Practice Exercise

Level - I

1. $287 \times 287 + 269 \times 269 - 2 \times 287 \times 269 = ?$
(a) 534 (b) 446
(c) 354 (d) 324

2. If $(64)^2 - (36)^2 = 20 \times x$, then $x = ?$
(a) 70 (b) 120
(c) 180 (d) 140

3. If $\sqrt{3} = 1.732$ and $\sqrt{2} = 1.414$, the value of $\frac{1}{\sqrt{3}+\sqrt{2}}$ is
(a) 0.064 (b) 0.308
(c) 0.318 (d) 2.146

4. $\sqrt{0.01+\sqrt{0.0064}} = ?$
(a) 0.3 (b) 0.03
(c) $\sqrt{0.18}$ (d) None of these

5. $356 \times 936 - 356 \times 836 = ?$
(a) 35600 (b) 34500
(c) 9630 (d) 93600

6. The value of $\frac{\frac{1}{2} \div \frac{1}{2} \text{ of } \frac{1}{2}}{\frac{1}{2} + \frac{1}{2} \text{of } \frac{1}{2}}$ is
(a) 2/3 (b) 2
(c) 4/3 (d) 3

7. The simplified value of

$$\frac{\left(1+\frac{1}{1+\frac{1}{100}}\right)\left(1+\frac{1}{1+\frac{1}{100}}\right)-\left(1-\frac{1}{1+\frac{1}{100}}\right)\left(1-\frac{1}{1+\frac{1}{100}}\right)}{\left(1+\frac{1}{1+\frac{1}{100}}\right)+\left(1-\frac{1}{1+\frac{1}{100}}\right)}$$ is

(a) 100 (b) $\frac{200}{101}$
(c) 200 (d) $\frac{202}{100}$

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

9. In a group of buffaloes and ducks, the number of legs are 24 more than twice the number of heads. What is the number of buffaloes in the group?
(a) 6 (b) 8
(c) 10 (d) 12

10. $\sqrt[3]{4\frac{12}{125}} = ?$
(a) $1\frac{2}{5}$ (b) $1\frac{3}{5}$
(c) $1\frac{4}{5}$ (d) $2\frac{2}{5}$

11. If $3^{4X-2} = 729$, then find the value of X.
(a) 4 (b) 3
(c) 2 (d) 5

12. 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

13. The value of $\left[\frac{1}{\sqrt{9}-\sqrt{8}}\right]-\left[\frac{1}{\sqrt{8}-\sqrt{7}}\right]+\left[\frac{1}{\sqrt{7}-\sqrt{6}}\right]-\left[\frac{1}{\sqrt{6}-\sqrt{5}}\right]+\left[\frac{1}{\sqrt{5}-\sqrt{4}}\right]$ is
(a) 6 (b) 5
(c) –7 (d) –6

14. Simplify: $5\sqrt[3]{250} + 7\sqrt[3]{16} - 14\sqrt[3]{54}$
(a) $-2\sqrt[3]{2}$ (b) $-3\sqrt[3]{2}$
(c) $3\sqrt[3]{2}$ (d) $2\sqrt[3]{3}$

15. The no. plate of a bus had peculiarity. The bus number was a perfect square. It was also a perfect square when the plate was turned upside down. The bus company had only five hundred buses numbered from 1 to 500. What was the number?
(a) 169 (b) 36
(c) 196 (d) Cannot say

16. If * means adding six times of second number into first number, then find the value of (1*2)*3.
(a) 121 (b) 31
(c) 93 (d) 91

17. If a and b are positive ingegers, such that $a^b = 125$, then $(a - b)^{a+b-4} = ?$
(a) 16 (b) 25
(c) 28 (d) 30

18. If $p \times q = p + q + \frac{p}{q}$, then value of $8 \times 2 = ?$
(a) 2 (b) 10
(c) 14 (d) 16

19. If $x*y = x^2 + y^2 - xy$, then value of 9*11 is
(a) 93 (b) 103
(c) 60.5 (d) 121

20. The least number by which we multiply to the 11760, so that we can get a perfect square number
(a) 2 (b) 3
(c) 5 (d) None of these

21. If $5\sqrt{5} \times 5^3 \div 5^{-3/2} = 5^{(a+2)}$, then value of a is
(a) 5 (b) 4
(c) 6 (d) 7

22. If difference between the $\frac{4}{5}$ of $\frac{3}{4}$ of a number and $\frac{2}{5}$ of $\frac{1}{6}$ of the same number is 648, then number is
(a) 1110 (b) 1215
(c) 1325 (d) 1440

23. If sum of two numbers is 42 and their product is 437, then find their difference.
(a) 3 (b) 4
(c) 5 (d) 7

24. $54.327 \times 357.2 \times 0.0057$ is the same as:
(a) $5.4327 \times 3.572 \times 5.7$
(b) $5.4327 \times 3.572 \times 0.57$
(c) $54327 \times 3572 \times 0.0000057$
(d) None of these

25. Write the 44000 in Roman numerals
(a) XLI (b) XLVI
(c) XLIV (d) XLVIC

26. Write LXXIX in Hindu-Arabic numerals
(a) 70000 (b) 70009
(c) 7009 (d) 700009

27. If $\frac{a+b}{b+c} = \frac{c+d}{d+a}$, then
(a) a must equal c
(b) $a+b+c+d$ must equal zero
(c) either $a = c$ or $a+b+c+d = 0$, or both
(d) $a(b+c+d) = c(a+b+d)$

28. A number lies between 300 and 400. If the number is added to the number formed by reversing the digits, the sum is 888 and if the unit's digit and the ten's digit change places, the new number exceeds the original number by 9. Find the number.
(a) 339 (b) 341
(c) 378 (d) 345

29. x and y are 2 different digits. If the sum of the two digit numbers formed by using both the digits is a perfect square, then find $x+y$.
(a) 10 (b) 11
(c) 12 (d) 13

30. Arrange the following in the decending order;
$5^{1/4}, 4^{1/3}, 6^{1/5}$.
(a) $4^{1/3}, 5^{1/4}, 6^{1/5}$ (b) $5^{1/4}, 4^{1/3}, 6^{1/5}$
(c) $6^{1/5}, 4^{1/3}, 5^{1/4}$ (d) $5^{1/4}, 4^{1/3}, 6^{1/5}$

31. If $a+b+c = 13$, $a^2+b^2+c^2 = 69$, then find $ab+bc+ca$.
(a) –50 (b) 50
(c) 69 (d) 75

32. If $a-8=b$, then determine the value of $|a-b|-|b-a|$.
(a) 16 (b) 0
(c) 4 (d) 2

33. Find the possible integral value of x, if $x^2 + |x-1| = 1$.
(a) 1 (b) –1
(c) 0 (d) 1 and 0

DIRECTIONS (Qs. 34-49) : ***What value should come in the place of question mark (?) in the following questions ?***

34. $3.6+36.6+3.66+0.36+3.0 = ?$ [*SBI Clerk-June-2012*]
(a) 44.22 (b) 77.22
(c) 74.22 (d) 47.22
(e) None of these

35. $23 \times 45 \div 15 = ?$ [*SBI Clerk-June-2012*]
(a) 69 (b) 65
(c) 63 (d) 71
(e) None of these

36. $4\frac{5}{6} + 7\frac{1}{2} - 5\frac{8}{11} = ?$ [*SBI Clerk-June-2012*]
(a) $2\frac{10}{33}$ (b) $6\frac{20}{33}$
(c) $2\frac{20}{33}$ (d) $6\frac{10}{33}$
(e) None of these

37. $\frac{210}{14} \times \frac{17}{15} \times ? = 4046$ [*SBI Clerk-June-2012*]
(a) 202 (b) 218
(c) 233 (d) 227
(e) None of these

38. 83% of 2350 = ? [*SBI Clerk-June-2012*]
(a) 1509.5 (b) 1950.5
(c) 1905.5 (d) 1590.5
(e) None of these

39. $\sqrt{1089} + 3 = (?)^2$ [*SBI Clerk-June-2012*]
(a) 5 (b) 6
(c) 3 (d) 8
(e) 4

40. $96 + 32 \times 5 - 31 = ?$ [*SBI Clerk-June-2012*]
(a) 223 (b) 225
(c) 229 (d) 221
(e) None of these

41. $? \div 36 = (7)^2 - 8$ [*SBI Clerk-June-2012*]
(a) 1426 (b) 1449
(c) 1463 (d) 1476
(e) None of these

42. $\sqrt{8281} = ?$ [*SBI Clerk- June-2012*]
(a) 89 (b) 97
(c) 93 (d) 91
(e) 83

43. $(63)^2 - (12)^2 = ?$ [*SBI Clerk-June-2012*]
(a) 3528 (b) 3852
(c) 3582 (d) 3825
(e) None of these

44. $1\frac{4}{5} + 3\frac{3}{5} = ? - 4\frac{3}{10}$ [*SBI Clerk-June-2012*]
(a) $9\frac{7}{10}$ (b) $7\frac{7}{10}$
(c) $9\frac{3}{10}$ (d) $7\frac{9}{10}$
(e) None of these

45. $17 \times 19 \times 4 \div ? = 161.5$ [*SBI Clerk-June-2012*]
(a) 8 (b) 6
(c) 7 (d) 9
(e) None of these

46. $1798 \div 31 \times ? = 348$ [*SBI Clerk-June-2012*]
(a) 3 (b) 6
(c) 4 (d) 5
(e) None of these

47. $(9.8 \times 2.3 + 4.46) \div 3 = (3)^?$ [*SBI Clerk-June-2012*]
(a) 3 (b) 9
(c) 5 (d) 2
(e) None of these

48. 43% of 600 + ?% of 300 = 399 [*SBI Clerk-June-2012*]
(a) 45 (b) 41
(c) 42 (d) 47
(e) None of these

49. The sum of three consecutive odd numbers is 1383. What is the largest number ? [*SBI Clerk-June-2012*]
(a) 463 (b) 49
(c) 457 (d) 461
(e) None of these

DIRECTIONS (Qs. 50-54) : ***What approximate value should come in place of the question mark (?) in the following questions? (NOTE: You are not expected to calculate the exact value)***

50. $1504 \times 5.865 - 24.091 = ?$ [*SBI Clerk-2012*]
(a) 7200 (b) 9500
(c) 6950 (d) 5480
(e) 8800

51. $16.928 + 24.7582 \div 5.015 = ?$ [*SBI Clerk-2012*]
(a) 20 (b) 24
(c) 22 (d) 26
(e) None of these

52. $\sqrt[3]{7.938} \times (6.120)^2 - 4.9256 = ?$ [*SBI Clerk-2012*]
(a) 70 (b) 55
(c) 30 (d) 25
(e) 90

53. $16.046 \div 2.8 \times 0.599 = ?$ [*SBI Clerk-2012*]
(a) 3.5 (b) 7.9
(c) 1.9 (d) 5.6
(e) 6.2

54. $\sqrt{963} + (4.895)^2 - 9.24 = ?$ [*SBI Clerk-2012*]
(a) 60 (b) 35
(c) 85 (d) 45
(e) 25

DIRECTIONS (Qs. 55-69) : ***What should come in place of the question mark (?) in the following questions ?***

55. $(12 \times 19) + (13 \times 8) = (15 \times 14) + ?$ [*SBI Clerk-2012*]
(a) 124 (b) 122
(c) 126 (d) 128
(e) None of these

56. $\sqrt{65 \times 12 - 50 + 54} = ?$ [*SBI Clerk-2012*]
(a) $\sqrt{28}$ (b) 28^2
(c) 28 (d) 784
(e) None of these

57. 15% of 524 – 2% of 985 + ? = 20% of 423 [*SBI Clerk-2012*]
(a) 25.9 (b) 27.7
(c) 25.7 (d) 24.9
(e) None of these

58. $151 \times 8 + (228 \div 19)^2 = ?$ [*SBI Clerk-2012*]
(a) 1360 (b) 1354
(c) 1368 (d) 1381
(e) None of these

59. $\sqrt{1521} + \sqrt{225} = ?$ [*SBI Clerk-2012*]
(a) 56 (b) 58
(c) 54 (d) 62
(e) None of these

60. $38.734 + 8.638 - 5.19 = ?$ [*SBI Clerk-2012*]
(a) 41.971 (b) 42.179
(c) 43.072 (d) 42.182
(e) None of these

61. $7^{8.9} \div (343)^{1.7} \times (49)^{4.8} = 7^?$ [*SBI Clerk-2012*]
(a) 13.4 (b) 12.8
(c) 11.4 (d) 9.6
(e) None of these

62. $\sqrt[5]{512} \div \sqrt[4]{16} + \sqrt{576} = ?$ [*SBI Clerk-2012*]
(a) 24 (b) 31
(c) 22 (d) 18
(e) None of these

63. $(42 \times 3.2) \div (16 \times 1.5) = ?$ [*SBI Clerk-2012*]
(a) 5.9 (b) 5.6
(c) 6.1 (d) 4.8
(e) None of these

64. $199 + 5^3 \div 4 \times 4^2 = ?$ [*SBI Clerk-2012*]
(a) 969 (b) 655
(c) 966 (d) 799
(e) None of these

65. $342 \div 6 \times 28 = 1099 + ?$ [*SBI Clerk-2012*]
(a) 478 (b) 502
(c) 486 (d) 504
(e) None of these

66. $\frac{9.8 \times 2.5 \times 7.6}{0.5} = ?$ [*SBI Clerk-2012*]
(a) 384.2 (b) 379.5
(c) 364.3 (d) 372.4
(e) None of these

67. $\frac{3}{5}$ of $\frac{2}{7}$ of $? = 426$ [*SBI Clerk-2012*]
(a) 2490 (b) 2565
(c) 2475 (d) 2485
(e) None of these

68. $3\frac{2}{5} + 1\frac{2}{9} = 4\frac{4}{5} - ?$ [*SBI Clerk-2012*]
(a) $\frac{8}{45}$ (b) $\frac{7}{47}$
(c) $\frac{7}{45}$ (d) $\frac{8}{51}$
(e) None of these

69. $\frac{13}{63} \div \frac{104}{14} \times \frac{52}{19} = ?$ [*SBI Clerk-2012*]
(a) $\frac{12}{173}$ (b) $\frac{13}{171}$
(c) $\frac{17}{171}$ (d) $\frac{18}{171}$
(e) None of these

DIRECTIONS (Qs. 70-84) : ***What should come in place of the question mark (?) in the following questions ?***

70. $\sqrt[3]{13824} \times \sqrt{?} = 864$ [*SBI Clerk-2014*]
(a) 1296 (b) 1156
(c) 1600 (d) 1024
(e) None of these

71. $(91)^2 + (41)^2 - \sqrt{?} = 9858$ [*SBI Clerk-2014*]
(a) 11236 (b) 10816
(c) 10404 (d) 9604
(e) None of these

72. $4900 \div 28 \times 444 \div 12 = ?$ [*SBI Clerk-2014*]
(a) 6575 (b) 6475
(c) 6455 (d) 6745
(e) None of these

73. 125% of 260 + ?% of 700 = 500 [*SBI Clerk-2014*]
(a) 32 (b) 56
(c) 23 (d) 46
(e) None of these

74. $3\frac{7}{11} + 7\frac{3}{11} \times 1\frac{1}{2} = ?$ [*SBI Clerk-2014*]
(a) $13\frac{10}{11}$ (b) $14\frac{6}{11}$
(c) $14\frac{9}{11}$ (d) $10\frac{17}{22}$
(e) None of these

75. $\frac{.23 - .023}{.0023 \div 23} = ?$ [*SBI Clerk-2014*]
(a) 0.207 (b) 207
(c) 2070 (d) 0.0207
(e) None of these

76. 1.05% of 2500 + 2.5% of 440 = ? [*SBI Clerk-2014*]
(a) 37.50 (b) 37.25
(c) 370.25 (d) 372.50
(e) None of these

77. $\frac{17 \times 4 + 4^2 \times 2}{90 \div 5 \times 12} = ?$ [*SBI Clerk-2014*]
(a) $\frac{25}{54}$ (b) $\frac{22}{57}$
(c) $\frac{11}{27}$ (d) $\frac{13}{27}$
(e) None of these

78. $17\frac{2}{5} \times 4\frac{5}{8} - ? = 46\frac{7}{8}$ [*SBI Clerk-2014*]
(a) $32\frac{3}{5}$ (b) $33\frac{3}{5}$
(c) $33\frac{2}{5}$ (d) $32\frac{2}{5}$
(e) None of these

79. 136% of 250 + ?% of 550 = 670 [*SBI Clerk-2014*]
(a) 64 (b) 55
(c) 56 (d) 65
(e) None of these

80. 3889 + 12.952 − ? = 3854.002 [*SBI Clerk-2014*]
(a) 47.95 (b) 47.752
(c) 47.095 (d) 47.932
(e) None of these

81. $(5 \times 5 \times 5 \times 5 \times 5 \times 5)^4 \times (5 \times 5)^6 \div (5)^2 = (25)^?$ [*SBI Clerk-2014*]
(a) 10 (b) 17
(c) 19 (d) 12
(e) None of these

82. $\frac{28 \times 5 - 15 \times 6}{7^2 + \sqrt{256} + (13)^2} = ?$ [*SBI Clerk-2014*]
(a) $\frac{27}{115}$ (b) $\frac{22}{117}$
(c) $\frac{25}{117}$ (d) $\frac{22}{115}$
(e) None of these

83. $1.5 \times 0.025 + (?)^2 = 0.1$ [*SBI Clerk-2014*]

(a) 0.28 (b) 0.27
(c) 0.25 (d) 0.235
(e) None of these

84. $\frac{(3.537-0.948)^2+(3.537+0.948)^2}{(3.537)^2+(.948)^2} = ?$ [*SBI Clerk-2014*]

(a) 4.485 (b) 2.589
(c) 4 (d) 2
(e) None of these

DIRECTIONS (Qs. 85-89) : ***Find out the approximate value which should come in place of the question mark in the following questions. (You are not expected to find the exact value.)***

85. $\frac{(10008.99)^2}{10009.001} \times \sqrt{3589} \times 0.4987 = ?$ [*SBI Clerk-2014*]

(a) 3000 (b) 300000
(c) 3000000 (d) 5000
(e) 9000000

86. $196.1 \times 196.1 \times 196.1 \times 4.01 \times 4.001 \times 4.999 \times 4.999 = 196.1^3 \times 4 \times ?$ [*SBI Clerk-2014*]

(a) 100 (b) 16
(c) 10 (d) 64
(e) 32

87. $12.25 \times ? \times 21.6 = 3545.64$ [*SBI Clerk-2014*]

(a) 20 (b) 12
(c) 15 (d) 13
(e) None of these

88. ?% of $45.999 \times 16\%$ of $83.006 = 116.073$ [*SBI Clerk-2014*]

(a) 6 (b) 24
(c) 19 (d) 30
(e) 11

89. $[(1.3)^2 \times (4.2)^2] \div 2.7 = ?$ [*SBI Clerk-2014*]

(a) 7 (b) 21
(c) 18 (d) 11
(e) 16

DIRECTIONS (Qs. 90-94) : ***What should come in place of question mark (?) in the following number series ?***

90. 3 23 43 ? 83 103 [*SBI Clerk-2014*]

(a) 33 (b) 53
(c) 63 (d) 73
(e) None of these

91. 1 9 25 49 81 ? 169 [*SBI Clerk-2014*]

(a) 100 (b) 64
(c) 81 (d) 121
(e) None of these

92. 5 6 14 45 ? [*SBI Clerk-2014*]

(a) 183 (b) 185
(c) 138 (d) 139
(e) None of these

93. 7 8 18 57 ? [*SBI Clerk-2014*]

(a) 244 (b) 174
(c) 186 (d) 226
(e) None of these

94. 1, 8, 9, ?, 25, 216, 49 [*SBI Clerk-2014*]

(a) 60 (b) 64
(c) 70 (d) 75
(e) None of these

95. Last year my age was a perfect square number. Next year it will be a cubic number. What is my present age? [*SSC-Sub. Ins.-2012*]

(a) 25 years (b) 27 years
(c) 26 years (d) 24 years

96. What is the value of $(2.1)^2 \times \sqrt{0.0441}$? [*SSC-Sub. Ins.-2012*]

(a) 0.9261 (b) 92.61
(c) 92.51 (d) 0.9251

97. The value of $\sqrt[3]{1372} \times \sqrt[3]{1458}$ is [*SSC-Sub. Ins.-2012*]

(a) 116 (b) 126
(c) 106 (d) 136

98. Equal amounts of water were poured into two empty jars of different capacities, which made one jar $\frac{1}{4}$ full and the other jar $\frac{1}{3}$ full. If the water in the jar with lesser capacity is then poured into the jar with greater capacity, then the part of the larger jar filled with water is [*SSC-Sub. Ins.-2012*]

(a) $\frac{1}{2}$ (b) $\frac{7}{12}$
(c) $\frac{1}{4}$ (d) $\frac{1}{3}$

99. If $\frac{5x-3}{x}+\frac{5y-3}{y}+\frac{5z-3}{z} = 0$, then the value of $\frac{1}{x}+\frac{1}{y}+\frac{1}{z}$ is [*SSC-Sub. Ins.-2012*]

(a) 15 (b) 3
(c) 5 (d) 10

100. Minimum value of $x^2 + \frac{1}{x^2+1} - 3$ is [*SSC-Sub. Ins.-2012*]

(a) -3 (b) -2
(c) 0 (d) -1

101. If $a + b = 5$, $a^2 + b^2 = 13$, the value of $a - b$ (where $a > b$) is [*SSC-Sub. Ins.-2012*]

(a) 2 (b) -1
(c) 1 (d) -2

102. If $(3x - y) : (x + 5y) = 5 : 7$, then the value of $(x + y) : (x - y)$ is [*SSC-Sub. Ins.-2012*]

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

103. The value of $1+\cfrac{1}{1+\cfrac{2}{3+\cfrac{4}{5}}}$ is: [*SSC-Sub. Ins.-2013*]

(a) $\frac{12}{29}$ (b) $\frac{8}{19}$

(c) $\frac{48}{29}$ (d) $\frac{2}{19}$

104. The value of

$\sqrt{19.36}+\sqrt{0.1936}+\sqrt{0.001936}+\sqrt{0.00001936}$ is:

[*SSC-Sub. Ins.-2013*]

(a) 4.8484 (b) 4.8694

(c) 4.8884 (d) 4.8234

105. If the square of the sum of two numbers is equal to 4 times of their product. then the ratio of these numbers is :

[*SSC-Sub. Ins.-2013*]

(a) 2 : 1 (b) 1 : 3

(c) 1 : 1 (d) 1 : 2

106. If $a^2+b^2=5ab$, then the value of $\left(\frac{a^2}{b^2}+\frac{b^2}{a^2}\right)$ is :

[*SSC-Sub. Ins.-2013*]

(a) 32 (b) 16

(c) 23 (d) –23

107. If $x=\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ and $y=\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$, then the value of x^3+y^3 is: [*SSC-Sub. Ins.-2013*]

(a) 950 (b) 730

(c) 650 (d) 970

108. The greatest among the following numbers $(3)^{\frac{1}{3}},(2)^{\frac{1}{2}},1,(6)^{\frac{1}{6}}$ is: [*SSC-Sub. Ins.-2013*]

(a) $(2)^{\frac{1}{2}}$ (b) 1

(c) $(6)^{\frac{1}{6}}$ (d) $(3)^{\frac{1}{3}}$

109. Evaluate $\frac{\sqrt{24}+\sqrt{6}}{\sqrt{24}-\sqrt{6}}$ [*SSC-Sub. Ins.-2014*]

(a) 2 (b) 3

(c) 4 (d) 5

110. The value of [*SSC-Sub. Ins.-2014*]

$3\div\left[(8-5)\div\left\{(4-2)\div\left(2+\frac{8}{13}\right)\right\}\right]$ is

(a) $\frac{15}{17}$ (b) $\frac{13}{17}$

(c) $\frac{15}{19}$ (d) $\frac{13}{19}$

111. If '+' means ' ÷ ', '×' means '–', ' ÷ ' means '×' and '–' means '+', what will be the value of the following expression?

$9+3\div 4-8\times 2=?$ [*SSC-Sub. Ins.-2014*]

(a) $6\frac{1}{4}$ (b) $6\frac{3}{4}$

(c) $-1\frac{3}{4}$ (d) 18

112. The next term of the sequence,

$\left(1+\frac{1}{2}\right),\left(1+\frac{1}{2}\right)\left(1+\frac{1}{3}\right),\left(1+\frac{1}{2}\right)\left(1+\frac{1}{3}\right)\left(1+\frac{1}{4}\right),\_\_$ is

[*SSC-Sub. Ins.-2014*]

(a) 3 (b) $\left(1+\frac{1}{5}\right)$

(c) 5 (d) $\left(1+\frac{1}{2}\right)\left(1+\frac{1}{5}\right)$

113. If $a=\sqrt{6}+\sqrt{5}$, $b=\sqrt{6}-\sqrt{5}$, then $2a^2-5ab+2b^2=$

[*SSC-Sub. Ins.-2014*]

(a) 38 (b) 39

(c) 40 (d) 41

114. If $p=\frac{5}{18}$, then $27p^3-\frac{1}{216}-\frac{9}{2}p^2+\frac{1}{4}p$ is equal to

[*SSC-Sub. Ins.-2014*]

(a) $\frac{4}{27}$ (b) $\frac{5}{27}$

(c) $\frac{8}{27}$ (d) $\frac{10}{27}$

115. If $x+\frac{1}{x}=2$, then $x^{2013}+\frac{1}{x^{2014}}=?$ [*SSC-Sub. Ins.-2014*]

(a) 0 (b) 1

(c) –1 (d) 2

116. If $a=331$, $b=336$ and $c=-667$, then the value of $a^3+b^3+c^3-3abc$ is [*SSC-Sub. Ins.-2014*]

(a) 1 (b) 6

(c) 3 (d) 0

117. The simplified value of

$\left(\sqrt{6}+\sqrt{10}-\sqrt{21}-\sqrt{35}\right)\left(\sqrt{6}-\sqrt{10}+\sqrt{21}-\sqrt{35}\right)$ is

[*SSC-Sub. Ins.-2014*]

(a) 13 (b) 12

(c) 11 (d) 10

118. If $x=a-b$, $y=b-c$, $z=c-a$, then the numerical value of the algebraic expression $x^3+y^3+z^3-3xyz$ will be

(a) $a+b+c$ (b) 0

(c) $4(a+b+c)$ (d) $3abc$

119. The simplified value of $\frac{\sqrt{32}+\sqrt{48}}{\sqrt{8}+\sqrt{12}}$ is [*SSC-MT-2013*]

(a) 4 (b) 3
(c) 2 (d) 6

120. $\sqrt{\frac{9.5\times0.085}{0.0017\times0.19}}$ equals [*SSC-MT-2013*]

(a) 5 (b) 50
(c) 500 (d) 0.05

121. If $\frac{x}{b+c}=\frac{y}{c+a}=\frac{z}{a+b}$, then : [*SSC 10+2-2012*]

(a) $\frac{x-y}{b-a}=\frac{y-z}{c-b}=\frac{z-x}{a-c}$

(b) $\frac{x}{a}=\frac{y}{b}=\frac{z}{c}$

(c) $\frac{x-y}{c}=\frac{y-z}{b}=\frac{z-x}{a}$

(d) none of the above is true

122. If $\frac{547.527}{0.0082}=x$, then the value $\frac{547527}{82}$ is : [*SSC 10+2-2012*]

(a) 10x (b) 100x
(c) $\frac{x}{100}$ (d) $\frac{x}{10}$

123. If $\sqrt[3]{3^n}=27$, then the value of n is: [*SSC 10+2-2012*]

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

124. From 9.00 AM to 2.00 PM, the temperature rose at a constant rate from 21°C to 36°C. What was the temperature at noon ? [*SSC 10+2-2012*]

(a) 27°C (b) 30°C
(c) 32°C (d) 28.5°C

125. If $\frac{3x+5}{5x-2}=\frac{2}{3}$, then the value of x is : [*SSC 10+2-2012*]

(a) 11 (b) 19
(c) 23 (d) 7

126. If the difference of two numbers is 3 and the difference of their squares is 39; then the larger number is : [*SSC 10+2-2012*]

(a) 9 (b) 12
(c) 13 (d) 8

127. If $x=\sqrt{3}+\sqrt{2}$, then the value of $x^3-\frac{1}{x^3}$ is : [*SSC 10+2-2012*]

(a) $14\sqrt{2}$ (b) $14\sqrt{3}$
(c) $22\sqrt{2}$ (d) $10\sqrt{2}$

128. If $a^2+b^2+c^2=2(a-b-c)-3$, then the value of $2a-3b+4c$ is [*SSC 10+2-2013*]

(a) 1 (b) 7
(c) 2 (d) 3

129. Let $a=\sqrt{6}-\sqrt{5}, b=\sqrt{5}-2, c=2-\sqrt{3}$.
Then point out the correct alternative among the four alternatives given below. [*SSC 10+2-2013*]

(a) $a<b<c$ (b) $b<a<c$
(c) $a<c<b$ (d) $b<c<a$;

130. If $a=\frac{b^2}{b-a}$ then the value of a^3+b^3 is [*SSC 10+2-2013*]

(a) 2 (b) 6 ab
(c) 0 (d) 1

131. If $xy+yz+zx=0$, then [*SSC 10+2-2013*]

$\left(\frac{1}{x^2-yz}+\frac{1}{y^2-zx}+\frac{1}{z^2-xy}\right)(x,y,z\neq0)$ is equal to

(a) 0 (b) 3
(c) 1 (d) $x+y+z$

132. The value of $\sqrt{40+\sqrt{9\sqrt{81}}}$ is [*SSC 10+2-2013*]

(a) 11 (b) $\sqrt{111}$
(c) 9 (d) 7

133. Which is greater $\sqrt[3]{2}$ or $\sqrt{3}$? [*SSC 10+2-2013*]

(A Equal (b) Cannot be compared
(c) $\sqrt[3]{2}$ (d) $\sqrt{3}$

134. If $a+b+c=9$ (where a, b, c are real numbers), then the minimum value of $a^2+b^2+c^2$ is [*SSC 10+2-2013*]

(a) 81 (b) 100
(c) 9 (d) 27

135. Find the value of

$3+\frac{1}{\sqrt{3}}+\frac{1}{\sqrt{3}+3}+\frac{1}{\sqrt{3}-3}$. [*SSC 10+2-2013*]

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

136. 'a' divides 228 leaving a remainder 18. The biggest two-digit value of 'a' is [*SSC 10+2-2013*]

(a) 30 (b) 70
(c) 21 (d) 35

137. A teacher wants to arrange his students in an equal number of rows and columns. If there are 1369 students, the number of students in the last row are [*SSC 10+2-2014*]

(a) 37 (b) 33
(c) 63 (d) 47

138. Which one of the following is true ? [*SSC 10+2-2014*]

(a) $\sqrt{5}+\sqrt{3}>\sqrt{6}+\sqrt{2}$

(b) $\sqrt{5}+\sqrt{3}<\sqrt{6}+\sqrt{2}$

(c) $\sqrt{5}+\sqrt{3}=\sqrt{6}+\sqrt{2}$

(d) $(\sqrt{5}+\sqrt{3})(\sqrt{6}+\sqrt{2})=1$

DIRECTIONS (139-148) : ***What will come in place of the question mark (?) in the following questions?***

139. $(3325 \div 25) \times (152 \div 16) = ?$ [*IBPS Clerk-2012*]

(a) 1269.4 (b) 1264.9
(c) 1265.3 (d) 1263.5
(e) None of these

140. $\sqrt{3136} - \sqrt{1764} = \sqrt{?}$ [*IBPS Clerk-2012*]

(a) 14 (b) $(196)^2$
(c) – 14 (d) 144
(e) None of these

141. $5\frac{1}{5} + 2\frac{2}{15} + 3\frac{2}{3} = ?$ [*IBPS Clerk-2012*]

(a) 15 (b) 13
(c) $\frac{11}{15}$ (d) 12
(e) None of these

142. $-15 - 27 - 88 - 63 + 255 = ?$ [*IBPS Clerk-2012*]

(a) 55 (b) 74
(c) 62 (d) 59
(e) None of these

143. $(2525 \times 0.25 \div 5) \times 7 = ?$ [*IBPS Clerk-2012*]

(a) 889.43 (b) 883.75
(c) 886.45 (d) 881.75
(e) None of these

144. $\frac{14}{19} \times \frac{57}{70} \times \frac{20}{21} = ?$ [*IBPS Clerk-2012*]

(a) $\frac{2}{7}$ (b) $\frac{4}{7}$
(c) $\frac{2}{9}$ (d) $\frac{3}{7}$
(e) None of these

145. 32% of 500 + 162% of 50 = ? [*IBPS Clerk-2012*]

(a) 231 (b) 245
(c) 237 (d) 247
(e) None of these

146. 45316 + 52131 – 65229 = ? + 15151 [*IBPS Clerk-2012*]

(a) 17063 (b) 17073
(c) 17076 (d) 17067
(e) None of these

147. $\sqrt{25 - 12 + 155 + 1} = ?$ [*IBPS Clerk-2012*]

(a) 13 (b) 14
(c) 17 (d) 16
(e) None of these

148. $\frac{184 \times 4}{23\% \text{ of } 400} = ?$ [*IBPS Clerk-2012*]

(a) 7 (b) 9
(c) 8 (d) 5
(e) None of these

149. What will come in place of both the question marks (?) in the following question ? [*IBPS Clerk-2012*]

$$\frac{(?)^{4/3}}{32} = \frac{128}{?^{5/3}}$$

(a) 16 (b) 12
(c) 18 (d) 14
(e) None of these

150. If the following fractions are arranged in a descending order (from left to right), which of them will be second from the right end ? [*IBPS Clerk-2012*]

$\frac{4}{9}, \frac{6}{13}, \frac{5}{11}, \frac{13}{16}, \frac{7}{12}$

(a) $\frac{6}{13}$ (b) $\frac{4}{9}$
(c) $\frac{13}{16}$ (d) $\frac{7}{12}$
(e) $\frac{5}{11}$

151. A factory produces 1515 items in 3 days. How many items will they produce in a week ? [*IBPS Clerk-2012*]

(a) 3530 (b) 3553
(c) 3533 (d) 3535
(e) None of these

152. What is the **least** number that can be added to 4800 to make it a perfect square ? [*IBPS Clerk-2012*]

(a) 110 (b) 81
(c) 25 (d) 36
(e) None of these

153. If $(1\,1)^3$ is subtracted from $(46)^2$ what will be the remainder ? [*IBPS Clerk-2012*]

(a) 787 (b) 785
(c) 781 (d) 783
(e) None of these

154. The sum of the squares of two odd numbers is 11570. The square of the smaller number is 5329. What is the other number ? [*IBPS Clerk-2012*]

(a) 73 (b) 75
(c) 78 (d) 79
(e) None of these

155. The sum of three consecutive integers is 5685. Which of the following is the correct set of these numbers ? [*IBPS Clerk-2012*]

(a) 1893, 1894, 1895 (b) 1895, 1896, 1897
(c) 1899, 1900, 1901 (d) 1897, 1898, 1899
(e) None of these

156. The product of three consecutive odd numbers is 24273. Which is the smallest number? [*IBPS Clerk-2012*]

(a) 25 (b) 29
(c) 23 (d) 37
(e) 27

DIRECTIONS (Qs. 157-171) : ***What will come in place of question mark (?) in the given question?***

157. $4\frac{1}{2}+\left(1\div 2\frac{8}{9}\right)-3\frac{1}{13}=?$ [*IBPS Clerk-2013*]

(a) $1\frac{9}{26}$ (b) $2\frac{7}{13}$

(c) $1\frac{11}{26}$ (d) $2\frac{4}{13}$

(e) $1\frac{10}{13}$

158. $\frac{6\times 136\div 8+132}{628\div 16-26.25}=?$ [*IBPS Clerk-2013*]

(a) 15 (b) 24

(c) 18 (d) 12

(e) 28

159. $\{(441)^{1/2}\times 207\times (343)^{1/3}\}\div\{(14)^2\times (529)^{1/2}\}$ [*IBPS Clerk-2013*]

(a) $6\frac{1}{2}$ (b) $5\frac{1}{2}$

(c) $5\frac{3}{4}$ (d) $6\frac{3}{4}$

(e) $6\frac{1}{4}$

160. $\left\{\sqrt{7744}\times (11)^2\right\}\div (2)^3=(?)^3$ [*IBPS Clerk-2013*]

(a) 7 (b) 9

(c) 11 (d) 13

(e) 17

161. $(4356)^{1/2}\div\frac{11}{4}=\sqrt{?}\times 6$ [*IBPS Clerk-2013*]

(a) 2 (b) 4

(c) 8 (d) 6

(e) 16

162. $\frac{3}{8}$ of $\{4624\div(564-428)\}=?$ [*IBPS Clerk-2013*]

(a) $13\frac{1}{4}$ (b) $14\frac{1}{2}$

(c) $11\frac{5}{6}$ (d) $12\frac{3}{4}$

(e) $12\frac{1}{8}$

163. $456\div 24\times 38-958+364=?$ [*IBPS Clerk-2013*]

(a) 112 (b) 154

(c) 128 (d) 136

(e) 118

164. $(43)^2+841=(?)^2+1465$ [*IBPS Clerk-2013*]

(a) 41 (b) 35

(c) 38 (d) 33

(e) 30

165. $3\frac{3}{8}\times 6\frac{5}{12}-2\frac{3}{16}\times 3\frac{1}{2}=?$ [*IBPS Clerk-2013*]

(a) 21 (b) 18

(c) 14 (d) 15

(e) 16

166. $(34.5\times 14\times 42)\div 2.8=?$ [*IBPS Clerk-2013*]

(a) 7150 (b) 7365

(c) 7245 (d) 7575

(e) 7335

167. $(216)^4\div(36)^4\times(6)^5=(6)^?$ [*IBPS Clerk-2013*]

(a) 13 (b) 11

(c) 7 (d) 9

(e) 10

168. $\frac{\sqrt{4356\times\sqrt{?}}}{\sqrt{6084}}=11$ [*IBPS Clerk-2013*]

(a) 144 (b) 196

(c) 169 (d) 81

(e) 121

169. $\left(3\frac{6}{17}\div 2\frac{7}{34}-1\frac{9}{25}\right)=(?)^2$ [*IBPS Clerk-2013*]

(a) $\frac{2}{5}$ (b) $\frac{1}{3}$

(c) $\frac{4}{5}$ (d) $\frac{1}{5}$

(e) $\frac{3}{5}$

170. $(1097.63+2197.36-2607.24)\div 3.5=?$ [*IBPS Clerk-2013*]

(a) 211.5 (b) 196.5

(c) 209.5 (d) 192.5

(e) 189.5

171. $\frac{1}{11}$ of $[(17424)^{1/2}\div(66)^2\times 3^3]=?^2$ [*IBPS Clerk-2013*]

(a) $\frac{1}{11}$ (b) $\frac{3}{11}$

(c) $\frac{2}{11}$ (d) $\frac{4}{11}$

(e) $\frac{5}{11}$

Level - II

1. Value of $999\frac{995}{999}\times 999 = ?$

(a) 990809 (b) 998996
(c) 153.6003 (d) 213.0003

2. $7892.35 \times 99.9 = ?$

(a) 753445.765 (b) 764455.765
(c) 788445.765 (d) None of these

3. How many $\frac{1}{12}$ in $18\frac{3}{4}$

(a) 522 (b) 252
(c) 225 (d) 253

4. The least possible positive number which should be added to 575 to make a perfect square number is

(a) 0 (b) 1
(c) 4 (d) None of these

5. If $a * b * c = \sqrt{\frac{(a+2)(b+3)}{(c+1)}}$, then the value of $(6 * 15 * 3)$ is

(a) 6 (b) 3
(c) 4 (d) can't be determined

6. If $x = 3+\sqrt{8}$, then $\left(x^2+\frac{1}{x^2}\right) = ?$

(a) 34 (b) 24
(c) 38 (d) 36

7. If $x^a = y^b = z^c$ and $y^2 = zx$ then the value of $\frac{1}{a}+\frac{1}{c}$ is

(a) $\frac{b}{2}$ (b) $\frac{c}{2}$
(c) $\frac{2}{b}$ (d) $2a$

8. If $\frac{2x}{1+\frac{1}{1+\frac{x}{1-x}}} = 1$, then find the value of x.

(a) $\frac{2}{3}$ (b) $\frac{3}{2}$
(c) 2 (d) $\frac{1}{2}$

9. Find the value of

$$\frac{1}{2\times3}+\frac{1}{3\times4}+\frac{1}{4\times5}+\frac{1}{5\times6}+.....+\frac{1}{9\times10}$$

(a) $\frac{3}{2}$ (b) $\frac{2}{5}$
(c) $\frac{2}{3}$ (d) $\frac{3}{5}$

10. Find the square root of $7-2\sqrt{10}$.

(a) $\sqrt{5}+\sqrt{2}$ (b) $-\sqrt{5}-\sqrt{2}$
(c) $\pm(\sqrt{5}-\sqrt{2})$ (d) $\pm(\sqrt{5}+\sqrt{2})$

11. The product of two 2-digit numbers is 1938. If the product of their unit's digits is 28 and that of ten's digits is 15, find the larger number.

(a) 34 (b) 57
(c) 43 (d) 75

12. If $P + P! = P^3$, then the value of P is

(a) 4 (b) 6
(c) 0 (d) 5

13. For any real value of x the maximum value of $8x-3x^2$ is

(a) $\frac{8}{3}$ (b) 4
(c) 5 (d) $\frac{16}{3}$

14. If x is a number satisfying the equation

$\sqrt[3]{x+9}-\sqrt[3]{x-9} = 3$, then x^2 is between

(a) 55 and 65 (b) 65 and 75
(c) 75 and 85 (d) 85 and 95

15. The value of $\left[35.7-\left(3+\frac{1}{3+\frac{1}{3}}\right)-\left(2+\frac{1}{2+\frac{1}{2}}\right)\right]$ is

(a) 30 (b) 34.8
(c) 36.6 (d) 41.4

16. Which one of the following sets of surds is in correct sequence of ascending order of their values?

(a) $\sqrt[4]{10},\sqrt[3]{6},\sqrt{3}$ (b) $\sqrt{3},\sqrt[4]{10},\sqrt[3]{6}$
(c) $\sqrt{3},\sqrt[3]{6},\sqrt[4]{10}$ (d) $\sqrt[4]{10},\sqrt{3},\sqrt[3]{6}$

17. The last three-digits of the multiplication 12345×54321 will be

(a) 865 (b) 745
(c) 845 (d) 945

18. The sum of the two numbers is 12 and their product is 35. What is the sum of the reciprocals of these numbers ?

(a) $\frac{12}{35}$ (b) $\frac{1}{35}$
(c) $\frac{35}{8}$ (d) $\frac{7}{32}$

19. Find the value of $\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\left(1-\frac{1}{5}\right).....\left(1-\frac{1}{100}\right)$.

(a) $\frac{1}{5}$ (b) $\frac{1}{10}$

(c) $\frac{1}{50}$ (d) $\frac{2}{5}$

20. An employer pays ₹20 for each day a works, and forfeits ₹ 3 for each day he is idle. At the end of 60 days, a worker gets ₹280. For how many days did the worker remain idle?

(a) 28 (b) 40

(c) 52 (d) 60

21. Simplify : $\cfrac{1}{1+\cfrac{\frac{2}{3}}{1+\frac{2}{3}+\cfrac{\frac{8}{9}}{1-\frac{2}{3}}}}$

(a) $\frac{11}{13}$ (b) $\frac{13}{15}$

(c) $\frac{13}{11}$ (d) $\frac{15}{13}$

22. The value of $\sqrt{\frac{(0.03)^2+(0.21)^2+(0.065)^2}{(0.003)^2+(0.021)^2+(0.0065)^2}}$ is

(a) 0.1 (b) 10

(c) 10^2 (d) 10^3

23. If $\frac{x^2+y^2+z^2-64}{xy-yz-zx}=-2$ and $x + y = 3z$, then the value of z is

(a) 2 (b) 3

(c) 4 (d) None of these

24. If $\sqrt{24} = 4.899$, the value of $\sqrt{\frac{8}{3}}$ is

(a) 0.544 (b) 1.333

(c) 1.633 (d) 2.666

25. If $(X+(1/X))=4$, then the value of $X^4 + 1/X^4$ is

(a) 124 (b) 64

(c) 194 (d) Can't be determined

26. If $\sqrt{15625}=125$, then the value of $\sqrt{15625}+\sqrt{156.25}+\sqrt{1.5625}$ is

(a) 1.3875 (b) 13.875

(c) 138.75 (d) 156.25

27. A hostel has provisions for 250 students for 35 days. After 5 days, a fresh batch of 25 students was admitted to the hostel. Again after 10 days, a batch of 25 students left the hostel. How long will the remaining provisions survive?

(a) 18 days (b) 19 days

(c) 20 days (d) 17 days

28. If $\frac{97}{19}=a+\cfrac{1}{b+\cfrac{1}{c}}$ where a, b and c are positive integers, then what is the sum of a, b and c?

(a) 16 (b) 20

(c) 9 (d) Cannot be determined

29. If $a > 1$, then arrange the following in ascending order.

I. $\sqrt[3]{\sqrt[4]{a^3}}$ II. $\sqrt[3]{\sqrt[5]{a^4}}$

III. $\sqrt{\sqrt[3]{a}}$ IV. $\sqrt{\sqrt[5]{a^3}}$

(a) I, II, III, IV (b) I, II, IV, III

(c) IV, I, III, II (d) III, I, II, IV

30. Which of the following is correct if $A=3^{3^3}$, $B=3^{33^3}$, $C=3^{3^{33}}$ and $D=3^{333}$?

(a) $A > B = C > D$ (b) $C > A > B > D$

(c) $A > C > D > B$ (d) $C > B > D > A$

31. Find the value of x in $\sqrt{x+2\sqrt{x+2\sqrt{x+2\sqrt{3x}}}}=x$.

(a) 1 (b) 3

(c) 6 (d) 12

32. Find two numbers such that their sum, their product and the differences of their squares are equal.

(a) $\left(\frac{3+\sqrt{3}}{2}\right)$ and $\left(\frac{1+\sqrt{2}}{2}\right)$ or $\left(\frac{3+\sqrt{2}}{2}\right)$ and $\left(\frac{1+\sqrt{2}}{2}\right)$

(b) $\left(\frac{3+\sqrt{7}}{2}\right)$ and $\left(\frac{1+\sqrt{7}}{2}\right)$ or $\left(\frac{3+\sqrt{6}}{2}\right)$ and $\left(\frac{1-\sqrt{6}}{2}\right)$

(c) $\left(\frac{3-\sqrt{5}}{2}\right)$ and $\left(\frac{1-\sqrt{5}}{2}\right)$ or $\left(\frac{3+\sqrt{5}}{2}\right)$ and $\left(\frac{1+\sqrt{5}}{2}\right)$

(d) None of these

DIRECTIONS (Qs. 33-37) : ***What will come in place of the question mark (?) in the following questions ?***

33. $\sqrt{11449}\times\sqrt{6241}-(54)^2=\sqrt{?}+(74)^2$ *[IBPS-PO-2011]*

(a) 384 (b) 3721

(c) 381 (d) 3638

(e) None of these

34. $\left[\left(3\sqrt{8}+\sqrt{8}\right)\times\left(8\sqrt{8}+7\sqrt{8}\right)\right]-98=?$ *[IBPS-PO-2011]*

(a) $2\sqrt{8}$ (b) $8\sqrt{8}$

(c) 382 (d) 386

(e) None of these

35. $3463\times295-18611=?+5883$ *[IBPS-PO-2011]*

(a) 997091 (b) 997071

(c) 997090 (d) 999070

(e) None of these

36. $\frac{28}{65}\times\frac{195}{308}\div\frac{39}{44}+\frac{5}{26}=?$ [*IBPS-PO-2011*]

(a) $\frac{1}{3}$ (b) 0.75

(c) $1\frac{1}{2}$ (d) $\frac{1}{2}$

(e) None of these

37. $(23.1)^2+(48.6)^2-(39.8)^2=?+1147.69$ [*IBPS-PO-2011*]

(a) $(13.6)^2$ (b) $\sqrt{12.8}$

(c) 163.84 (d) 12.8

(e) None of these

DIRECTIONS (Qs. 38-42) : ***What* approximate *value should come in place of the question mark (?) in the following questions?***

(*Note : *You are not expected to calculate the exact value.)

38. $\sqrt[3]{4663}+349=?\div 21.003$ [*IBPS-PO-2011*]

(a) 7600 (b) 7650

(c) 7860 (d) 7560

(e) 7680

39. 39.897% of 4331 + 58.779% of 5003 = ? [*IBPS-PO-2011*]

(a) 4300 (b) 4500

(c) 4700 (d) 4900

(e) 5100

40. $59.88\div 12.21\times 6.35=?$ [*IBPS-PO-2011*]

(a) 10 (b) 50

(c) 30 (d) 70

(e) 90

41. $43931.03\div 2111.02\times 401.04=?$ [*IBPS-PO-2011*]

(a) 8800 (b) 7600

(c) 7400 (d) 9000

(e) 8300

42. $\sqrt{6354}\times 34.993=?$ [*IBPS-PO-2011*]

(a) 3000 (b) 2800

(c) 2500 (d) 3300

(e) 2600

DIRECTIONS (Qs. 43–47) : ***In the following number series only one number is* wrong. *Find out the* wrong *number.***

43. 9050 5675 3478 2147 1418 1077 950 [*IBPS-PO-2011*]

(a) 3478 (b) 1418

(c) 5675 (d) 2147

(e) 1077

44. 7 12 40 222 1742 17390 208608 [*IBPS-PO-2011*]

(a) 7 (b) 12

(c) 40 (d) 1742

(e) 208608

45. 6 91 584 2935 11756 35277 70558 [*IBPS-PO-2011*]

(a) 91 (b) 70558

(c) 584 (d) 2935

(e) 35277

46. 1 4 25 256 3125 46656 823543 [*IBPS-PO-2011*]

(a) 3125 (b) 823543

(c) 46656 (d) 25

(e) 256

47. 8424 4212 2106 1051 526.5 263.25 131.625 [*IBPS-PO-2011*]

(a) 131.625 (b) 1051

(c) 4212 (d) 8424

(e) 263.25

48. Rubina could get equal number of ₹ 55, ₹ 85 and ₹ 105 tickets for a movie. She spents ₹ 2940 for all the tickets. How many of each did she buy? [*IBPS-PO-2011*]

(a) 12 (b) 14

(c) 16 (d) Cannot be determined

(e) None of these

49. Seema bought 20 pens, 8 packets of wax colours, 6 calculators and 7 pencil boxes. The price of one pen is ₹ 7, one packet of wax colour is ₹ 22, one calculator is ₹ 175 and one pencil box is ₹ 14 more than the combined price of one pen and one packet of wax colours. How much amount did Seema pay to the shopkeeper?[*IBPS-PO-2011*]

(a) ₹ 1,491 (b) ₹ 1,725

(c) ₹ 1,667 (d) ₹ 1,527

(e) None of these

DIRECTIONS (Qs. 50-54) : ***What will come in place of the question mark (?) in the following questions ?***

50. $4003\times 77-21015=?\times 116$ [*IBPS-PO-2012*]

(a) 2477 (b) 2478

(c) 2467 (d) 2476

(e) None of these

51. $\left[\left(5\sqrt{7}+\sqrt{7}\right)+\left(4\sqrt{7}+8\sqrt{7}\right)\right]-(19)^2=?$ [*IBPS-PO-2012*]

(a) 143 (b) $72\sqrt{7}$

(c) 134 (d) $70\sqrt{7}$

(e) None of these

52. $(4444\div 40)+(645\div 25)+(3991\div 26)=?$ [*IBPS-PO-2012*]

(a) 280.4 (b) 290.4

(c) 295.4 (d) 285.4

(e) None of these

53. $\sqrt{33124}\times\sqrt{2601}-(83)^2=(?)^2+(37)^2$ [*IBPS-PO-2012*]

(a) 37 (b) 33

(c) 34 (d) 28

(e) None of these

54. $5\frac{17}{37}\times 4\frac{51}{52}\times 11\frac{1}{7}+2\frac{3}{4}=?$ [*IBPS-PO-2012*]

(a) 303.75 (b) 305.75

(c) $303\frac{3}{4}$ (d) $305\frac{1}{4}$

(e) None of these

DIRECTIONS (Qs. 55-61) : ***What approximate value should come in place of the question mark (?) in the following questions? (Note : You are not expected to calculate the exact value.)***

55. $8787\div 343\times\sqrt{50}=?$ [*IBPS-PO-2012*]

(a) 250 (b) 140

(c) 180 (d) 100

(e) 280

56. $\sqrt[3]{54821}\times(303\div 8)=(?)^2$ [*IBPS-PO-2012*]

(a) 48 (b) 38

(c) 28 (d) 18

(e) 58

57. $\frac{5}{8}$ of $4011.33+\frac{7}{10}$ of $3411.22=?$ [*IBPS-PO-2012*]

(a) 4810 (b) 4980

(c) 4890 (d) 4930

(e) 4850

58. 23% of 6783 + 57% of 8431 = ? [*IBPS-PO-2012*]

(a) 6460 (b) 6420

(c) 6320 (d) 6630

(e) 6360

59. $335.01\times 244.99\div 55=?$ [*IBPS-PO-2012*]

(a) 1490 (b) 1550

(c) 1420 (d) 1590

(e) 1400

60. Rachita enters a shop to buy ice-creams, cookies and pastries. She has to buy atleast 9 units of each. She buys more cookies than ice-creams and more pastries than cookies. She picks up a total of 32 items. How many cookies does she buy ? [*IBPS-PO-2012*]

(a) Either 12 or 13 (b) Either 11 or 12

(c) Either 10 or 11 (d) Either 9 or 11

(e) Either 9 or10

61. With a two digit prime number, if 18 is added, we get another prime number with digits reversed. How many such numbers are possible? [*SSC CGL-2012*]

(a) 2 (b) 3

(c) 0 (d) 1

62. If $x=\frac{4ab}{a+b}$, then the value of [*SSC CGL-2012*]

$\frac{x+2a}{x-2a}+\frac{x+2b}{x-2b}$ is

(a) a (b) b

(c) 0 (d) 2

63. If $x=997$, $y=998$, $z=999$, then the value of $x^2+y^2+z^2-xy-yz-zx$ will be [*SSC CGL-2012*]

(a) 3 (b) 9

(c) 16 (d) 4

64. If $a+b+c=8$, then the value of [*SSC CGL-2012*]
$(a-4)^3+(b-3)^3+(c-1)^3-3(a-4)(b-3)(c-1)$ is

(a) 2 (b) 4

(c) 1 (d) 0

65. If $x=\sqrt{a}+\frac{1}{\sqrt{a}}$, $y=\sqrt{a}-\frac{1}{\sqrt{a}}$, then the value of $x^4+y^4-2x^2y^2$ is [*SSC CGL-2012*]

(a) 16 (b) 20

(c) 10 (d) 5

66. If $5a+\frac{1}{3a}=5$, then the value of $9a^2+\frac{1}{25a^2}$ is [*SSC CGL-2012*]

(a) $\frac{51}{5}$ (b) $\frac{29}{5}$

(c) $\frac{52}{5}$ (d) $\frac{39}{5}$

67. If $x=3+2\sqrt{2}$, then the value of $\sqrt{x}-\frac{1}{\sqrt{x}}$ is [*SSC CGL-2012*]

(a) $\pm 2\sqrt{2}$ (b) ± 2

(c) $\pm\sqrt{2}$ (d) $\pm\frac{1}{2}$

68. If $a+b+c=0$, the value of [*SSC CGL-2012*]

$\left(\frac{a^2}{bc}+\frac{b^2}{ca}+\frac{c^2}{ab}\right)$ is

(a) 2 (b) 3

(c) 4 (d) 5

69. If a, b, c are real and $a^3+b^3+c^3=3abc$ and $a+b+c\neq 0$, then the relation between a, b, c will be [*SSC CGL-2012*]

(a) $a+b=c$ (b) $a+c=b$

(c) $a=b=c$ (d) $b+c=a$

70. If $a=2$, $b=3$, then $(a^b+b^a)^{-1}$ is [*SSC CGL-2013*]

(a) $\frac{1}{31}$ (b) $\frac{1}{17}$

(c) $\frac{1}{21}$ (d) $\frac{1}{13}$

71. The smallest positive integer which when multiplied by 392, gives a perfect square is [*SSC CGL-2013*]

(a) 2 (b) 3

(c) 5 (d) 7

72. Divide 81 into three parts so that $\frac{1}{2}$ of 1st, $\frac{1}{3}$ of 2nd and $\frac{1}{4}$ of 3rd are equal. [*SSC CGL-2013*]

(a) 36, 27, 18 (b) 27, 18, 36
(c) 18, 27, 36 (d) 30, 27, 24

73. The expression $x^4 - 2x^2 + k$ will be a perfect square when the value of k is [*SSC CGL-2013*]

(a) 1 (b) 2
(c) $\frac{1}{2}$ (d) $\frac{1}{4}$

74. If $3x - \frac{1}{4y} = 6$, then the value of $4x - \frac{1}{3y}$ is [*SSC CGL-2013*]

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

75. If $a + b + c = 0$, find the value of $\frac{a+b}{c} - \frac{2b}{c+a} + \frac{b+c}{a}$. [*SSC CGL-2013*]

(a) 0 (b) 1
(c) -1 (d) 2

76. If $x + \frac{4}{x} = 4$, find the value of $x^3 + \frac{4}{x^3}$. [*SSC CGL-2013*]

(a) 8 (b) $8\frac{1}{2}$
(c) 16 (d) $16\frac{1}{2}$

77. If $x = 3 + 2\sqrt{2}$, then the value of $\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)$ is [*SSC CGL-2013*]

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

78. If 'a' be a positive number, then the least value of $a + \frac{1}{a}$ is [*SSC CGL-2013*]

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

79. Arrange the following in ascending order
$3^{34}, 2^{51}, 7^{17}$, we get [*SSC CGL-2014*]

(a) $3^{34} > 2^{51} > 7^{17}$ (b) $7^{17} > 2^{51} > 3^{34}$
(c) $3^{34} > 7^{17} > 2^{51}$ (d) $2^{51} > 3^{34} > 7^{17}$

80. If $x = 2 + \sqrt{3}$, then $x^2 + \frac{1}{x^2}$ is equal to [*SSC CGL-2014*]

(a) 10 (b) 12
(c) -12 (d) 14

81. If $a = 4.965$, $b = 2.343$ and $c = 2.622$, then the value of $a^3 - b^3 - c^3 - 3abc$ is [*SSC CGL-2014*]

(a) -2 (b) -1
(c) 0 (d) 9.93^2

82. If $x + y + z = 0$, then the value of $\frac{x^2 + y^2 + z^2}{x^2 - yz}$ is [*SSC CGL-2014*]

(a) -1 (b) 0
(c) 1 (d) 2

83. In an examination, a boy was asked to multiply a given number by $\frac{7}{19}$. By mistake, he divided the given number by $\frac{7}{19}$ and got a result 624 more than the correct answer. The sum of digits of the given number is [*SSC CGL-2014*]

(a) 10 (b) 11
(c) 13 (d) 14

84. If $a^2 + b^2 + c^2 = 2a - 2b - 2$, then the value of $3a - 2b + c$ is [*SSC CGL-2014*]

(a) 0 (b) 3
(c) 5 (d) 2

85. If $a + b + c = 3$, $a^2 + b^2 + c^2 = 6$ and $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 1$, where a, b, c are all non-zero, then 'abc' is equal to [*SSC CGL-2014*]

(a) $\frac{2}{3}$ (b) $\frac{3}{2}$
(c) $\frac{1}{2}$ (d) $\frac{1}{3}$

86. If $a^2 - 4a - 1 = 0$, $a \neq 0$, then the value of $a^2 + 3a + \frac{1}{a^2} - \frac{3}{a}$ is [*SSC CGL-2014*]

(a) 24 (b) 26
(c) 28 (d) 30