    a) 56 b) 66 c) 112 d) None of these
15. Number of prime factors in (216)3/5 x (2500)2/5 x (300)1/5 is :   
    a) 6 b) 7 c) 8 d) None of these
16. Given that 100.48 = x , 100.70 = y and xz = y2 , then the value of z is close to :   
    a) 1.45 b) 1.88 c) 2.9 d) 3.7
17. If = 27, then the value of n is:   
    a) 0 b) 2 c) 3 d) 4
18. If x 92 = 3n x 3 , then the value of n is:   
    a) 2 b) 3 c) 4 d) 5
19. If = 64, then the value of n is:   
    a) 2 b) 4 c) 6 d) 12
20. If 5 x 53 ÷ 5 -3/2 = 5a+2, then the value of a is:   
    a) 4 b) 5 c) 6 d) 8
21. 22n-1 = then the value of n is:   
    a) 3 b) 2 c) 0 d) -2
22. If ()x-1 = ()x-3, then the value of x is:   
    a) ½ b) 1 c) 2 d) 7/2
23. (25)7.5 x (5)2.5 ÷ (125)1.5  = 5?   
    a) 8.5 b) 13 c) 16 d) 17.5
24. (18)3.5 ÷ (27)3.5 x 63.5 = 2?   
    a) 3.5 b) 4.5 c) 6 d) 7
25. (64)-1/2 – (-32)-4/5 = ? a)1/8 b) 3/8 c) 1/16 d) 3/16
26. (17)3.5 X (17)? = (17)8a) 2.29 b) 2.75 c) 4.25 d) 4.5
27. (0.04)-15 = ?   
    a) 25 b) 125 c) 250 d) 625
28. (1000)7 ÷ 1018= ?   
    a) 10 b) 100 c) 1000 d) 10000
29. (2.4 x 103) ÷ (8 x 10-2) = ?   
    a) 3 x (10)-5 b) 3 x (10)-4 c) 3 x (10)5 d) 30
30. The value of + +   
    a) 102 b) 105 c) 107 d) 109

**Answers**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 - b | 2 - c | 3 - a | 4 - d | 5 - a | 6 - c | 7 - b | 8 - b | 9 - c | 10 – b |
| 11 - d | 12 - c | 13 - b | 14 – b | 15 – b | 16 – c | 17 – c | 18 – d | 19 – d | 20 – a |
| 21 - b | 22 - c | 23 - b | 24 – d | 25 – c | 26 – d | 27 – b | 28 – c | 29 – b | 30 – a |