Deadline: 22-06-21 by EOD Answers should by marked

SIMPLIFICATIONS:

Assignment 01(100 Q)

To Increase Calculation Speed

(Please go through speed math's)

1.Vedic Math's (session on app)

2. How to multiply faster (session on app)
   - 2.1. 2*2 multiplication (session on app)
   - 2.2. 3*3 multiplication (session on app)
   - 2.3. 3*2 multiplication (session on app)

3.Cube Root (session on app)

4.Square Root (session on app)

Simplification:

Directions: What value should come in place of Question mark (?) in the following question?

1. $784 \div 14 + 598 \div 13 + ? = 99\%$ of 2500

A. 2475 B. 2373 C. 2285 D. 2565 E. None of these

2. $221 \div 13 \times \sqrt{576} + 10^2 = ?$

A. 628 B. 428 C. 408 D. 508 E. None of these

3. $15^2 + 12^2 = 11^2 + ?$

A. 258 B. 248 C. 262 D. 282 E. None of these

4. $6 \times 6 \times 6 \times 6 \times 6 + 6 \times 6 \times 6 \times 6 = 81 \times 3.5 \times ?$

A. 64 B. 16 C. 32 D. 16 E. None of these

5. $18\frac{1}{3}$ of 18 + $19\frac{1}{4}$ of 28 = 5.5 × ?

A. 198 B. 68 C. 158 D. 136 E. None of these

6. $3^{-2} + 22\frac{2}{9}\%$ of 364 = ?

A. 243 B. 57 C. 105 D. 81 E. None of these

7. $\sqrt{1024} \times \left(\frac{1}{2^{-5}}\right) + 8^2 \times 4 = ? \times 2^6$

A. 12 B. 34 C. 6 D. 36 E. None of these

8. $3\frac{2}{3} \times 4\frac{1}{5} \times \frac{3\frac{1}{5}}{2\frac{1}{5}} = ?$

A. 54.2 B. 68.4 C. 22.4 D. 44.8 E. None of these

9. $15^2 + 17^2 - ? = 21^2$

A. – 63 B. – 53 C. 53 D. 73 E. None of these

10. $0.5 \times 8.4 + 3.5 \times 12.2 + 0.25 \times 10^2 = ?$

A. 128.1 B. 71.9 C. 52.7 D. 107.9 E. None of these

11. $9 \times 9 \times 9 + 6 \times 6 \times 6 = (1.5)^{?} \times 35 \times 8$

A. 6 B. 9 C. 3 D. 1.5 E. None of these

12. $0.005 \times 10^5 \times 33 - ? = (60)^2$

A. 13500 B. 1230 C. – 1950 D. 12900 E. None of these

13. $\frac{3}{5}$ of $\frac{4}{7}$ of $\frac{2}{3}$ of $875 \div 5^{-1} = ?$

A. 1500 B. 200 C. 1000 D. 40 E. None of these

14. $11 \times ? \times 19 = 19^3 - 37 \times 95$

A. 24 B. 8 C. 22 D. 16 E. None of these

15. $15 \times 15 \times 15 + 45^2 = 3^2 \times ?$

A. 1800 B. 200 C. 600 D. 900 E. None of these

16. $5\frac{1}{3}$ of $5 + 373\frac{1}{3}$ of $1 + ? = 5^2 \times 4^2$

A. 200 B. – 200 C. 0 D. – 400 E. None of these

17. $333 \div 18.5 + 10^4 \div 2^4 + 10^2 = ?$

A. 848 B. 743 C. 924 D. 683 E. None of these

18. $5\frac{1}{5}\%$ of $3000 + 6\frac{1}{3}\%$ of $3000 = ?$

A. 35600 B. 3800 C. 346 D. 848 E. None of these

19. 56% of 2400 – 82% of 6000 = ? – 32% of 1800

A. –2400 B. – 3000 C. 2400 D. 3000 E. None of these

20. $16^{4.5} \times 4^{6.3} \times 8^{2.1} \div 2^{9.2} \times 32^{0.64} = 8^{2.3 + ?}$

A. 9 B. 7 C. 8 D. 3 E. 10

21. $1\frac{1}{6}$ of 355 of $1\frac{1}{5}$ of 2160 + √3969 – 448.98 = ?

A. 25424.02 B. 18436.02 C. 26834.02 D. 25174.02 E. None of these

22. $? = \frac{1224}{} \times \frac{220}{} \div \frac{340}{}$

$$\begin{array}{r} 44 \\ 23 \\ \hline 414 \end{array}$$

A. 316 B. 324 C. 336 D. 354 E. 386

23. If X = 10, Y = 7, then

$$\frac{(X-Y)^4-18}{7}\times\frac{9XY}{10Y^2-6XY}=?$$

A. 44 B. 113 C. 66 D. 81 E. 69

24. 3990 ÷ 57 + √361 + √324 = $?^2$ × 535 ÷ 729 × 5

A. 6.2 B. 4.5 C. 5.6 D. 6.4 E. None of these

25. $[(2211 \div 67)^2 - 21 \times \sqrt{256} + \div (549 - 213) = ? \div 1344$

A. 3052 B. 3012 C. 3042 D. 3062 E. 3032

26. 784 ÷ √196 + 25.6 ÷ 2 × 1.5 ÷ √8100 × 3 = ?

A. 66.64 B. 76.54 C. 56.64 D. 72.64 E. 76.46

27. $?^2$ % of 11.11% of 256 × 1872 ÷ 2704 = 81

A. 9.75 B. 10.50 C. 11.25 D. 12.75 E. None of these

28. $3\frac{4}{7} \div [(62\% \text{ of } 620 \times 7) \div 2401] = ?^2$

A. 25/61 B. (35/62) × $\sqrt{10}$ C. (32/75) × $\sqrt{10}$ D. 52/83 E. None of these

29. $(6561 \times 117) \div 108 \times \sqrt{36} = 3^{?+4} \div 216^{1/3} \times 39$

A. 10 B. 6 C. 4 D. 8 E. 2

30. $137 \div (512^{1/3} \div \sqrt{1225})*2 + 3(17 \div 68)] = ?547310$

A. 65 B. 45 C. 74 D. 84 E. None of these

31. $(2^{12} - 3^9) \times (3^6 - 9^3) + 11^2 = ?$

A. 12251 B. 17781 C. 91641 D. 72361 E. None of these

32. $(37.5 \times 22 \times 48) \div 2^4 - ? = (11)^3$

A. 1234 B. 1144 C. 1284 D. 1384 E. 1674

33. (47 + 47 + 47 + 47 + 47 + 47) × 5 × (47 + 47) × 6 ÷ (47 × 2) = 47 × ?

A. 47×180 B. 47×90 C. 90 D. None of these E. 124

34. $2\sqrt{3} \times 3\sqrt{8} \times 2\sqrt{27} \times 2\sqrt{2} = 2^4 \times ?$

A. 18 B. 54 C. 9 D. 27 E. None of these

35. $17^2 + 19^2 + ? = 21^2 + 15^2$

A. – 16 B. 0 C. 32 D. 36 E. 16

36. $\frac{1}{1 \times 6} + \frac{1}{6 \times 11} + \frac{1}{11 \times 16} + \frac{1}{16 \times 21} = ?$

A. $\frac{3}{21}$ B. $\frac{8}{42}$ C. $\frac{2}{21}$ D. $\frac{20}{21}$ E. None of these

37. $(5175 \div 23)^{1/2} + (72 \times 2)^{1/2} = (?)^{1/2}$

A. 26 B. 29 C. 729 D. 841 E. None of these

38. $641.23 - 228.48 - 124.21 = ?$

A. 378.54 B. 278.54 C. 288.54 D. 298.54 E. None of these

39. $\frac{\sqrt{3}+1}{\sqrt{3}-1} \times 20^2 - 3^{1/2} \times 2^2 \times 10^2 = (?) \times 10$

A. 30 B. 20 C. 90 D. 120 E. None of these

40. $\sqrt{15} + \sqrt{?} = 3^{3/2}$

A. 12 B. 13 C. 169 D. 144 E. None of these

41. 61% of $550 - ?\%$ of $250 = 35$

A. 32 B. 28 C. 37 D. 44 E. None of these

42. $5 \times ? = 735 \div 3$

A. 39 B. 59 C. 43 D. 49 E. 53

43. $\frac{4}{7} \times \frac{9}{14} \div \frac{16}{21} \times ? = 1$

A. $\frac{27}{56}$ B. $2\frac{4}{27}$ C. $1\frac{9}{27}$ D. $2\frac{2}{27}$ E. None of these

44. 19% of $250 + ? = 2^7$

A. 85.5 B. 75.5 C. 80.5 D. 70.5 E. None of these

45. $(6 \times 6 \times 6 \times 6 \times 6)^5 \times (9 \times 9 \times 9)^5 \div (18 \times 18 \times 18)^3 = 2^{16} \times 3^{?}$

A. 36 B. 39 C. 37 D. 41 E. 43

46. **50% of** $(13\frac{1}{10} + 11\frac{1}{10})$ **= ?**

A. 16.2 B. 20.1 C. 12.1 D. 6.50 E. None of these

47. $\sqrt{729}$ **÷ 45 × 720 + ? =** 30^2

A. 512 B. 468 C. 528 D. 498 E. None of these

48. $9\frac{3}{8} \times 7\frac{3}{5} \times$ **? =** 15^2

A. $2\frac{2}{19}$ B. $4\frac{6}{19}$ C. $4\frac{1}{19}$ D. $3\frac{3}{19}$ E. None of these

49. **600% of** $\sqrt{\frac{180 \times 81}{5}}$ **× 12 ÷** 3^{-1} **=** $?^2$

A. 108 B. 72 C. 144 D. 96 E. None of these

50. $16\frac{2}{3}$ **% of (2.8 × 6 + 5.4 × 9) =** 10^{-1} **× ?**

A. 10.7 B. 107 C. 126 D. 119 E. None of these

Correct Answers:

1	2	3	4	5	6	7	8	9	10
B	D	B	C	C	D	E	C	D	B
11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
C	D	C	D	C	C	B	C	B	C
21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
D	B	D	E	B	C	C	B	C	E
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
E	B	D	B	E	B	C	C	E	D
41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
C	D	D	C	C	C	B	D	A	E

Explanations:

1. $784 \div 14 + 598 \div 13 + ? = 99\% \text{ of } 2500$

$$\frac{784}{14} + \frac{598}{13} + ? = 99 \times \frac{2500}{100}$$

$56 + 46 + ? = 2475$
$? = 2475 - 102 = 2373$
Hence, option B is correct.

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2. $221 \div 13 \times \sqrt{576} + 10^2 = ?$
$221 \div 13 \times \sqrt{576} + 100$
$? = 17 \times 24 + 100$
$? = 408 + 100$
$? = 508$

Hence, option D is correct.

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3. $15^2 + 12^2 = 11^2 + ?$
$225 + 144 - 121 = ?$
$? = 248$
Hence, option B is correct.

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4. $6 \times 6 \times 6 \times 6 \times 6 + 6 \times 6 \times 6 \times 6 = 81 \times 3.5 \times ?$
$6^4 (6 + 1) = 81 \times 3.5 \times ?$
$$2^4 \times 3^4 \times 7 = 3^4 \times \frac{7}{2} \times ?$$

$? = 2^5 = 32$
Hence, option C is correct.

5.
$$18\frac{1}{3} \text{ of } 18 + 19\frac{1}{4} \text{ of } 28 = 5.5 \times ?$$

$$\frac{55}{3} \text{ of } 18 + \frac{77}{4} \text{ of } 28 = 5.5 \times ?$$

$55 \times 6 + 77 \times 7 = 5.5 \times ?$
$11 (30 + 49) = 5.5 \times ?$
$? = 79 \times 2 = 158$

Hence, option C is correct.

6.

$$\Rightarrow \frac{\sqrt{1024} + (16 \times 13)}{\sqrt{576}} - 4 + \frac{3}{7} \times 1092 = ?$$

$$\Rightarrow \frac{32 + 208}{24} - 4 + 3 \times 156 = ?$$

$\Rightarrow 10 - 4 + 468 = ?$

$\Rightarrow ? = 474$

Hence, option B is correct.

7.

$3^{-2} + 22\frac{2}{9}\%$ of $364 = ?$

$\frac{1}{9} + \frac{200}{9}\%$ of $364 = ?$

$\frac{1}{9} + \frac{728}{9} = ?$

$\frac{729}{9} = 81 = ?$

$? = 81$

Hence, option D is correct.

8. $\sqrt{1024} \times (\frac{1}{2^{-5}}) + 8^2 \times 4 = ? \times 2^6$

$32 \times 2^5 + 2^6 \times 2^2 = ? \times 2^6$

$2^6 (16 + 4) = ? \times 2^6$

$? = 20$

Hence, option E is correct.

9. $15^2 + 17^2 - ? = 21^2$

$225 + 289 - ? = 441$

$? = 514 - 441 = 73$

Hence, option D is correct.

10. $0.5 \times 8.4 + 3.5 \times 12.2 + 0.25 \times 10^2 = ?$

$$? = \frac{1}{2} \times 8.4 + \frac{7}{2} \times 12.2 + \frac{1}{4} \times 100$$

$? = 4.2 + 42.7 + 25$

? = 71.9
Hence, option B is correct.

11. $9 \times 9 \times 9 + 6 \times 6 \times 6 = (1.5)^{?} \times 35 \times 8$

$729 + 216 = (1.5)^{?} \times 35 \times 8$

$945 = (1.5)^{?} \times 35 \times 8$

$(\frac{27}{8}) = (\frac{3}{2})^{?}$

$(\frac{3}{2})^{3} = (\frac{3}{2})^{?}$

Hence, option C is correct.

12. $0.005 \times 10^5 \times 33 - ? = (60)^2$

$500 \times 33 - ? = 3600$

$? = 16500 - 3600 = 12900$

Hence, option D is correct.

13. $\frac{3}{5}$ of $\frac{4}{7}$ of $\frac{2}{3}$ of $875 \div 5^{-1} = ?$

$? = 25 \times 4 \times 2 \times 5$

$? = 1000$

Hence, option C is correct.

14. $11 \times ? \times 19 = 19^3 - 37 \times 95$

$11 \times ? \times 19 = 19\,(19^2 - 37 \times 5)$

$11 \times ? = 361 - 185 = 176$

$? = \frac{176}{11} = 16$

Hence, option D is correct.

15. $15 \times 15 \times 15 + 45^2 = 3^2 \times ?$

$9 \times 25\ (15 + 9) = 9 \times ?$

$? = 25 \times 24 = 600$

Hence, option C is correct.

16. $5\frac{1}{3}$ of $5 + 373\frac{1}{3}$ of $1 + ? = 5^2 \times 4^2$

$\frac{16}{3}$ of $5 + \frac{1120}{3}$ of $1 - 400 = ?$

$(\frac{1200}{3}) - 400 = 0 = ?$

Hence, option C is correct.

17. $333 \div 18.5 + 10^4 \div 2^4 + 10^2 = ?$

$18 + 5^4 + 100 = ?$

$18 + 625 + 100 = ?$

$? = 743$

Hence, option B is correct.

18. $5\frac{1}{5}\%$ of $3000 + 6\frac{1}{3}\%$ of $3000 = ?$

$\frac{26}{500} \times 3000 + \frac{19}{300} \times 3000 = ?$

$? = 26 \times 6 + 19 \times 10$

$? = 156 + 190 = 346$

Hence, option C is correct.

19. 56% of 2400 – 82% of 6000 = ? – 32% of 1800

$\Rightarrow 1344 - 4920 + 576 = ?$

$\Rightarrow -3000 = ?$

Hence, option B is correct.

20. $\Rightarrow 16^{4.5} \times 4^{6.3} \times 8^{2.1} \div 2^{9.2} \times 32^{0.64} = 8^{2.3+?}$

$\Rightarrow 2^{4 \times 4.5} \times 2^{2 \times 6.3} \times 2^{3 \times 2.1} \div 2^{9.2} \times 2^{5 \times 0.64} = 2^{[3 \times 2.3 + 3?]}$

$\Rightarrow 2^{18} \times 2^{12.6} \times 2^{6.3} \div 2^{9.2} \times 2^{3.2} = 2^{(6.9 + 3?)}$

$\Rightarrow 2^{(18 + 12.6 + 6.3 - 9.2 + 3.2)} = 2^{(6.9 + 3?)}$

$\Rightarrow 18 + 12.6 + 6.3 - 9.2 + 3.2 = 6.9 + 3?$

$\Rightarrow 30.9 = 6.9 + 3?$

$\Rightarrow 24 = 3?$

$\Rightarrow ? = 8$

Hence, option C is correct.

21. $\frac{1}{6}$ of 355 of $\frac{1}{5}$ of 2160 + √ 3969 – 448.98 = ?

$\Rightarrow 71 \times 360 + 63 - 448.98 = ?$

$\Rightarrow 25560 + 63 - 448.98 = ?$

$\Rightarrow ? = 25174.02$

Hence, option D is correct.

22. $? = \frac{1224}{44} \times \frac{220}{23} \div \frac{340}{414}$

$$\Rightarrow ? = \frac{\frac{1224}{44} \times \frac{220}{23}}{\frac{340}{414}}$$

$$\Rightarrow ? = \frac{1224}{44} \times \frac{220}{23} \times \frac{414}{340}$$

$$\Rightarrow ? = \frac{36}{2} \times 18$$

$\therefore ? = 324$

Hence, option B is correct.

23. $\Rightarrow \frac{(X-Y)^4-18}{7} \times \frac{9XY}{10Y^2-6XY} = ?$

$\Rightarrow \frac{81-18}{7} \times \frac{9 \times 10}{10 \times 7 - 6 \times 10}$

$\Rightarrow \frac{63}{7} \times \frac{9 \times 10}{10 \times 7 - 6 \times 10}$

$\Rightarrow 9 \times \frac{90}{10}$

$\Rightarrow 81$

Hence, option D is correct.

24. $3990 \div 57 + \sqrt{361} + \sqrt{324} = ?^2 \times 535 \div 729 \times 5$

$70 + 19 + 18 = ?^2 \times 535 \div 729 \times 5$

$107 = ?^2 \times 535 \div 729 \times 5$

$?^2 = 729 \div 25$

$? = 27 \div 5$

$? = 5.4$

Hence, option E is correct.

25. $[(2211 \div 67)^2 - 21 \times \sqrt{256} + \div (549 - 213) = ? \div 1344$

$[(33)^2 - 21 \times 16] \div 336 = ? \div 1344$

$(1089 - 336) \div 336 = ? \div 1344$

$753 \times 1344 \div 336 = ?$

$? = 3012$

Hence, option B is correct.

26. $784 \div \sqrt{196} + 25.6 \div 2 \times 1.5 \div \sqrt{8100} \times 3 = ?$

$784 \div 14 + 25.6 \div 2 \times 1.5 \div 90 \times 3 = ?$

$56 + 0.64 = ?$

$? = 56.64$

Hence, option C is correct.

27. $?^2$ % of 11.11% of $256 \times 1872 \div 2704 = 81$

$?^2 \times 1 \div 900 \times 16 \times 1872 \div 52 = 81$

$?^2 = 81 \times 900 \times 52 \div 16 \div 1872$

$?^2 = 2025/ 16$

$? = 45/ 4 = 11.25$

Hence, option C is correct.

28. $3\frac{4}{7} \div [(62\% \text{ of } 620 \times 7) \div 2401] = ?^2$

$?^2 = \frac{25}{7} \div (62 \times 62 \div 3430)$

$?^2 = \frac{25}{7} \times 3430 \div 62 \div 62$

$?^2 = 25 \times 490 \div 62 \div 62$

$? = 5 \times 7 \div 62 \times \sqrt{10}$

$? = \frac{35}{62} \times \sqrt{10}$

Hence, option B is correct.

29. $(6561 \times 117) \div 108 \times 36 = 3^{?+4} \div 216^{1/3} \times 39$

$(6561 \times 117) \div 108 \times 6 = 3^{?+4} \div 6 \times 39$

$729 \times 117 \div 12 \times 6 \times 6 \div 39 = 3^{?+4}$

$729 \times 3 \times 3 = 3^{?+4}$

$3^{6+2} = 3^{?+4}$

$8 = ? + 4$

$? = 4$

Hence, option C is correct.

30. $13\frac{7}{5} \div (512^{1/3} \div \sqrt{1225}) * \frac{2}{4} + \frac{3}{7}(\frac{17}{3} \div \frac{68}{10})\ ] = ?$

72/5 ÷ (8 ÷ 35) [2/4 + 3/7 (17/3 × 10/68)] = ?

72/5 × 35 ÷ 8 [2/4 + 3/7 × 5/6] = ?

63 (2/4 + 5/14) = ?

63 (10 + 14)/28 = ?

63 × 24/28 = ?

? = 63 × 6/7

? = 9 × 6 = 54

Hence, option E is correct.

31. $(2^{12} - 3^9) \times (3^6 - 9^3) + 11^2 = ?$

$? = (2^{12} - 3^9) \times (729 - 729) + 121$

? = 121 + 0 = 121

Hence, option E is correct.

32. $(37.5 \times 22 \times 48) \div 2^4 - ? = (11)^3$

$\frac{37.5 \times 22 \times 48}{16} - 1331 = ?$

? = 37.5 × 22 × 3 – 1331

? = 2475 – 1331 = 1144

Hence, option B is correct.

33. (47 + 47 + 47 + 47 + 47 + 47) × 5 × (47 + 47) × 6 ÷ (47 × 2) = 47 × ?

$47 \times 6 \times 5 \times 47 \times 2 \times \frac{6}{47 \times 2} = 47 \times ?$

47 × 6 × 5 × 6 = 47 × ?

? = 180

Hence, option D is correct.

34. $2\sqrt{3} \times 3\sqrt{8} \times 2\sqrt{27} \times 2\sqrt{2} = 2^4 \times ?$

$2^4 \times ? = 2\sqrt{3} \times 6\sqrt{2} \times 6\sqrt{3} \times 2\sqrt{2}$

$? \times 2^4 = 2 \times 6 \times 6 \times 2 \times 3 \times 2$

$? = 3 \times 3 \times 3 \times 2 = 54$

Hence, option B is correct.

35. $17^2 + 19^2 + ? = 21^2 + 15^2$

$289 + 361 + ? = 441 + 225$

$? = 666 - 650 = 16$

Hence, option E is correct.

36.

$$\frac{1}{1 \times 6} + \frac{1}{6 \times 11} + \frac{1}{11 \times 16} + \frac{1}{16 \times 21} = ?$$

$$? = \frac{1}{5}\left(1 - \frac{1}{6} + \frac{1}{6} - \frac{1}{11} + \frac{1}{11} - \frac{1}{16} + \frac{1}{16} - \frac{1}{21}\right)$$

$$? = \frac{1}{5}\left(1 - \frac{1}{21}\right)$$

$$? = \frac{1}{5} \times \frac{20}{21}$$

$$? = \frac{4}{21} = \frac{8}{42}$$

Hence, option B is correct.

37. $(5175 \div 23)^{1/2} + (72 \times 2)^{1/2} = (?)^{1/2}$

$225^{1/2} + 144^{1/2} = (?)^{1/2}$

$15 + 12 = 27 = ?^{1/2}$

$? = 729$

Hence, option C is correct.

38. 641.23 – 228.48 – 124.21 = ?

? = 288.54

Hence, option C is correct.

39.

$\frac{\sqrt{3}+1}{\sqrt{3}-1} \times 20^2 - 3^{1/2} \times 2^2 \times 10^2 = (?) \times 10$

$(?) \times 10 = \frac{\sqrt{3}+1}{\sqrt{3}-1} \times \frac{\sqrt{3}+1}{\sqrt{3}+1} \times 400 - \sqrt{3} \times 4 \times 100$

$(?) \times 10 = \frac{(\sqrt{3}+1)^2}{2} \times 400 - 400\sqrt{3}$

$(?) \times 10 = (3 + 1 + 2\sqrt{3}) \times 200 - 400\sqrt{3}$

$(?) \times 10 = 4 \times 200 + 400\sqrt{3} - 400\sqrt{3}$

$(?) \times 10 = 8 \times 100$

$(?) \times 10 = 800$

? = 80

Hence, option E is correct.

40. $\sqrt{15 + \sqrt{?}} = 3^{3/2}$

$15 + ?^{1/2} = 3^3$

$?^{1/2} = 27 - 15 = 12$

? = 144

Hence, option D is correct.

41. 61% of 550 – ?% of 250 = 3^5

$335.5 - ? \times \frac{250}{100} = 243$

$335.5 - 243 = ? \times 2.5$

$? \times 2.5 = 92.5$

$? = 92.5 \times \frac{2}{5} = 37$

Hence, option C is correct.

42. $5 \times ? = 735 \div 3$

$5 \times ? = 245$

$? = \frac{245}{5} = 49$

Hence, option D is correct.

43.

$\frac{4}{7} \times \frac{9}{14} \div \frac{16}{21} \times ? = 1$

$\frac{4}{7} \times \frac{9}{14} \times \frac{21}{16} \times ? = 1$

$? = \frac{14 \times 4}{9 \times 3} = \frac{56}{27} = 2\frac{2}{27}$

Hence, option D is correct.

44. 19% of 250 + ? = 2^7

$19 \times 2.5 + ? = 128$

$? = 128 - 47.5 = 80.5$

Hence, option C is correct.

45. $(6 \times 6 \times 6 \times 6 \times 6)^5 \times (9 \times 9 \times 9)^5 \div (18 \times 18 \times 18)^3 = 2^{16} \times 3^?$

$6^{5 \times 5} \times \frac{9^{5 \times 3}}{18^{3 \times 3}} = 2^{16} \times 3^?$

$\frac{2^{25} \times 3^{25} \times 3^{15} \times 3^{15}}{2^9 \times 3^9 \times 3^9} = 2^{16} \times 3^?$

$3^{(25 + 15 + 15 - 9 - 9)} = 3^?$

$? = 25 + 15 + 15 - 9 - 9 = 37$

Hence, option C is correct.

46.

50% of $\left(13\frac{1}{10} + 11\frac{1}{10}\right) = ?$

$\frac{1}{2}$ of $\left(\frac{131}{10} + \frac{111}{10}\right) = ?$

$? = \frac{1}{2}$ of $(13.1 + 11.1)$

$? = \frac{24.2}{2} = 12.1$

Hence, option C is correct.

47. $\sqrt{729} \div 45 \times 720 + ? = 30^2$

$\frac{27}{45} \times 720 + ? = 900$

$? = 900 - 432 = 468$

Hence, option B is correct.

48.

$9\frac{3}{8} \times 7\frac{3}{5} \times ? = 15^2$

$\frac{75}{8} \times \frac{38}{5} \times ? = 225$

$\frac{15}{4} \times 19 \times ? = 225$

$? = \frac{60}{19} = 3\frac{3}{19}$

Hence, option D is correct.

49. 600% of $\sqrt{\frac{180 \times 81}{5}} \times 12 \div 3^{-1} = ?^2$

$6 \times 6 \times 9 \times 12 \times 3 = ?^2$

$? = 3 \times 6 \times 6 = 108$

Hence, option A is correct.

50.

$16\frac{2}{3}\%$ of $(2.8 \times 6 + 5.4 \times 9) = 10^{-1} \times ?$

$\frac{50}{300} \times 6\,(2.8 + 3 \times 2.7) = \frac{1}{10} \times ?$

$\frac{1}{10} \times ? = 8.1 + 2.8$

$? = 10 \times 10.9 = 109$

Hence, option E is correct.

Simplification:

Directions: What value should come in place of question mark.

1. $[(288)^2 \div 24 \times 36] \div 18 = \sqrt{?}$

A. 6912 B. 3456 C. 216 D. 6912^2 E. None of these

2. $1454 + 2365 + 9710 + 3020 = ?$

A. 20718 B. 18121 C. 16549 D. 14226 E. None of these

3. 67.5% of $960 + ?\%$ of $640 = 728$

A. 12.5 B. 25 C. 12 D. 11 E. None of these

4. $19 \div {}^{*}1 - \frac{1}{2} + 2\frac{2}{3} + = ?$

A. $\frac{1}{6}$ B. 6 C. $\frac{1}{2}$ D. $\frac{1}{19}$ E. None of these

5. $(\sqrt{8} \times \sqrt{8})^{1/2} + 9^{1/2} = ?^3 + \sqrt{8} - 340$

A. 7 B. 19 C. 18 D. 9 E. None of these

6. $2\frac{1}{3}\%$ of $1500 + \{32\%$ of $1450 + \sqrt{1066 - 15\%\ 280} \div (68 - 72)\} = ?$

A. 499 B. 480 C. 491 D. 490 E. None of these

7. $7428 \times \frac{3}{4} \times \frac{2}{9} \times ? = 619$

A. 0.5 B. 1.5 C. 0.2 D. 2.4 E. None of these

8. $(4 + 3\sqrt{2})^2 - (3 + 2\sqrt{2})^2 = ?$

A. $24 + 12\sqrt{2}$ B. $24 + 10\sqrt{2}$ C. $23 + 12\sqrt{2}$ D. $23 + 10\sqrt{2}$ E. None of these

9. $632323 + 454545 - 757575 - 157866 = ?$

A. 187548 B. 174578 C. 171427 D. 172787 E. None of these

10. $3\frac{12}{67} \times 59\frac{32}{71} \times 16\frac{2}{7} + 3\frac{1}{2} = ?$

A. 3084.5 B. 3125.5 C. 3245.5 D. 3081.5 E. None of these

11. $23 \times 17 + 427 - 52\\% \text{ of } 1450 = ?^2$

A. 64 B. 58 C. 8 D. 16 E. None of these

12. $62\\% \text{ of } 16850 + 32\\% \text{ of } 7345 = 52\\% \text{ of } 645 + ?$

A. 10328 B. 12462 C. 10358 D. 10748 E. 12360

13. $\frac{3}{5}$ of $3245 + 32\\% \text{ of } 6250 - (?)^2 = 103$

A. 64 B. 62 C. 58 D. 57 E. None of these

14. $23568 + 33852 + 17183 - 52549 = ?$

A. 20084 B. 22184 C. 21084 D. 22084 E. None of these

15. $\left(\frac{3}{9}\right)$ of $3267 + 72\\% \text{ of } 6350 = (?)^2 - 580$

A. 54 B. 92 C. 27 D. 79 E. None of these

16. $\sqrt{1345 - 256} + \sqrt{3845 - 364} = ?$

A. 90 B. 93 C. 97 D. 92 E. None of these

17. $(0.9)^2 \times 15 + 2.64 = ? - 532 \div 28$

A. 33.79 B. 32.79 C. 33.69 D. 32.69 E. None of these

18. $4\frac{2}{10} + 2\frac{6}{3} - 6\frac{2}{8} = ?$

A. $2\frac{111}{110}$ B. $2\frac{120}{110}$ C. $1\frac{120}{114}$ D. $1\frac{114}{120}$ E. None of these

19. $4\frac{1}{6} \div 2\frac{1}{2} - 1.25 - 3\frac{1}{4} + 3.5 = ?$

A. $\frac{3}{2}$ B. $\frac{4}{3}$ C. $\frac{2}{3}$ D. $\frac{5}{3}$ E. None of these

20. $? \% \text{ of } (17895.35 - 16764.10) = 10^2 + 9^2$

A. 15 B. 12 C. 16 D. 18 E. 20

21. $5376 \div 24 \times 13 - 703 = ?^2$

A. 57 B. 47 C. 53 D. 43 E. None of these

22. $4\frac{5}{7} \times 4\frac{2}{3} + ? = 35\%$ of 158

A. 23.3 B. 33.3 C. 31.3 D. 19.3 E. None of these

23. 12473 – 1016 – 10137 + 21477 = ? + 8573

A. 15124 B. 14224 C. 14624 D. 14424 E. None of ttese

24. $(0.4)^3 \times 400 \div 4000$ of $(0.4)^2 = ?$

A. $\frac{1}{100}$ B. $\frac{1}{50}$ C. $\frac{1}{25}$ D. 1 E. None of these

25. 185% of 500 – 46% of 1650 = 4 × ?

A. 42.5 B. 35.5 C. 53.5 D. 41.5 E. None of these

26. 165% of 400 + 85% of 240 = ?% of 1080

A. 70 B. 90 C. 80 D. 110 E. 100

27. 24473 – 12016 – 11037 + 22477 = ? + 9473

A. 14136 B. 14424 C. 14760 D. 18342 E. 14572

28. $123 \times 8697 \div 223 = ?^2 + 36$

A. 67 B. 72 C. 85 D. 69 E. 83

29. $13 \times ? \times 6 = 47^2 - \sqrt{625}$

A. 32 B. 28 C. 36 D. 38 E. None of these

30. $\frac{882}{9} - 7 \times 13 + \sqrt[3]{2197} = ?$

A. 20 B. 24 C. 27 D. 31 E. None of these

31. $7\frac{2}{3} + 9\frac{7}{12} + 11\frac{3}{4} - 6\frac{1}{2} = ?$

A. $25\frac{3}{5}$ B. $22\frac{1}{2}$ C. $23\frac{3}{4}$ D. $22\frac{3}{5}$ E. None of these

32. $25^{6.5} \times 25^{12.25} = 25^{21-?}$

A. 2.20 B. 2.25 C. 2.5 D. 3 E. None of these

33. 1332 ÷ 36 × 23 + 287 – 189 = ?

A. 1029 B. 988 C. 850 D. 949 E. None of these

34. 0.8% of 2580 + 16% of 685 = ?

A. 125.76 B. 120.76 C. 130.24 D. 124.76 E. None of these

35. (153 × 1331) ÷ (11 × 17) = ?

A. 948 B. 1089 C. 1153 D. 1249 E. None of these

36. $\sqrt{1849} + \sqrt{529} - \sqrt{1521}$ **= ?**

A. 34 B. 27 C. 36 D. 26 E. None of these

37. 9845 – 3746 + 5483 = 7416 + ?

A. 3614 B. 4166 C. 2876 D. 3776 E. None of these

38. $\frac{5}{13}$ **of 1456 of** $\frac{2}{7}$ **of** $\frac{136}{17}$ **= ?**

A. 1140 B. 1280 C. 1320 D. 1210 E. None of these

39. 4.8 × 4.5 × 3.6 × 50 = ?

A. 2888 B. 3688 C. 3888 D. 3288 E. None of these

40. $13^3 + 21^2 - 19^3 + 5360 = ?$

A. 1240 B. 1139 C. 1332 D. 1129 E. None of these

41. $(\sqrt{7} - \sqrt{10})^2 + (\sqrt{5} + \sqrt{14})^2 = (?)^3 - 28$

A. √2 B. 4 C. √6 D. 3 E. None of these

42. 64% of $\sqrt{409600} \div 1.6 = ? \times 2.56$

A. √10 B. 256 C. √160 D. 100 E. None of these

43. 38.4% **of 1450 +** 78.2% **of 240 –** $?^2 = 20\%$ **of 77.4**

A. √17 B. 19 C. 27 D. 81 E. None of these

44. $(2.89)^4 \div (4913 \div 1000)^3 \times (0.17 \times 10)^3 = (1.7)^{?-3}$

A. √4 B. 6 C. 2 D. 5 E. None of these

45. $\sqrt[3]{5.832}$ **+ 35% of 6500 – ?% of 1250 = 222.8**

A. 164.32 B. 18.23 C. 174.32 D. 194.23 E. None of these

46. $13\frac{9}{7}$ **% of 2835 + 25% of 3248 = 1117 + ?**

A. 110 B. 100 C. 132 D. 50 E. None of these

47. $\sqrt{32 + \sqrt{13 + \sqrt{5 + \sqrt{16}}}}$ **= ?**

A. 3√2 B. 7 C. 4√3 D. 6 E. None of these

48. $(0.0036)^{1/2} + (0.0169)^{1/2} = ? + 0.03$

A. 0.16 B. 0.12 C. 0.14 D. 0.26 E. None of these

49. **25% of** $\sqrt[3]{328509}$ **+ 75% of** $\sqrt[3]{79507}$ **= ?**

A. 49.5 B. 36.5 C. 39.5 D. 41.5 E. None of these

50. $33^2 + 34^2 + 35 + 36^2 - 39^2 = ?$

A. 2025 B. 2055 C. 3025 D. 3155 E. None of these

Correct Answers:

1	2	3	4	5	6	7	8
D	C	A	B	A	C	A	E
9	10	11	12	13	14	15	16
C	D	C	B	B	E	D	D
17	18	19	20	21	22	23	24
A	D	C	C	B	B	B	C
25	26	27	28	29	30	31	32
D	C	B	D	B	A	B	B
33	34	35	36	37	38	39	40
D	C	B	B	B	B	C	B
41	42	43	44	45	46	47	48
B	D	C	D	A	B	D	B
49	50						
A	B						

Explanations:

1. $[(288)^2 \div 24 \times 36+ \div 18 = \sqrt{?}$

$\sqrt{?} = *(288)^2 \div 24 \times 36] \div 18$

$\sqrt{?} = *82944 \div 24 \times 36+ \div 18$

$\sqrt{?} = 6912$

$? = 6912^2$

Hence, option D is correct.

2. $1454 + 2365 + 9710 + 3020 = ?$

$? = 1454 + 2365 + 9710 + 3020$

$? = 16549$

Hence, option C is correct.

3. 67.5% of 960 + ?% of 640 = 728

$\frac{67.5}{100} \times 960 + \frac{?}{100} \times 640 = 728$

$648 + \frac{?}{100} \times 640 = 728$

$\frac{?}{100} \times 640 = 728 - 648$

$\frac{?}{100} \times 640 = 80$

$? = 80 \times \frac{100}{640}$

$? = 12.5$

Hence, option A is correct.

4.

$19 \div [1 - \frac{1}{2} + 2\frac{2}{3}] = ?$

$? = 19 \div [1 - \frac{1}{2} + 2\frac{2}{3}]$

$? = 19 \div [3 - \frac{1}{2} + \frac{2}{3}]$

$? = 19 \div [3 - \frac{3}{6} + \frac{4}{6}]$

$? = 19 \div [3 + \frac{1}{6}]$

$? = 19 \div [\frac{19}{6}]$

$? = 19 \times [\frac{6}{19}]$

$? = 6$

Hence, option B is correct.

5. $(\sqrt{8} \times \sqrt{8})^{1/2} + 9^{1/2} = ?^3 + \sqrt{8} - 340$

$(8)^{1/2} + 9^{1/2} = ?^3 + \sqrt{8} - 340$

$9^{1/2} = ?^3 + \sqrt{8} - 340 - (8)^{1/2}$

$3 = ?^3 + - 340$

$?^3 = 340 + 3 = 343$

$? = 7$

Hence, option A is correct.

6. $2\frac{1}{3}$% of 1500 + {320 of 1450 + $\sqrt{1066 - 15\% \text{ of } 280} \div (68 - 72)$} = ?

$\frac{7}{3} \times \frac{1}{100} \times 1500 + \{\frac{32}{100} \times 1450 + \sqrt{1066 - (280 * \frac{15}{100})} \div (-4)\} = ?$

$35 + \{464 + \sqrt{1066 - 42} \div (-4)\} = ?$

$? = 35 + \{464 + \sqrt{1024} \div (-4)\}$

$? = 35 + 464 - 32 \times \frac{1}{(4)}$

$? = 35 + (464 - 8)$

$? = 35 + 456 = 491$

Hence, option C is correct.

7.

$7428 \times \frac{3}{4} \times \frac{2}{9} \times ? = 619$

$7428 \times \frac{1}{2} \times \frac{1}{3} \times ? = 619$

$3714 \times \frac{1}{3} \times ? = 619$

$1238 \times ? = 619$

$? = \frac{619}{1238} = 0.5$

Hence, option A is correct.

8. $(4 + 3\sqrt{2})^2 - (3 + 2\sqrt{2})^2$

$? = (16 + 18 + 24\sqrt{2}) - (9 + 8 + 12\sqrt{2})$

$? = (34 + 24\sqrt{2}) - (17 + 12\sqrt{2})$

$? = 34 + 24\sqrt{2} - 17 - 12\sqrt{2}$

$? = 17 + 12\sqrt{2}$

Hence, option E is correct.

9. 632323 + 454545 – 757575 – 157866 = ?

? = 1086868 – 915441

? = 171427

Hence, option C is correct.

10.

$\Rightarrow 3\frac{12}{67} \times 59\frac{32}{71} \times 16\frac{2}{7} + 3\frac{1}{2} = ?$

$\Rightarrow \frac{213}{67} \times \frac{4221}{71} \times \frac{114}{7} + \frac{7}{2} = ?$

$\Rightarrow 3078 + 3.5 = ?$

$\Rightarrow ? = 3081.5$

Hence, option D is correct.

11. $23 \times 17 + 427 - 52\%$ of $1450 = ?^2$

$?^2 = 391 + 427 - 754$

$?^2 = 391 + 427 - 754$

$?^2 = 64$

$? = 8$

Hence, option C is correct.

12. 62% of 16850 + 32% of 7345 = 52% of 645 + ?

10447 + 2350.40 = 335.40 + ?

? = 12462

Hence, option B is correct.

13. $1947 + 2000 - 103 = (?)^2$

$3947 - 103 = (?)^2$

$3844 = (?)^2$

$? = 62$

Hence, option B is correct.

14. $74603 - 52549 = 22054$

Hence, option E is correct.

15.

$\left(\frac{3}{9}\right)$ of $3267 + 72\%$ of $6350 + 580 = (?)^2$

$1089 + 4572 + 580 = (?)^2$

$(?)^2 = 6241$

$? = \sqrt{6241} = 79$

Hence, option D is correct.

16. $\sqrt{1089} + \sqrt{3481} = ?$

$? = 33 + 59 = 92$

Hence, option D is correct.

17. $(0.9)^2 \times 15 + 2.64 = ? - 532 \div 28$

$0.81 \times 15 + 2.64 = ? - 19$

$12.15 + 2.64 = ? - 19$

$? = 33.79$

Hence, option A is correct.

18.

$4\frac{2}{10} + 2\frac{6}{3} - 6\frac{2}{8} = ?$

$? = (4 + 2 - 6) + \frac{2}{10} + \frac{6}{3} - \frac{2}{8}$

$? = 0 + \frac{(24 + 240 - 30)}{120}$

$? = 0 + \frac{234}{120}$

$? = 1\frac{114}{120}$

Hence, option D is correct.

19.

$4\frac{1}{6} \div 2\frac{1}{2} - 1.25 - 3\frac{1}{4} + 3.5 = ?$

$? = \frac{25}{6} \div \frac{5}{2} - 1.25 - \frac{13}{4} + 3.5$

$? = \frac{25}{6} \times \frac{2}{5} - 1.25 - 3.25 + 3.5$

$? = \frac{5}{3} - 1.25 - 3.25 + 3.5$

$? = \frac{5}{3} - 4.5 + 3.5$

$? = \frac{5}{3} - 1 = \frac{2}{3}$

Hence, option C is correct.

20. ? % of (17895.35 – 16764.10) = $10^2 + 9^2$

?% of 1131.25 = 181

18100

$? = \frac{1131.25}{} = 16$

Hence, option C is correct.

21. $?^2 = 5376 \div 24 \times 13 - 703$

$?^2 = 224 \times 13 - 703$

$?^2 = 2912 - 703 = 2209$

$? = \sqrt{2209} = 47$

Hence, option B is correct.

22.

$4\frac{5}{7} \times 4\frac{2}{3} + ? = 35\% \text{ of } 158$

$\frac{33}{7} \times \frac{14}{3} + ? = \frac{35}{100} \times 158$

$22 + ? = 55.3$

$? = 55.3 - 22 = 33.3$

Hence, option B is correct.

23. $12473 - 1016 - 10137 + 21477 = ? + 8573$

or, $? = 12473 - 1016 - 10137 + 21477 - 8573$

or, $? = 14224$

Hence, option B is correct.

24. $? = (0.4)^3 \times 400 \div 4000 \text{ of } (0.4)^2$

Applying the BODMAS, we get $= (0.4)^3 \times 400 \div (4000 \times 0.4 \times 0.4)$

$= \frac{0.4 \times 0.4 \times 0.4 \times 400}{4000 \times 0.4 \times 0.4}$

$= \frac{4 \times 4 \times 4 \times 400}{4000 \times 4 \times 4 \times 10}$

$= \frac{4}{100} = \frac{2}{50} = \frac{1}{25}$

Hence, option C is correct.

25. 185% of 500 – 46% of 1650 = 4 × ?

⇒ 185% of 500 – 46% of 1650 = 4 × ?

⇒ (925 – 759) = 4 × ?

⇒ 166 = 4 × ?

⇒ ? = 41.5

Hence, option D is correct.

26.

$$400 \times \frac{165}{100} + \frac{85}{100} \times 240 = \frac{?}{100} \times 1080$$

or, 4 × 165 + 85 × 2.4 = 10.8 × ?

or, 660 + 204 = 10.8 × ?

$$\therefore ? = \frac{864 \times 10}{108} = 80$$

Hence, option C is correct.

27. 24473 – 12016 – 11037 + 22477 = ? + 9473

? = 24473 – 12016 – 11037 + 22477 – 9473

? = 46950 – 32526

? = 14424

Hence, option B is correct.

28. 123 × 8697 ÷ 223 = $?^2$ + 36

$$?^2 = 123 \times \frac{8697}{223} - 36$$

$?^2$ = 4797 – 36 = 3481

$\therefore ? = \sqrt{4761} = \sqrt{69 \times 69} = 69$
Hence, option D is correct.

29. $13 \times ? \times 6 = 47^2 - \sqrt{625}$

or, $78 \times ? = 2209 - 25$

or, $? = 2184 \div 78$

or, $? = 28$

Hence, option B is correct.

30. $\frac{882}{9} - 7 \times 13 + \sqrt[3]{2197} = ?$

$? = 98 - 91 + 13$

$? = 20$

Hence, option A is correct.

31. $7\frac{2}{3} + 9\frac{7}{12} + 11\frac{3}{4} - 6\frac{1}{2} = ?$

$? = (7 + 9 + 11 - 6) + \left(\frac{2}{3} + \frac{7}{12} + \frac{3}{4} - \frac{1}{2}\right)$

$? = 21 + \frac{8 + 7 + 9 - 6}{12} = 21 + \frac{18}{12}$

$? = 21 + \frac{3}{2} = 22 + \frac{1}{2} = 22\frac{1}{2}$

Hence, option B is correct.

32. As the base on both the sides LHS and RHS are equal, we can compare the indices.

$6.5 + 12.25 = 21 - x$

$18.75 = 21 - x$

Therefore, $x = 21 - 18.75$

$\Rightarrow 2.25$

Hence, option B is correct.

33. $1332 \div 36 \times 23 + 287 - 189 = ?$

$\Rightarrow \frac{1332}{36} \times 23 + 287 - 189$

$= 851 + 287 - 189 = 1138 - 189 = 949$

Hence, option D is correct.

34. 0.8% of 2580 + 16% of 685 = ?

$? = \frac{8}{10 \times 100} \times 2580 + \frac{16}{100} \times 685$

$= 20.64 + 109.6 = 130.24$

Hence, option C is correct.

35. $(153 \times 1331) \div (11 \times 17) = ?$

$? = \frac{153 \times 1331}{11 \times 17} = 9 \times 121 = 1089$

Hence, option B is correct.

36. $\sqrt{1849} + \sqrt{529} - \sqrt{1521} = ?$

$? = 43 + 23 - 39 = 27$

Hence, option B is correct.

37. $9845 - 3746 + 5483 = 7416 + ?$

$? = 9845 - 3746 + 5483 - 7416$

$? = 4166$

Hence, option B is correct.

38.

$\frac{5}{13}$ of 1456 of $\frac{2}{7}$ of $\frac{136}{17}$ = ?

$? = \frac{5}{13} \times 1456 \times \frac{2}{7} \times \frac{136}{17}$

? = 5 × 16 × 2 × 8

or, ? = 1280

Hence, option B is correct.

39. 4.8 × 4.5 × × 3.6 × 50 = ?

⇒ ? = 4.8 × 4.5 × 3.6 × 50 = 3888

Hence, option C is correct.

40. $13^3 + 21^2 - 19^3 + 5360 = ?$

or, ? = 2197 + 441 – 6859 + 5360

or, ? = 1139

Hence, option B is correct answer.

41. $(\sqrt{7} - \sqrt{10})^2 + (\sqrt{5} + \sqrt{14})^2 = (?)^3 - 28$

$(?)^3 = 7 + 10 - 2\sqrt{70} + 5 + 14 + 2\sqrt{70} + 28$

$(?)^3 = 36 + 28 = 64$

$\therefore ? = \sqrt[3]{64} = 4$

Hence, option B is correct.

42. 64% of $\sqrt{409600}$ ÷ 1.6 = ? × 2.56

? × 2.56 = 64% of 640 ÷ 1.6

$? \times 2.56 = \frac{64 \times 640}{100} \div 1.6 = \frac{64 \times 640}{100 \times 1.6} = 256$

$\therefore \quad ? = \frac{256}{2.56} = 100$

Hence, option D is correct.

43. 38.4% of $1450 + 78.2\%$ of $240 - ?^2 = 20\%$ of 77.4

or, $?^2 = 38.4\%$ of $1450 + 78.2\%$ of $240 - 20\%$ of 77.4

or, $?^2 = 556.8 + 187.68 - 15.48$

$= 744.48 - 15.48 = 729$

$\therefore ? = \sqrt{729} = 27$

Hence, option C is correct.

44. $(2.89)^4 \div (4913 \div 1000)^3 \times (0.17 \times 10)^3 = (1.7)^{?-3}$

or, $(1.7)^8 \div (1.7)^{3\times3} \times (1.7)^3 = (1.7)^{?-3}$

or, $(1.7)^8 \div (1.7)^9 \times (1.7)^3 = (1.7)^{?-3}$

or, $(1.7)^{8-9+3} = (1.7)^{?-3}$

or, $(1.7)^2 = (1.7)^{?-3}$

$\therefore \quad ? - 3 = 2$

or, $? = 3 + 2 = 5$

45. $\sqrt[3]{5.832}$ + 35% of 6500 – ?% of 1250 = 222.8

or, 1.8 + 2275 – ? × 12.5 = 222.8

or, ? × 12.5 = 2276.8 – 222.8

or, ? = $\frac{2054}{12.5}$ = 164.32

Hence, option A is correct.

46.

$13\frac{9}{7}$% of 2835 + 25% of 3248 = 1117 + ?

∴ $\frac{100}{7}$% of 2835 + $\frac{1}{4}$ × 3248 = 1117 + ?

= $\frac{100}{700}$ × 2835 + 812 = 1117 + ?

⇒ 405 + 812 = 1117 + ?

∴ ? = 1217 – 1117 = 100

Hence, option B is correct.

47. $\sqrt{32 + \sqrt{13 + \sqrt{5 + \sqrt{16}}}}$ = ?

⇒ ? = $\sqrt{32 + \sqrt{13 + \sqrt{5 + 4}}}$

⇒ ? = $\sqrt{32 + \sqrt{13 + \sqrt{9}}}$

⇒ ? = $\sqrt{32 + \sqrt{13 + 3}}$

⇒ ? = $\sqrt{32 + \sqrt{16}}$

⇒ ? = $\sqrt{32 + 4}$

⇒ ? = $\sqrt{36}$

$\Rightarrow ? = 6$

Hence, option D is correct.

48. $(0.0036)^{1/2} + (0.0169)^{1/2} = ? + 0.03$

$\Rightarrow ? + 0.03 = 0.06 + 0.13$

$\Rightarrow ? = 0.19 - 0.03 = 0.16$

Hence, option B is correct.

49. 25% of $\sqrt[3]{328509}$ + 75% of $\sqrt[3]{79507}$ = ?

? = 25% of 69 + 75% of 43

? = 17.25 + 32.25 = 49.5

Hence, option A is correct.

50. $33^2 + 34^2 + 35 + 36^2 - 39^2 = ?$

? = 1089 + 1156 + 35 + 1296 – 1521

? = 2055

Hence, option B is correct.