

Quantitative Aptitude

Approximations

Level-1

Q1 Find the Approximate Value.

$$34.99 \times 17.98 \div 6.97 - 72.93 = ? - 128.99$$

- (A) 132 (B) 156
(C) 172 (D) 164
(E) 146

Q2 $(22.99 + 17.01) \div 1.998 \times 3.997 - 41.998 + 644.199 = ?$

- (A) 798 (B) 542
(C) 682 (D) 745
(E) none of these

Q3 $339.01 + 211.01 - 380.01 = ? - 320.01$

- (A) 490 (B) 440
(C) 380 (D) 520
(E) 400

Q4 $? = (1248.28 + 51.7) \div 99.9 - 7.98$

- (A) Multiple of 5
(B) Multiple of 7
(C) $43 < ? < 300$
(D) $13 > ? < 32$
(E) None of these

Q5 Find the approximate value :

$$286.97 \times 56.97 + 240.91 = \sqrt{624.95} \times ?$$

- (A) 624 (B) 648
(C) 616 (D) 632
(E) 664

Q6 $32 \div 3.996 \div 9.98 + 29 = ?$

- (A) $113 < ? < 123$
(B) $33 > ? < 20$
(C) $20 < ? > 22$
(D) $43 < ? < 23$
(E) None of these

Q7 $11.92^2 + 15.96 \text{ of } 2.93 - 1992 \div 3.99 = ?$

- (A) 187 (B) 205
(C) 117 (D) 165

(E) 197

Q8 $[(22.5 \times 36.003) \div 47.987] \times ? = 5863.10376$

- (A) $113 < ? < 123$
(B) $120 < ? > 122$
(C) $133 > ? < 320$
(D) $143 < ? < 300$
(E) None of these

Q9 What approximate value will come at the place of question mark (?).

$$1768.98 \div 61.07 = ? + 10.97$$

- (A) 18 (B) 25
(C) 15 (D) 10
(E) 13

Q10 $\sqrt[3]{1330.99} + 43.98 - 14.95 + ? = 188.88$

- (A) 209 (B) 189
(C) 165 (D) 149
(E) 179

Q11 $\frac{?}{4} + 44.01 + 139.99 = 78.09 + 249.01 + 86.99$

- (A) $113 < ? < 823$
(B) $240 < ? > 222$
(C) $333 > ? < 120$
(D) $430 < ? < 223$
(E) None of these

Q12 $15.98 \times 49.97 - 18.03 \times 32.01 + (14.01)^2 = ?$

- (A) 400 (B) 450
(C) 350 (D) 380
(E) 420

Q13 What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)



$$3.94 + \frac{1}{12.93} \text{ of } \{2599.96 \div (117.98 - 107.98)\} = ?$$

- (A) 16 (B) 20
(C) 32 (D) 28
(E) 24

Q14 Find the Approximate Value.

$$324.95 - [(11.99)^2 - 74.9] = (?)^2 - 67.99$$

- (A) 22 (B) 18
(C) 28 (D) 38
(E) None of these

Q15 What approximate value should come in place of question mark (?) in the following questions?

$$\sqrt{25.50\% \text{ of } 500.04 - 22.02\% \text{ of } 20.98 + 2} = ?$$

- (A) 5 (B) 6
(C) 8 (D) 7
(E) 9

Q16 Find the approximate value :

$$(18.10 \times 5.05 - 10.098) - \left(\frac{3}{4} \text{ of } 15.83\right) = 33.35 + ?$$

- (A) 36 (B) 28
(C) 30 (D) 46
(E) None of these

Q17 What approximate value will come in the place of the question mark '?' in the following question ?

$$54.98 + (25.01)^{1/2} + ? = (35.98)^{1/2} + (8.01)^2$$

- (A) 10 (B) 20
(C) 30 (D) 40
(E) 50

Q18 $851.92 - 12.93 \times 7.98 - 101.92 \times 2.93 - 0.91 = ?^2$

- (A) 19 (B) 17
(C) 15 (D) 21
(E) None of these

Q19 $? + 185.10 - 79.09 = (23.01)^2 - 70.01\% \text{ of } 139.99$

- (A) $113 < ? < 330$
(B) Multiple of 5
(C) Both A & B
(D) $43 < ? < 23$
(E) None of these

$$\text{Q20 } \frac{1639.99}{41.01} + \frac{?}{400} \times 999.990 = 779.9909$$

- (A) 286 (B) 278
(C) 318 (D) 296
(E) None of these



Level-2

- Q1** Find the approximate value :
 $(2.99^2 \times 3.99^2 \times 4.99) \div 35.99 = (?)^2 - 79.99$
 (A) 12 (B) 20
 (C) 10 (D) 15
 (E) 25
- Q2** $28 + (22.02)^2 = 2 \times (?)^2$
 (A) Multiple of 2
 (B) Multiple of 4
 (C) Square of 4
 (D) $15 < ? < 10$
 (E) All of the above
- Q3** Find the approximate Value.
 $49.99 \times ? + 12.01 \times 44.99 = 759.99 + 2.99 \times 60.01$
 (A) 4 (B) 8
 (C) 16 (D) 20
 (E) 12
- Q4** $24.998 + (4.9989)^2 = ? \div \frac{1}{4.9900865}$
 (A) $9 < ? < 3$
 (B) $12 > ? < 122$
 (C) $13 < ? < 15$
 (D) $23 < ? < 150$
 (E) None of these
- Q5** $89.9\% \text{ of } 400.01 + 14.99\% \text{ of } 4800.01 - 676.99 = ?$
 (A) 413 (B) 419
 (C) 403 (D) 389
 (E) None of these
- Q6** $17.99\% \text{ of } 199.98 + ?\% \text{ of } 600.01 = 39.99\% \text{ of } 750.01$
 (A) 48 (B) 30
 (C) 44 (D) 50
 (E) None of these
- Q7** $63.9872 \times 9449.8780 \div 243.003 = (?)^2$
 (A) Multiple of 2 (B) Multiple of 10
 (C) Multiple of 5 (D) 50
 (E) 55
- Q8** $599.99 \times \frac{3}{2} \text{ of } 19.92\% \text{ of } (109.99 - 9.99) = ?$
 (A) 12000 (B) 22000
 (C) 16000 (D) 18000
 (E) None of these
- Q9** $45.0112 \div 64.992 \times 312.211 + 361.11 = ?^2 + 11.09 \times 32.13$
 (A) 15 (B) 45
 (C) 35 (D) 55
 (E) None of these
- Q10** $(2 \times ?)^2 + 499.99\% \text{ of } 112.01 = 1239.99 - 8.01 \times 34.99$
 (A) 18 (B) 12
 (C) 15 (D) 14
 (E) 10
- Q11** $95.98 + (30.01)^2 - 795.99 = (?)^2 + 3.94$
 (A) Multiple of 7 (B) Multiple of 2
 (C) Both A & B (D) Multiple of 3
 (E) None of these
- Q12** Find the Approximate Value.
 $44.04\% \text{ of } 349.98 + 205.01\% \text{ of } 140.01 = (?)^2$
 (A) Multiple of 9 (B) Multiple of 3
 (C) Cube of 3 (D) 21
 (E) 25
- Q13** $19.66\% \text{ of } 144.87 - \frac{266.47}{118.84} \times \frac{17}{18.84} = ?^3$
 (A) 5 (B) 7
 (C) 4 (D) 3
 (E) 6
- Q14** $? \text{ of } (1131.145 - 501.923 - 241.02 - 187.7) = 59.99456$
 (A) 30 (B) 50
 (C) 40 (D) 70
 (E) 80
- Q15** $?^2 + 29.07 \times 5.114 - 115.117 = 8.9\% \text{ of } 400.118 + 522.9$
 (A) Multiple of 5
 (B) Prime No.
 (C) Non Prime No.
 (D) Multiple of 7



(E) None of these

Q16 $\left[(1763.97)^{\frac{1}{2}} + (2197.04)^{\frac{1}{3}} \right] = ? + 4.021$

$\times 7.9$

(A) 15

(B) 8

(C) 12

(D) 5

(E) None of these

Q17 $\sqrt[3]{\frac{404.99 \times 315.01 \times 245.40}{27}}$

(A) 100

(B) 105

(C) 110

(D) 115

(E) None of these

Q18 $35.99 + 32.0032 = \frac{68}{10.998} \times \sqrt{?}$

(A) $113 < ? < 103$

(B) $120 < ? < 112$

(C) $133 > ? < 140$

(D) $143 < ? < 300$

(E) None of these

Q19 $(15.95)^{\frac{1}{4}} + (3.01)^3 - 111.99 \times 2.02$

$+ (9.98)^2$

(A) Negative No.

(B) Multiple of 5

(C) Both A & B

(D) $143 < ? < 300$

(E) None of these

Q20 $(25.11)^{\frac{1}{2}} \times (80.87)^{\frac{1}{4}} \times (49.22)^{\frac{1}{2}} + 3.13$

$\times 7.01 + 2 = 2^?$

(A) 2

(B) 4

(C) 7

(D) 9

(E) 5



Level-3

Q1 $771.999 + \frac{437.99}{2.01} - 80.99 \times (1.99)^3 = (?)^3$

- (A) 8 (B) 4
(C) 6 (D) 7
(E) 9

Q2 $34.971\% \text{ of } 80.13 \times 20.03\% \text{ of } 250.01 - 423.87 = ? + 51.991 \times 8.13$

- (A) 580 (B) 550
(C) 570 (D) 560
(E) 540

Q3 $\frac{(21.87)^2 + 448.98 - 32.80}{(4.99)^3 + \sqrt[3]{511.94} - ?} = 8.98$

- (A) 33 (B) 53
(C) 63 (D) 101
(E) None of these

Q4 $? - 554.09 - 50.045\% \text{ of } \frac{6450.01}{42.91} = 35$
 $.79 \times 41.12 \div 369.03$

- (A) 647
(B) 537
(C) 679
(D) 511
(E) None of the above.

Q5 $(77.987\% \text{ of } 358) + (68.55\% \text{ of } 729) = ?$

- (A) Multiple of 2
(B) Multiple of 10
(C) Multiple of 5
(D) 780
(E) None of these

Q6 What approximate value will come at the place of question mark (?).

$15.98\% \text{ of } 2374.99 = 24.98\% \text{ of } ? + 29.98\% \text{ of } 1119.99$

- (A) 176 (B) 186
(C) 225 (D) 325
(E) 200

Q7 $\frac{5435.99}{302.12} + 18 + 53.89 + 35.98\% \text{ of } 1000$
 $= \frac{108.11}{5.99} \times ? + 216.05$

- (A) 10 (B) 12
(C) 13 (D) 15
(E) None of these

Q8 $(63.94 \times 15.96 \div 255.96)^2 = \sqrt[3]{[3.94^{(?-3)}]}$

- (A) 11 (B) 13
(C) 9 (D) 7
(E) None of these

Q9 What approximate value will come at the place of question mark (?).

$\sqrt[3.01]{726} + 19.956\% \text{ of } 881.0954 + 25.08\% \text{ of } 2200.96 = ?$

- (A) 960 (B) 735
(C) 855 (D) 951
(E) none of these

Q10 What approximate value will come at the place of question mark (?).

$(782.85)^{1/2} + 37.505\% \text{ of } 2688.04 + 48.12 \times 34.25 \div (67.78) = ?$

- (A) 780 (B) 1340
(C) 1060 (D) 1220
(E) 1000



Answer Key

Level-1

Q1 (E)
Q2 (C)
Q3 (A)
Q4 (A)
Q5 (E)
Q6 (C)
Q7 (A)
Q8 (E)
Q9 (A)
Q10 (D)

Q11 (B)
Q12 (E)
Q13 (E)
Q14 (B)
Q15 (A)
Q16 (A)
Q17 (A)
Q18 (D)
Q19 (C)
Q20 (D)



Level-2

Q1 (C)

Q2 (E)

Q3 (B)

Q4 (B)

Q5 (C)

Q6 (C)

Q7 (D)

Q8 (D)

Q9 (A)

Q10 (E)

Q11 (C)

Q12 (D)

Q13 (D)

Q14 (A)

Q15 (B)

Q16 (B)

Q17 (B)

Q18 (C)

Q19 (C)

Q20 (C)



Level-3

Q1 (D)

Q2 (C)

Q3 (A)

Q4 (E)

Q5 (D)

Q6 (A)

Q7 (C)

Q8 (C)

Q9 (B)

Q10 (C)



Hints & Solutions

Level-1

Q1 Text Solution:

Given expression is

$$34.99 \times 17.98 \div 6.97 - 72.93 = ? - 128.99$$

$$\Rightarrow 35 \times 18 \div 7 - 73 = ? - 129$$

$$\Rightarrow 35 \times \left(\frac{18}{7}\right) - 73 = ? - 129$$

$$\Rightarrow ? = 35 \times \left(\frac{18}{7}\right) - 73 + 129$$

$$\Rightarrow ? = 90 - 73 + 129 \Rightarrow ? = 146$$

Q2 Text Solution:

$$(22.99 + 17.01) \div 1.998 \times 3.997 - 41.998 + 644.199 = ?$$

$$\left\{\left(\frac{23+17}{2}\right)\right\} 4 - 42 + 644 = ?$$

$$? = 20 \times 4 - 42 + 644$$

$$? = 80 + 644 - 42 = 724 - 42 = 682$$

Q3 Text Solution:

$$339 + 211 - 380$$

$$\simeq ? = 320$$

$$? \simeq 870 - 380$$

$$? \simeq 490$$

Q4 Text Solution:

$$= (1248.28 + 51.7) \div 99.9 - 7.98$$

$$= (1300 \div 100) - 8$$

$$= 5$$

$$? = 25$$

Q5 Text Solution:

$$286.97 \times 56.97 + 240.91 = \sqrt{624.95} \times ?$$

$$\Rightarrow 287 \times 57 + 241 = \sqrt{625} \times ?$$

$$\Rightarrow 16359 + 241 = 25 \times ?$$

$$\Rightarrow 25 \times ? = 16600$$

$$\Rightarrow ? = 16600/25$$

$$\Rightarrow ? = 664$$

Q6 Text Solution:

$$32 \div 4 \div 10 + 29 = ?$$

$$? = 8 \div 10 + 29$$

$$? = 29.8 \approx 30$$

Q7 Text Solution:

Given expression is

$$11.92^2 + 15.96 \text{ of } 2.93 - 1992 \div 3.99 = ?$$

$$\Rightarrow 12^2 + 16 \text{ of } 3 - 20 \div 4 = ?$$

$$\Rightarrow 144 + 16 \times 3 - 5 = ?$$

$$\Rightarrow 144 + 48 - 5 = ?$$

$$\Rightarrow 187 = ?$$

Q8 Text Solution:

$$[(22.5 \times 36.003) \div 47.987] \times ? = 5863$$

$$.10376$$

$$\frac{22.5 \times 36}{48} \times ? = 5863$$

$$? \approx 347$$

Q9 Text Solution:

$$1768.98 \div 61.07 = ? + 10.97$$

$$? = 1769 \div 61 - 11$$

$$= 29 - 11$$

$$= 18$$

Q10 Text Solution:

$$\approx \sqrt[3]{1331} + 44 - 15 + ? = 189$$

$$? = 189 - 29 - 11$$

$$? = 149$$

Q11 Text Solution:

$$\frac{?}{4} + 44.01 + 139.99 = 78.09 + 249.01$$

$$+ 86.99$$

$$\Rightarrow \frac{?}{4} + 44 + 140 \simeq 78 + 249 + 87$$

$$\Rightarrow \frac{?}{4} \simeq 414 - 184$$

$$\Rightarrow \frac{?}{4} \simeq 230$$

$$\Rightarrow ? \simeq 920$$

Q12 Text Solution:

$$16 \times 50 - 18 \times 32 + 196 = ?$$

$$? = 800 - 576 + 196$$

$$? = 420$$

Q13 Text Solution:

Given expression is

$$3.94 + \frac{1}{12.93} \text{ of } \{2599.96 \div (117.98 - 107.98)\} = ?$$

$$\Rightarrow 4 + \frac{1}{13} \text{ of } \{2600 \div (118 - 108)\} = ?$$

$$\Rightarrow 4 + \frac{1}{13} \text{ of } \{2600 \div 10\} = ?$$

$$\Rightarrow 4 + \frac{1}{13} \text{ of } 260 = ?$$

$$\Rightarrow 4 + 20 = ?$$

$$\therefore ? = 24$$

Q14 Text Solution:

$$324.95 - [(11.99)^2 - 74.9] = (?)^2 - 67.99$$

$$\Rightarrow 325 - [(12)^2 - 75] = (?)^2 - 68$$

$$\Rightarrow 325 - [144 - 75] + 68 = (?)^2$$

$$\Rightarrow 325 - 69 + 68 = (?)^2$$



$$\Rightarrow 324 = (?)^2$$

$$\Rightarrow 18 = ?$$

Q15 Text Solution:

Ans: 5

$$\sqrt[3]{25.50\% \text{ of } 500.04 - 22.02\% \text{ of } 20.98 + 2}$$

=?

$$\sqrt[3]{127 - 4 + 2} = ?$$

$$? = \sqrt[3]{125}$$

$$? = 5$$

Q16 Text Solution:

Given expression becomes,

$$\Rightarrow (18 \times 5 - 10) - \left(\frac{3}{4} \text{ of } 16\right) = 33 + ?$$

$$\Rightarrow (90 - 10) - \left(\frac{3}{4} \times 16\right) = 33 + ?$$

$$\Rightarrow (80) - (3 \times 4) = 33 + ?$$

$$\Rightarrow 80 - 12 = 33 + ?$$

$$\Rightarrow 68 = 33 + ?$$

$$\Rightarrow ? = 68 - 33 \Rightarrow ? \approx 35$$

Q17 Text Solution:

$$54.98 + (25.01)^{1/2} + ? = (35.98)^{1/2} +$$

$$(8.01)^2$$

$$55 + 5 + ? = 6 + 64$$

$$60 + ? = 70$$

$$? = 10$$

Q18 Text Solution:

Given expression is

$$851.92 - 12.93 \times 7.98 - 101.92 \times 2.93 - 0.91 = ?^2$$

$$\Rightarrow 852 - 13 \times 8 - 102 \times 3 - 1 = ?^2$$

$$\Rightarrow 852 - 104 - 306 - 1 = ?^2$$

$$\Rightarrow 441 = ?^2$$

$$\Rightarrow 21 = ?$$

Q19 Text Solution:

$$? + 185.10 - 79.09$$

$$= (23.01)^2 - 70.01\% \text{ of } 139.99$$

$$\Rightarrow ? + 185 - 79 \simeq (23)^2 - \frac{70}{100} \times 140$$

$$\Rightarrow ? + 106 \simeq 529 - 98$$

$$\Rightarrow ? \simeq 431 - 106 \simeq 325$$

Q20 Text Solution:

$$\frac{1640}{41} + \frac{?}{400} \times 1000 = 780$$

$$? \times 2.5 = 780 - 40$$

$$? = \frac{740}{2.5}$$

$$? = 296$$



Level-2

Q1 Text Solution:

$$(2.99^2 \times 3.99^2 \times 4.99) \div 35.99 = (?)^2 - 79.99$$

$$\Rightarrow (3^2 \times 4^2 \times 5) \div 36 = (?)^2 - 80$$

$$\Rightarrow (?)^2 = ((9 \times 16 \times 5) \div 36) + 80$$

$$\Rightarrow (?)^2 = (720 \div 36) + 80$$

$$\Rightarrow (?)^2 = 20 + 80 = 100$$

$$\Rightarrow (?) = 10$$

Q2 Text Solution:

$$28 + (22.02)^2 = 2 \times (?)^2$$

$$\Rightarrow + (22)^2 \simeq 2 \times (?)^2$$

$$\Rightarrow 28 + 484 \simeq 2 \times (?)^2 \Rightarrow 512 \simeq 2 \times (?)^2$$

$$\Rightarrow (?)^2 \simeq 256$$

$$\Rightarrow ? = 16$$

Q3 Text Solution:

$$? \times 50 + 540 = 760 + 180$$

$$? = \frac{400}{50}$$

$$? = 8$$

Q4 Text Solution:

$$24.998 + (4.9989)^2 = ? \div \frac{1}{4.9900865}$$

$$\approx \frac{25+25}{5}$$

$$\approx 10$$

Q5 Text Solution:

$$\frac{90}{100} \times 400 + \frac{15}{100} \times 4800 - 677 = ?$$

$$? = 360 + 720 - 677$$

$$? = 403$$

Q6 Text Solution:

$$\frac{18}{100} \times 200 + \frac{?}{100} \times 600 = \frac{40}{100} \times 750$$

$$? \times 6 = 300 - 36$$

$$? = \frac{264}{6}$$

$$? = 44$$

Q7 Text Solution:

$$63.9872 \times 9449.8780 \div 243.003 = (?)^2$$

$$64 \times 9450 \div 243 = (?)^2$$

$$\approx 50$$

Q8 Text Solution:

$$599.99 \times \frac{3}{2} \text{ of } 19.92\% \text{ of } (109.99 - 9.99) = ?$$

$$= 600 \times \frac{3}{2} \text{ of } 20\% \text{ of } 100 = ?$$

$$= 600 \times \frac{3}{2} \text{ of } 20/100 \text{ of } 100 = ?$$

$$= 600 \times \frac{3}{2} \text{ of } 20 = ?$$

$$= 600 \times \frac{3}{2} \times 20 = ?$$

$$= 600 \times 30 = 18000 = ?$$

Q9 Text Solution:

$$45 \times \frac{1}{65} \times 312 + 361 = ?^2 + 11 \times 32$$

$$577 = ?^2 + 352$$

$$? = (225)^{\frac{1}{2}}$$

$$? = 15$$

Q10 Text Solution:

$$(2 \times ?)^2 + \frac{500}{100} \times 112$$

$$= 1240 - 280$$

$$(2 \times ?)^2 = 1240 - 280 - 560$$

$$(2 \times ?)^2 = 400$$

$$? = 10$$

Q11 Text Solution:

$$(?)^2 \approx 96 - 4 + 104$$

$$= 196$$

$$? \approx 14$$

Q12 Text Solution:

$$44.04\% \text{ of } 349.98 + 205.01\% \text{ of } 140.01 = (?)^2$$

$$\Rightarrow \frac{44}{100} \times 350 + \frac{205}{100} \times 140 \simeq (?)^2$$

$$\Rightarrow 154 + 287 \simeq (?)^2$$

$$\Rightarrow 441 \simeq (?)^2$$

$$\Rightarrow ?$$

$$= 21$$

Q13 Text Solution:

$$\frac{20}{100} \times 145 - \frac{266}{119} \times \frac{17}{19} = ?^3$$

$$\Rightarrow ?^3 = 29 - 2$$

$$\Rightarrow ?^3 = 3^3 \Rightarrow ? = 3$$

Q14 Text Solution:

$$\frac{?}{100} \times (1131 - 502 - 241 - 188) = 60$$

$$\frac{?}{100} \times 200 = 60$$

$$? = \frac{60}{2} = 30$$

Q15 Text Solution:

$$?^2 + 29.07 \times 5.114 - 115.117 = 8.9\% \text{ of } 400.118 + 522.9$$

$$?^2 + 29 \times 5 - 115 \approx 9\% \text{ of } 400 + 523$$

$$\Rightarrow ?^2 + 30 \approx \frac{9}{100} \times 400 + 523$$



$$\Rightarrow ?^2 + 30 \approx 36 + 523$$

$$\Rightarrow ?^2 \approx 529$$

$$\Rightarrow ? \approx 23$$

Q16 Text Solution:

$$42 + 13 = ? + 32$$

$$55 - 32 = ?$$

$$? = 23$$

Q17 Text Solution:

$$\sqrt[3]{405 \times 315 \times 245} = ?$$

$$\Rightarrow ? = \frac{\sqrt[3]{5 \times 81 \times 5 \times 63 \times 5 \times 49}}{3}$$

$$\Rightarrow ? = \frac{5 \times 7 \times 9}{3} \Rightarrow ? = 105$$

Q18 Text Solution:

$$36 + 32 = \frac{68}{11} \times \sqrt{?}$$

$$68 = \frac{68}{11} \times \sqrt{?}$$

$$? = 121$$

Q19 Text Solution:

$$(15.95)^{\frac{1}{4}} + (3.01)^3 - 111.99 \times 2.02$$

$$+ (9.98)^2$$

$$129 - 224$$

$$= -95$$

Q20 Text Solution:

$$(25.11)^{\frac{1}{2}} \times (80.87)^{\frac{1}{4}} \times (49.22)^{\frac{1}{2}} + 3.13$$

$$\times 7.01 + 2 = 2^?$$

Taking the approximate values,

$$25.11 \approx 25, 80.87 \approx 81, 49.22 \approx 49, 3.13 \approx 3, 7.01 \approx 7$$

$$\Rightarrow (25)^{\frac{1}{2}} \times (81)^{\frac{1}{4}} \times (49)^{\frac{1}{2}} + 3 \times 7 + 2$$

$$= 2^?$$

$$\Rightarrow 5 \times 3 \times 7 + 23 = 2^?$$

$$\Rightarrow 2^? = 128$$

$$\therefore ? = 7$$



Level-3

Q1 Text Solution:

$$991 - 648 = (?)^3$$

$$(?)^3 = 343$$

$$? = 7$$

Q2 Text Solution:

$$\frac{35}{100} \times 80 \times \frac{20}{100} \times 250 - 424 = ? + 52 \times 8$$

$$1400 - 424 = ? + 416 = 560$$

Q3 Text Solution:

$$\approx \frac{(22)^2 + 449 - 33}{9} = (5)^3 + \sqrt[3]{512} - ?$$

$$\Rightarrow 100 = 133 - ?$$

$$\Rightarrow ? = 33$$

Q4 Text Solution:

$$? - 554 - \frac{50}{100} \times \frac{6450}{43} = \frac{36 \times 41}{369}$$

$$? - 554 - 75 = 4$$

$$? = 4 + 629$$

$$? = 633$$

Q5 Text Solution:

$$\approx 280 + 500$$

$$\approx 780$$

Q6 Text Solution:

$$15.98\% \text{ of } 2374.99 = 24.98\% \text{ of } ? + 29.98\% \text{ of } 1119.99$$

$$16\% \text{ of } 2375 = 25\% \text{ of } ? + 30\% \text{ of } 1120$$

$$0.25 \times ? + 0.30 \times 1120 = 0.16 \times 2375$$

$$0.25 \times ? + 336 = 380$$

$$0.25 \times ? = 44$$

$$? = 176$$

Q7 Text Solution:

$$\frac{5436}{302} + 18 + 54 + \frac{36}{100} \times 1000$$

$$= \frac{108}{6} \times ? + 216$$

$$? = \frac{(18 + 72 + 360 - 216)}{18} \approx 13$$

Q8 Text Solution:

Given expression is

$$(63.94 \times 15.96 \div 255.96)^2 =$$

$$\sqrt[3]{[3.94^{(?-3)}]}$$

$$\Rightarrow (64 \times 16 \div 256)^2 = \sqrt[3]{[4^{(?-3)}]}$$

$$\Rightarrow \left(64 \times \frac{16}{256}\right)^2 = \sqrt[3]{[4^{(?-3)}]}$$

$$\Rightarrow 4^2 = \sqrt[3]{[4^{(?-3)}]}$$

$$\Rightarrow 4^6 = 4^{(?-3)}$$

$$\Rightarrow (?) - 3 = 6$$

$$\Rightarrow (?) = 9$$

Q9 Text Solution:

$$\sqrt[3.01]{726} + 19.956\% \text{ of } 881.0954 + 25.08\% \text{ of } 2200.96 = ?$$

$$\sqrt[3]{729} + 20\% \text{ of } 880 + 25\% \text{ of } 2200 = ?$$

$$? = 9 + 0.20 \times 880 + 0.25 \times 2200$$

$$? = 9 + 176 + 550$$

$$? = 735$$

Q10 Text Solution:

$$(782.85)^{1/2} + 37.505\% \text{ of } 2688.04 + 48.12 \times 34.25 \div (67.78) = ?$$

$$? = (784)^{1/2} + 37.5\% \text{ of } 2688 + 48 \times 34 \div 68$$

$$? = 28 + \frac{37.5}{100} \times 2688 + 48 \times \frac{1}{2}$$

$$? = 28 + 1008 + 24$$

$$? = 1060$$

