Simplification

1. Simplify : $1+\frac{1}{1+\frac{2}{2+\frac{3}{1+\frac{4}{5}}}}$

(a) 28/17 (b) 15/7
(c) 23/17 (d) 38/17

2. Evaluate: $\frac{[9|\,3-5\,|-\,5\,|\,4\,|\div 10]}{-3\,(5)-2\times 4\div 2}$

(a) 9/10 (b) -(8/17)
(c) - (16/19) (d) 4/7

3. 45 – [4- {3 - (3 – 3 – 6)}] is equal to :

(a) 10 (b) 6
(c) 4 (d) 0

4. 1 – [5 – {2 + (5 + 6 – 2)2}] is equal to

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

5. Assume that $\sqrt{13}$ = 3.605 (approximately)$\sqrt{130}$ = 11.40 (approximately)find the value of :$\sqrt{1.3}$ + $\sqrt{1300}$ + $\sqrt{0.013}$ $\sqrt{13}$ = 3.605$\sqrt{130}$ = 11.40$\sqrt{1.3}$ + $\sqrt{1300}$ + $\sqrt{0.013}$

(a) 36.164 (b) 36.304
(c) 37.304 (d) 37.164

6. On simplification of $\frac{(2.644)^2-(2.356)^2}{0.288}$

(a) 1 (b) 4
(c) 5 (d) 6

7. Simplification of $\frac{(3.4567)^2-(3.4533)^2}{0.0034}$

(a) 0.02 (b) 0.03
(c) 0.003 (d) 3.0

8. The value of $\frac{(0.03)^2-(0.01)^2}{0.03-0.01}$

(a) 0.02 (b) 0.004
(c) 0.4 (d) 0.04

9. What is the square root of 0.09

(a) 0.3 (b) 0.03
(c) 0.03 (d) 3.0

10. $\frac{\sqrt{0.49}}{\sqrt{0.25}}+\frac{\sqrt{0.81}}{\sqrt{0.36}}$ *is equal to* +

(a) 49/10
(c)29/10
(c) 9/10 (d) 99/10

11. If the square root of 841 is 29, then 0.00000841 is equal to:

(a) 0.029 (b) 0.0029
(c) 0.00029 (d) 0.29

12. The square root of a positive number less than 100 lies between:

(a) 0 and 1000 (b) 0 and 10
(c) -10 and 10 (d) - 100 and 100

13. By which smallest number should 5808 be multiplied so that it becomes a perfect square?

(a) 2 (b) 7
(c) 11 (d) 3

14. By which smallest number 1323 must be multiplies, so that it becomes a perfect cube?

(a) 2 (b) 3
(c) 5 (d) 7

15. On simplification 3034 – (1002 ÷ 20.04) is equal to

(a) 3029 (b) 2984
(c) 2993 (d) 2543

16. When $\left(\frac{1}{2}-\frac{1}{4}+\frac{1}{5}-\frac{1}{6}\right)$is divided by$\left(\frac{2}{5}-\frac{5}{9}+\frac{3}{5}-\frac{7}{18}\right)$ the result is:

(a) 51/10 (b) 37/18
(c) 19/6 (d) 33/10

17. ($\sqrt{72}$ - $\sqrt{18}$ ÷$\sqrt{12}$)is equal to:

(a) 6 (b) $\sqrt{3}/2$
(c) $\sqrt{2}/3$ (d) $\sqrt{6}/2$

18. The square root of (272^2 - 128^2) is:

(a) 256 (b) 200
(c) 240 (d) 144

19. The digit at the unit's place in the square root of 15876 is:

(a) 8 (b) 6
(c) 4 (d) 2

20. If the sum of two numbers is 22 and sum of their squares is 404, then the product of the number is:

(a) 40 (b) 44
(c) 80 (d) 88

21. $(5.5)^3$ - $(4.5)^3$ is equal to :

(a) 1 (b) 75
(c) 74.25 (d) 75.25

22. Which of the following is a perfect square as well as a cube?

(a) 81 (b) 125
(c) 343 (d) 64

23. When the square of a natural number subtracted from its cube, the result is 48. Find the number.

(a) 8 (b) 6
(c) 5 (d) 4

24. Simplify: $\frac{19}{43}+\frac{1}{2+\frac{1}{3+\frac{1}{1+\frac{1}{4}}}}$

(a) 1 (b) 19/43
(c) 49/19 (d) 38/43

25. If $\frac{40}{*}=\frac{*}{12\frac{1}{2}}$then the value of * is:

(a) 25/2 (b) 4/25
(c) 4 (d) 25

26. Find the sum of the following:$\frac{1}{9}+\frac{1}{6}+\frac{1}{12}+\frac{1}{20}+\frac{1}{30}+\frac{1}{42}+\frac{1}{56}+\frac{1}{72}$

(a) 1/2 (b) 0
(c) 1/9 (d) 1

27. If x = $\frac{1}{2+\frac{1}{2}}$then $\frac{1}{x}$ = ?

(a) 2/5 (b) 5/2
(c) 3/5 (d) 1/2

28. The value of $\frac{5}{1\frac{7}{8}\,of\,1\frac{1}{3}}\times\frac{2\frac{1}{10}}{3\frac{1}{2}}$ of $1\frac{1}{4}$

(a) 3/2 (b) 0.05
(c) 1 (d) 2

29. $\frac{9}{20}-\left[\frac{1}{5}+\left\{\frac{1}{4}+\right\}\left(\frac{5}{6}-\frac{1}{3}+\frac{1}{2}\right)\right]$ is equal to

(a) 0 (b) 1
(c) 9/20 (d) 10

30. $\frac{0.83\div 7.5}{2.321-0.098}$ *is equal to*

(a) 0.6 (b) 0.1
(c) 0.06 (d) 0.05

31. For what value of * statement$[\frac{*}{21}\times\frac{*}{189}]$ = 1 is correct?

(a) 3969 (b) 147
(c) 63 (d) 21

32. The sum of $\sqrt{0.01}$ + $\sqrt{0.81}$ + $\sqrt{1.21}$ + $\sqrt{0.0009}$

(a) 2.1 (b) 2.13
(c) 2.03 (d) 2.11

33. The value of $\frac{\sqrt{[(6.1)^2+(61.1)^2+(611.1)^2]}}{\sqrt{[(0.61)^2+(6.11)^2+(61.11)^2]}}$
(a) 0.1 (b) 1.1
(c) 10 (d) 100

34. The value of $\sqrt{0.000441}$ is equal to
(a) 0.21 (b) 0.0021
(c) 0.021 (d) 0.00021

35. The square root of $\frac{0.342\times0.684}{0.000342\times0.000171}$
(a) 250 (b) 2500
(c) 2000 (d) 4000

36. $\sqrt{0.00060516}$ is equal to
(a) 0.0246 (b) 0.00246
(c) 0.246 (d) 0.000246

37. If $(102)^2 = 10404$ then the value of $\sqrt{104.04} + \sqrt{1.0404} + \sqrt{0.010404}$ is equal to
(a) 0.306 (b) 0.8306
(c) 11.122 (d) 11.322

38. If $\sqrt{4096} = 64$, then the value of $\sqrt{40.96} + \sqrt{0.4096} + \sqrt{0.004096} + \sqrt{0.00004096}$ up to two place of decimals is:
(a) 7.09 (b) 7.10
(c) 7.11 (d) 7.12

39. Three fifth of the square of a certain number is 126.15, What is the number?
(a) 210.25 (b) 75.69
(c) 14.5 (d) 145

40. The least number that must be subtracted from 63522 to make the result a perfect square is:
(a) 18 (b) 20
(c) 24 (d) 30

41. By which smallest number should 20184 be multiplied so that it becomes a perfect square?
(a) 2 (b) 3
(c) 5 (d) 6

42. If cube root of 175616 is 56, then the $\sqrt[3]{175.616} + \sqrt[3]{0.175616} + \sqrt[3]{0.000175616}$ to:
(a) 0.168 (b) 62.16
(c) 0.216 (d) 6.116

43. The simplification of $\frac{5}{3+\frac{3}{1-\frac{2}{3}}}$
(a) 5 (b) 5/3
(c) 5/12 (d) 3/5

44. Find the value of $\frac{2}{1+\frac{1}{1-\frac{1}{2}}} \times \frac{3}{\frac{5}{6}of\frac{3}{2}\div1\frac{1}{4}}$
(a) 6 (b) 8
(c)4 (d) 2

45. $\frac{3\frac{1}{4}-\frac{4}{5}of\frac{5}{6}}{4\frac{1}{3}\div\frac{1}{5}-\left(\frac{3}{10}+21\frac{1}{5}\right)} - \left(1\frac{2}{3}\ of\ 1\ \frac{1}{2}\right)$ *is equal to*
(a) 9 (b) 23/2
(c) 13 (d) 31/2

46. Simplify : $\left[3\frac{1}{4}\div\left\{1\frac{1}{4}-\frac{1}{2}\left(2\frac{1}{2}-\frac{1}{4}-\frac{1}{6}\right)\right\}\right] \div \left(\frac{1}{2}\ of\ 4\frac{1}{3}\right)$
(a) 18 (b) 36
(c) 39 (d) 73

47. $\frac{1}{30}+\frac{1}{42}+\frac{1}{36}+\frac{1}{72}+\frac{1}{90}+\frac{1}{110} = ?$
(a) $\sqrt{2}\frac{2}{27}$ (b) 1/9
(c) 5/27 (d) 6/55

48. Simplify: $2\frac{\frac{3}{4}}{1\frac{5}{6}}\div\frac{7}{8}\times\left(\frac{1}{3}+\frac{1}{4}\right)+\frac{5}{7}\div\frac{3}{4}\ of\ \frac{3}{7}$
(a) 56/77 (b) 49/88
(c) 2/3 (d) 29/9

49. The value of $\frac{0.9\times0.9\times0.9+0.2\times0.2\times0.2+0.3\times0.3\times0.3-3\times0.9\times0.2\times0.3}{0.9\times0.9+0.2\times0.2+0.3\times0.3-0.9\times0.2-0.2\times0.3-0.3\times0.9}$
(a) 2.60 (b) 2.61
(c) 2.64 (d) 2.65

50. Simplify: $(0.1)^{-2}\{1-9(0.16)^{-2}\}$
(a) 1/162 (b) 1/108
(c) $7696/(10)^6$ (d) 1/109

51. Simplify : [0.9 – (2.3 – 5.2 - (7.1 – 5.4 – 3.5))]
(a) 9.18 (b) 1.8
(c) 0 (d) 2.6

52. $\left(\frac{5}{2}+\frac{3}{2}\right)\left(\frac{25}{4}-\frac{15}{4}+\frac{9}{4}\right)$ is equal to
(a) 38 (b) 19
(c) 37 (d) 36

53. $\frac{1}{2}+\left\{4\frac{3}{4}-\left(3\frac{1}{6}-2\frac{1}{3}\right)\right\}$ is equal to
(a) 11/3 (b) 5/4
(c) 53/12 (d) 5/3

54. The simplification $\frac{1}{8}+\frac{1}{8^2}+\frac{1}{8^3}+\frac{1}{8^4}+\frac{1}{8^5}$
(a) 0.143 (b) 0.163
(c) 0.215 (d) 0.715

55. Simplify: $\sqrt{[(12.1)^2(8.1)^2\div[(0.25)^2+(0.25)(19.95)]}$
(a) 1 (b) 2
(c) 3 (d) 4

56. The Value of $\frac{(75.8)^2-(55.8)^2}{20}$
(a) 20 (b) 40
(c) 121.6 (d) 131.6

57. The value of $\frac{4-\sqrt{0.04}}{4+\sqrt{0.4}}$ (a 0.4 (b) 0.8
(c) 1.0 (d) 1.4

58. If $\sqrt{0.00004761}$ equal to (a) 0.069 (b) 0.0069
(c) 0.00069 (d) 0.0609

59. $\frac{\sqrt{0.00001225}}{\sqrt{0.00005329}}$ is equal to (a) 25/77 (b) 35/73
(c) 35/77 (d) 25/73

60. Given that $\sqrt{574.6} = 23.97$, $\sqrt{5746} = 75.8$ then $\sqrt{0.00005746}$
(a) 0.002397 (b) 0.0002397
(c) 0.0007580 (d) 0.00738

61. $\sqrt{[(0.798)^2+0.404\times0798+(0.202)^2+1]} = ?$
(a) 0 (b) 2
(c) 1 (d) 0.404

62. The value of $3\sqrt{\frac{7}{875}}$
(a) 1/3 (b) 1/15
(c) ¼ (d) 1/5

63. $\frac{5\frac{9}{14}}{5+\frac{3}{3+\frac{1}{3\frac{1}{5}}}}$ is equal to :
(a) 1 (b) 1.5
(c) 2 (d) 2.5

64. $\frac{2}{2+\frac{2}{3+\frac{2}{3+\frac{2}{3}\times0.39}}}$ is simplified to
(a) 1/3 (b) 2
(c) 6 (d) None of these

65. $1+\frac{1}{1+\frac{1}{2}}$ *is equal to*:
(a) 3 (b) 3/2
(c) 2/3 (d) 5/3

66. 8.7 - [7.6 – {6.5 – (5.4 – 4.3 - 2)}] is simplified to:
(a) 2.5 (b) 3.5
(c) 4.5 (d) 5.5

67. The simplified value of$[(0.111)^3 + (0.222)^3 – (0.333)^3 + (0.333)^2(0.222)]^3$
(a) 0.999 (b) 0
(c) 0.888 (d) 0.111

68. $\frac{1\frac{1}{4}\div 1\frac{1}{2}}{(\frac{1}{15}+1-\frac{9}{10})}$ *is equal to*:
(a) 3 (b) 6
(c) 2/5 (d) 5

69. The simplification of : (0.63 + 0.37 + 0.80) yield the result
(a) 1.80 (b) 1.81
(c) 1.79 (d)1.80

70. $(\frac{(4.53-3.07)^2}{(3.07-2.15)(2.15-4.53)}+\frac{(3.07-2.15)^2}{(2.15-4.53)(4.53-3.07)}+\frac{(2.15-4.53)^2}{(4.53-3.07)(3.07-2.15)}$ is simplified to:
(a) 0 (b) 1
(c) 2 (d) 3

71. The square root of 0.4 is:
(a) 0.8 (b) 0.6
(c) 0.7 (d) 0.9

72. The value of $\sqrt{32} - \sqrt{128} + \sqrt{50}$ correct to 3 places of decimal is:
(a) 1.732 (b) 1.141
(c) 1.414 (d) 1.441

73. $\sqrt{\frac{48.4}{0.289}}$. is equal to :
(a) 2200/17 (b) 22/17
(c) 220/17 (d) 205/17

74. The number, whose square is equal to the difference of the square of 75.15 and 60.12 is
(a) 46.09 (b) 48.09
(c) 45.09 (d) 47.09

75. The sum of the squares of two numbers is 386. If one of the number is 5, the other will be:
(a)18 (b) 19
(c) 15 (d) 20

76. The sum of the cubes of the numbers 22, - 15 and – 7 is equal to
(a) 6930 (b)9630
(c) 3 (d) 0

77. The sum of the digits of the smallest number which, when multiplied by 1800, gives a perfect cube, is
(a) 2 (b) 3
(c) 6 (d) 8

78. The value of $\frac{2}{3}\times\frac{3}{\frac{5}{6}\div\frac{2}{3} of\ 1\frac{1}{4}}$
(a) 2 (b) 1
(c) 1/2
(c) 2/3

79. $\left(4\frac{11}{15}+\frac{15}{71}\right)^2-(4\frac{11}{15}-\frac{15}{71})^2$ *is equal to*:
(a) 1 (b) 2
(c) 3 (d) 4

80. If * represent a number, then the value of * in $5\frac{3}{*}\times 3\frac{1}{2}=19$
(a) 7 (b) 4
(c) 6 (d) 2

81. $(\sqrt{2}+\frac{1}{\sqrt{2}})^2$ equal to:
(a) 5/2 (b) 7/2
(c) 9/2 (d) 10/1

82. The value of $\sqrt[3]{\frac{0.2\times0.2\times0.2+0.04\times0.04\times0.04}{0.4\times0.4\times\ 0.4+0.08\times0.08\times0.08}}$
(a) 0.5 (b) 0.25
(c) 0.75 (d) 0.125

83. The smallest number added to 680621 to make the sum a perfect square is
(a) 4 (b) 5
(c) 6 (d) 8

84. The smallest positive integer when multiplied by 392, the product is a perfect square is
(a) 6 (b) 5
(c) 3 (d) 2

85. Which smallest number must be added to 2203 so that we get a perfect square?
(a) 1 (b) 3
(c) 6 (d) 8

86. The number, whose square is equal to the difference between the squares of 975 and 585, is:
(a) 780 (b) 390
(c) 1560 (d) 130

87. If the sum and difference of two number are 20 and 8 respectively, then the difference of their squares is:
(a) 12 (b) 28
(c) 80 (d) 160

88. The sum of the squares of two positive integers is 100 and the difference of their squares is 28, The sum of the numbers is:
(a) 12 (b) 13
(c) 14 (d) 15

89. Which smallest number must be added to 710 so that the sum is a perfect cube?
(a) 29 (b) 19
(c) 11 (d) 21

90. $\frac{13}{48}$ *is equal to*
(a) $\frac{1}{3+\frac{1}{1+\frac{1}{16}}}$ (b) $\frac{1}{2+\frac{1}{1+\frac{1}{8}}}$
(c) $\frac{1}{3+\frac{1}{1+\frac{1}{1+\frac{1}{8}}}}$ (d) $\frac{1}{3+\frac{1}{2+\frac{1}{2+\frac{1}{4}}}}$

91. The value of $1+\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{2}{3}}}}}$
(a) 21/13 (b) 17/2
(c) 34/21 (d) 8/5

92. $\frac{(3.63)^2-(2.37)^2}{3.63+2.37}$ *is equal to*
(a) 6 (b) 1.36
(c) 2.26 (d) 1.26

93. The number of perfect square numbers between 50 and 1000 is:
(a) 21 (b) 22
(c) 23 (d) 24

94. Given that $\sqrt{24}$ is approximately equal to 4.898.$\frac{\sqrt{8}}{\sqrt{3}}$ is nearly equal to:
(a) 0.544 (b) 1.333
(c) 1.633 (d) 2.666

95. There are some boys and girls in a room. The square of the number of the girls is less than the square of

the number of boys by 28. If there were two more girls, the number of boys would has been the same as that of the girls. The total number of the boys and girls in the room are
(a) 56 (b) 14
(c) 10 (d) 7

96. If the sum of the squares of three consecutive natural numbers is 110, then the smallest of these natural numbers is:
(a) 8 (b) 6
(c) 7 (d) 5

97. $\sqrt[3]{[(333)^3 + (333)^3 + (334)^3 - 3 \times 333 \times 333 \times 334]}$ to equal
(a) 12 (b) 11
(c) 10 (d) 15

98. The sum of the squares of 2 number is 146 and the square root of one of them is $\sqrt{5}$. The cube of the other number is
(a) 1111 (b) 1221
(c) 1331 (d) 1441

99. The least number, by which 1944 must be multiplied so as to make the result a perfect cube is
(a) 2 (b) 3
(c) 6 (d) 13

100. The smallest natural number, by which 3000 must be divided to make the quotient a perfect cube, is:
(a) 3 (b) 4
(c) 5 (d) 6

101. The smallest positive integer n for which 864 × n is a perfect cube, is:
(a) 1 (b) 2
(c) 3 (d) 4

102. $\frac{\sqrt{0.081 \times 0.484}}{\sqrt{0.0064} \times 6.25}$ is equal to:
(a) 9 (b) 0.9
(c) 99 (d) 0.99

103. Given that $\sqrt{13} = 3.6$ and $\sqrt{130} = 11.4$, then the value of $\sqrt{13} + \sqrt{1300} + \sqrt{0.013}$ is equal to:
(a) 36.164 (b) 637.254
(c) 37.714 (d) 37.154

104. If $\sqrt[2]{(0.014 \times 0.14x)} = 0.014 \times 0.14\ \sqrt[2]{y}$ find the value of $\frac{x}{y}$
(a) 0.000196 (b) 0.00196
(c) 0.0196 (d) 0.196

105. The simplified value of $\sqrt{[5 + \sqrt{\{11 + \sqrt{(19 + \sqrt{(29 + \sqrt{49})})}\}}]}$ is:
(a) 3 (b) 2
(c) 4 (d) 6

106. $(0.1 \times 0.01 \times 0.01 \times 10^7)$ is equal to :
(a) 100 (b) 1/10
(c) 1/100 (d) 10

107. $\frac{3.25 \times 3.20 - 3.20 \times 3.05}{0.064}$ is equal to:
(a) 1 (b) 1/2
(c) 1/10 (d) 10

108. $\frac{\{(0.1)^2 - (0.01)^2\}}{0.0001} + 1$ is equal to
(a) 1010 (b) 110
(c) 101 (d) 100

109. $(0.5 \times 5 + 0.25 \times 0.5 + 0.5 \times 4 + 0.5 \times 0.75)$ is equal to
(a) 5 (b) 10
(c) 15 (d) 20

110. $\frac{[(5+5+5+5) \div 5]}{3+3+3+3+3+\div 3}$ is equal to :
(a) 1 (b) 3/10
(c) 4/9 (d) 2/5

111. $\frac{[(100-1)(100-2)(100-3)\ldots(100-200)]}{100 \times 99 \times 98 \times \ldots \times 3 \times 2 \times 1}$ is equal to:
(a) $\frac{100}{99 \times 98 \times 97 \times \ldots \times 3 \times 2 \times 1}$ (b) $\frac{1}{99 \times 98 \times 97 \times \ldots \times 3 \times 2 \times 1}$
(c) 0 (d) $-\frac{2}{99 \times 98 \times 97 \times \ldots \times 3 \times 2 \times 1}$

112. $(0.9 \times 0.9 \times 0.9 + 0.1 \times 0.1 \times 0.1)$ is equal to:
(a) 0.73 (b) 0.82
(c) 0.91 (d) 1.00

113. $\frac{\sqrt{(0.009 \times 0.036 \times 0.016 \times 0.08)}}{\sqrt{0.002 \times 0.0008 \times 0.0002}}$ is equal to:
(a) 34 (b) 24/25
(c) 23/25 (d) 21/25

114. $\sqrt{1\frac{1}{4} \times \frac{64}{125} \times 1.44}$ is equal to:
(a) 26/25 (b) 24/25
(c) 23/25 (d) 21/25

115. $[2\sqrt{54} - 6\sqrt{2/3} - \sqrt{96}]$ is equal to:
(a) 0 (b) 1
(c) 2 (d) $\sqrt{6}$

116. $\frac{\sqrt{24} + \sqrt{216}}{\sqrt{96}}$ is equal to:
(a) $2/\sqrt{6}$ (b) $2\sqrt{6}$
(c) $4\sqrt{6}$ (d) 2

117. $\sqrt{(100 + ¼)}$ is equal to:
(a) 12.0 (b) 11.5
(c) 11.0 (d) 10.5

118. $\sqrt[3]{0.000064}$ is equal to:
(a) 0.0002 (b) 0.002
(c) 0.02 (d) 0.2

119. $\sqrt[3]{[15612 + \sqrt{\{154 + \sqrt{225}\}}]}$ is equal to (a) 15 (b) 25
(c) 75 (d) 125

120. $\sqrt[3]{0.000125}$ is equal to:
(a) 0.5 (b) 0.15
(c) 0.05 (d) 0.005

121. $(\sqrt[3]{1000} + \sqrt[3]{0.008} - \sqrt[3]{0.125})$ is equal to:
(a) 9.7 (b) 9.97
(c) 9.997 (d) 9.9997

122. By what least number should 675 be multiplied so as to obtain a perfect cube number ?
(a) 3
(c) 5
(c) 24 (d) 40

123. The value of $1 + \cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{1+\frac{2}{3}}}}}$
(a) 21/13 (b) 17/3
(c) 34/21 (d) 8/5

124. The value of $\cfrac{\left(2\frac{1}{3} - 1\frac{2}{11}\right)}{3+\cfrac{1}{3+\cfrac{1}{3+\frac{1}{3}}}}$
(a) 38/109 (b) 109/38
(c) 1 (d) 116/109

125. The value of $1 + \cfrac{1}{1+\frac{1}{5}}$
(a) 11/6 (b) 13/6
(c) 15/6 (d) None of the above

126. The value of $\frac{[(3.2)^2 - 0.008]}{(3.2)^2 + 0.64 + 0.04}$
(a) 0 (b) 2.994
(c) 3.208 (d) 3

127. Simplify : $\frac{\left[\frac{1}{3}+\frac{1}{4}\left(\frac{2}{5}-\frac{1}{2}\right)\right]}{1\frac{2}{3}\ of\ \frac{3}{4}-\frac{3}{4}of\frac{4}{5}}$

(a) 37/78 (b) 37/13
(c) 74/78 (d) 74/13

128. $\frac{0.04}{0.03}$ of $\frac{\left[\left(3\frac{1}{3}-2\frac{1}{2}\right)\div\frac{1}{2}of\ 1\frac{1}{4}\right]}{\frac{1}{3}+\frac{1}{5}of\ \frac{1}{9}}$

(a) 1 (b) 5
(c) 1/5 (d) 1/2

129. The sum of the squares of 3 consecutive positive numbers is 365. The sum of the numbers is

(a) 30 (b) 33
(c) 36 (d) 45

130. If the number p is 5 more than q and the sum of the squares of p and q is 55, then the product of p and q is

(a) 10 (b) -10
(c) 15 (d) – 15

131. The product of two numbers is 45 and their difference is 4. The sum of squares of the two numbers is:

(a) 135 (b) 240
(c) 73 (d) 106

132. $\sqrt[3]{\left(1-\frac{127}{373}\right)}$ is equal to:

(a) 5/9 (b) 1 – 1/7
(c) 4/7 (d) 1 – 2/7

133. $\frac{0.3555\times0.5555\times2.025}{0.225\times1.7775\times0.2222}$ is equal to:

(a) 5.4 (b) 4.58
(c) 4.5 (d) 5.45

134. The simplified value of $\sqrt{(0.25\times2.25)}$ is

(a) 0.075 (b) 0.705
(c) 0.750 (d) 7.500

135. if $\sqrt{18225}=135$, then the value of $\sqrt{18225}+\sqrt{182.25}+\sqrt{1.8225}+\sqrt{0.018225}$ is

(a) 14.9985 (b) 149.985
(c) 1499.85 (d) 1.49985

136. The value of $\frac{\sqrt{(0.064\times0.256\times15.625)}}{\sqrt{(0.025\times0.625\times4.096)}}$

(a) 2 (b) 2.4
(c) 0.24 (d) 4.2

137. The number of pairs of natural numbers the difference of whose squares is 45 will be

(a) 2 (b) 3 (d) 6 (d) 5

138. If $\sqrt[3]{3^n}=27$, then the value of n is:

(a) 9 (b) 6
(c) 1 (d) 3

139. $\frac{\left(4\frac{2}{7}-\frac{1}{2}\right)}{3\frac{1}{2}+1\frac{1}{7}}\div\frac{1}{2+\frac{1}{2+\frac{1}{5+\frac{1}{5}}}}$ is equal to:

(a) 1 (b) 1/2
(c) 2 (d) 1/3

140. $\frac{1}{1+2^{a-b}}+\frac{1}{1+2^{b-a}}$ is equal to

(a) a – b (b) b – a
(c) 1 (d) 0

141. Find the sum of $\left(1-\frac{1}{n+1}\right)+\left(1-\frac{2}{n+1}\right)+\left(1-\frac{3}{n+1}\right)+\ldots\ldots+\left(1-\frac{n}{n+1}\right)$

(a) n (b) 1/2 n
(c) n + 1 (d) 1/2 (n + 1)

142. The value of $5\frac{1}{3}\div1\frac{2}{9}\times\frac{1}{4}\left(10+\frac{3}{1-\frac{1}{5}}\right)$

(a) 15 (b) 67/25
(c) 128/11 (d) 128/99

143. The value of $(3+\sqrt{8})+\frac{1}{3-\sqrt{8}}-(6+4\sqrt{2})$

(a) 8 (b) 1
(c) $\sqrt{2}$ (d) 0

144. What is the value of $\frac{\sqrt{24}+\sqrt{216}}{\sqrt{96}}$= ?

(a) $2\sqrt{6}$ (b) $4\sqrt{6}$
(c) 2 (d) 4

145. Number of digits in the square root of 62478078 is:

(a) 4 (b) 5
(c) 6 (d) 3

146. If $\left(n^r-tn+\frac{1}{4}\right)$ *be a perfect square*,then the values of t are:

(a) ± 2 (b) 1,2
(c) 2,3 (d) ± 1

147. The greatest 4 digit number which is a perfect square, is

(a) 9999 (b) 9909
(c) 9801 (d) 9081

148. What number must be added to the expression $16a^2$ – 12a to make it a perfect square?

(a) 9/4 (b) 11/2
(c) 13/2 (d) 16

149. The value of $\sqrt{(4^3+15^2)^3}$

(a) 4913 (b) 4813
(c) 4193 (d) 3993

150. The least number which must be added to 1728 to make it a perfect square is ……

(a) 36 (b) 32
(c) 38 (d) 30

151. If a = 64 and b = 289, then the value of $(\sqrt{\sqrt{a}+\sqrt{b}}-\sqrt{b-a})^{1/2}$ is

(a) $2^{1/2}$ (b) 2
(c) 4 (d) - 2

152. $\sqrt{64009}$ is equal to: (a) 352 (b) 523
(c) 253 (d) 532

153. A tourist spends daily as many rupees as the number of days of his total tour. If his total expenses were Rs. 361, then how many days did his tour last?

(a) 17 days (b) 19 days
(c) 21 days (d) 31 days

154. The value of $\sqrt{(10^{-6}\times0.25)}$ is

(a) 0.00025 (b) 0.0005
(c) 0.25 (d) 0.50

155. The simplified value of: $\frac{3\sqrt{2}}{\sqrt{3}+\sqrt{6}}-\frac{4\sqrt{3}}{\sqrt{6}+\sqrt{2}}+\frac{\sqrt{6}}{\sqrt{3}+\sqrt{2}}$

(a) $\sqrt{2}$ (b) $1/\sqrt{2}$
(c) $\sqrt{3}-\sqrt{2}$ (d) 0

156. The value of $\frac{4-\sqrt{0.04}}{4+\sqrt{0.4}}$ is close to

(a) 0.4 (b) 0.8
(c) 1.0 (d) 1.4

157. If $\sqrt{(0.05\times0.5\times a)}=0.5\times0.05\times\sqrt{b}$, then $\frac{a}{b}$ *is equal to*:

(a) 0.0025 (b) 0.025
(c) 0.25 (d) 0.00025

158. If $x=\sqrt{3}+\sqrt{2}$ then the value of $x^3-\frac{1}{x^3}$ is

(a) $10\sqrt{2}$ (b) $14\sqrt{2}$
(c) $22\sqrt{2}$ (d) $8\sqrt{2}$

159. The value of $(1001)^3$ is

(a) 1003003001 (b) 100303001
(c) 100300301 (d) 103003001

160. What is the smallest number by which 625 must be divided so that the quotient is a perfect cube?
(a) 25 (b) 5
(c) 2 (d) 3

161. $\frac{1}{a+\frac{1}{b+\frac{1}{c+\frac{1}{2}}}} = \frac{16}{23}$ then the value of a + b + c is
(a) 3 (b) 6
(c) 9 (d) 12

162. The sum of two numbers is 46/3 and their difference is 14/3, the product of the number is:
(a) 144/3 (b) 60
(c) 50 (d) 159/3

163. The value of following is:$\sqrt{[12 + \sqrt{(12 + \sqrt{12} + ...)}]}$
(a) $2\sqrt{2}$ (b) $2\sqrt{3}$
(c) 4 (d) 2

164. If $x = \sqrt[3]{(\sqrt{7} + 3)}$ then the value of $x^3 - 9x^2 + 27x - 34$ is:
(a) 2 (b) 1
(c) -1 (d) 0

165. The value of x in the below equation is: 0.3 + 0.6 + 0.7 + 0.8 = x
(a) 5.3 (b) 2.35
(c) 8/3 (d) 23/10

166. Simplified value of the following expression is:$\frac{1}{\sqrt{11}-2\sqrt{30}} - \frac{3}{\sqrt{7}-2\sqrt{10}} - \frac{4}{\sqrt{8}+4\sqrt{3}}$
(a) 0 (b) 1
(c) $\sqrt{2}$ (d) $\sqrt{3}$

167. Given $2^2 + 4^2 + 6^2 + ... + 40^2 = 11480$, then the value of $1^2 + 2^2 + 3^2 + ... + 20^2$ is:
(a) 2868 (b) 2870
(c) 2869 (d) 2867

168. The sum of 3 consecutive natural numbers divisible by 3 is 45. The smallest number is:
(a) 12 (b) 3
(c) 18 (d) 9

1.	**a**	2.	**c**	3.	**a**
4.	**a**	5.	**c**	6.	**c**
7.	**a**	8.	**d**	9.	**a**
10.	**b**	11.	**b**	12.	**c**
13.	**d**	14.	**d**	15.	**b**
16.	**a**	17.	**d**	18.	**c**
19.	**b**	20.	**a**	21.	**d**
22.	**d**	23.	**d**	24.	**d**
25.	**d**	26.	**a**	27.	**b**
28.	**a**	29.	**a**	30.	**d**
31.	**c**	32.	**b**	33.	**c**
34.	**c**	35.	**c**	36.	**a**
37.	**d**	38.	**c**	39.	**c**
40.	**a**	41.	**d**	42.	**c**
43.	**c**	44.	**d**	45.	**c**
46.	**b**	47.	**d**	48.	**d**
49.	**a**	50.	**b**	51.	**c**
52.	**b**	53.	**c**	54.	**a**
55.	**d**	56.	**d**	57.	**b**
58.	**b**	59.	**b**	60.	**d**
61.	**b**	62.	**d**	63.	**a**
64.	**d**	65.	**d**	66.	**c**
67.	**b**	68.	**d**	69.	**b**
70.	**d**	71.	**b**	72.	**c**
73.	**c**	74.	**c**	75.	**b**
76.	**a**	77.	**c**	78.	**a**
79.	**d**	80.	**a**	81.	**c**
82.	**a**	83.	**a**	84.	**d**
85.	**c**	86.	**a**	87.	**b**
88.	**c**	89.	**b**	90.	**d**
91.	**c**	92.	**d**	93.	**d**
94.	**c**	95.	**b**	96.	**d**
97.	**c**	98.	**c**	99.	**b**
100.	**a**	101.	**b**	102.	**d**
103.	**c**	104.	**b**	105.	**a**
106.	**a**	107.	**d**	108.	**d**
109.	**a**	110.	**d**	111.	**c**
112.	**a**	113.	**b**	114.	**b**
115.	**a**	116.	**d**	117.	**d**
118.	**c**	119.	**b**	120.	**c**
121.	**a**	122.	**b**	123.	**c**
124.	**a**	125.	**a**	126.	**d**
127.	**a**	128.	**b**	129.	**b**
130.	**c**	131.	**d**	132.	**b**
133.	**c**	134.	**c**	135.	**b**
136.	**a**	137.	**b**	138.	**a**
139.	**c**	140.	**c**	141.	**b**
142.	**a**	143.	**d**	144.	**c**
145.	**a**	146.	**d**	147.	**c**
148.	**a**	149.	**a**	150.	**a**
151.	**a**	152.	**c**	153.	**b**
154.	**b**	155.	**d**	156.	**b**
157.	**b**	158.	**c**	159.	**a**
160.	**b**	161.	**b**	162.	**d**
163.	**c**	164.	**d**	165.	**c**
166.	**a**	167.	**b**	168.	**a**