

Speed Enhancement Test - I
(Recommended time : 20 min.)

Directions for questions 1 to 5: Additions/Subtractions

1. $69855 + 42958 + 40957 - 75295 - 59954 = ?$
2. $29584 + 40954 + 94035 + 56908 - 90654 = ?$
3. $99999 - 13454 - 21445 - 34154 - 11434 = ?$
4. $58937 + 85755 + 75834 + 29875 + 38957 = ?$
5. $89567 + 89035 - 23475 - 47589 - 23442 = ?$

Directions for questions 6 to 10: Multiplications

6. $535 \times 895 = ?$
7. $344 \times 688 = ?$
8. $893 \times 234 = ?$
9. $264 \times 759 = ?$
10. $324 \times 985 = ?$

Directions for questions 11 to 15: Percentages

11. 48 is what percentage of 484?
12. 343 is what percentage of the 944?
13. 843 is what percentage of the 1237?
14. 585 is what percentage of the 4586?
15. 735 is what percentage of the 4255?

Directions for questions 16 to 20: Find the lowest fraction

16. $\frac{22}{40}, \frac{40}{78}, \frac{78}{142}$

17. $\frac{14}{26}, \frac{21}{28}, \frac{31}{38}$

18. $\frac{15}{38}, \frac{24}{80}, \frac{39}{96}, \frac{41}{68}$

19. $\frac{49}{41}, \frac{70}{58}, \frac{76}{63}, \frac{102}{88}$

20. $\frac{18}{32}, \frac{19}{33}, \frac{20}{34}, \frac{21}{35}$

Directions for questions 21 to 25: From the given choices, select the correct alternative which gives an appropriate value to replace the given question mark (?)

21. $12 + 7(4 \times 5 - 14 \div 2) = ?$
(A) 33 (B) 66 (C) 99 (D) 103

22. 45% of $\left[\frac{540}{7} (18 - 34 \div 2 + 4 \times 5) \right] = ?$
(A) 729 (B) 801 (C) 874 (D) 944

23. $\frac{1}{24} (7 \times 8 - 4 + 13 \times 12 - 48 \div 3) = ?$
(A) 6 (B) 8 (C) 12 (D) 24

24. 57% of $450 - 197 + 22.7 \times 5 = ?$
(A) 134 (B) 147 (C) 173 (D) 212

25. $70.56 \times 24 \div 8 + 224.12 - 14.7\% \text{ of } 96 \times 25 = ?$
(A) 58 (B) 69 (C) 77 (D) 83

Speed Enhancement Test - 2
(Recommended time : 20 min.)

Directions for questions 1 to 5: Additions/Subtractions

1. $74194 - 38925 + 48013 - 22256 + 18934 = ?$
2. $77777 + 99999 + 88888 + 44444 + 66666 = ?$
3. $53475 + 39494 + 89784 + 25937 + 10885 = ?$
4. $29493 + 39489 - 94381 + 72485 + 13346 = ?$
5. $97485 - 29543 - 35825 - 04059 - 24999 = ?$

Directions for questions 6 to 10: Multiplications/Squares

6. $73 \times 342 = ?$
7. $248 \times 205 = ?$
8. $999 \times 995 = ?$
9. $794^2 = ?$
10. $493 \times 507 = ?$

Directions for questions 11 to 15: Find the LCM and HCF of the given set of numbers

		LCM	HCF
11.	43, 129, 301		
12.	84, 119, 147		
13.	112, 224, 336		
14.	36, 288, 576		
15.	255, 425, 595		

Directions for questions 16 to 20: Percentages

16. 29% of 584 = ?
17. 53% of 1152 = ?
18. What percentage of 1495 is 794?
19. What percentage of 45687 is 12804?
20. Find 39.5% of 1447.

Directions for questions 21 to 25: Fractions

21. $\frac{16}{17} + \frac{24}{34} + \frac{67}{51} = ?$
22. $\frac{8}{21} + \frac{14}{28} + \frac{43}{56} = ?$
23. $\frac{18}{24} + \frac{32}{48} + \frac{48}{96} = ?$
24. $\frac{12}{16} + \frac{58}{64} + \frac{108}{128} + \frac{120}{256} = ?$
25. $\frac{11}{216} + \frac{10}{180} + \frac{4}{270} + \frac{8}{135} = ?$

Speed Enhancement Test - 3
(Recommended time : 20 min.)

Directions for questions 1 to 5: Multiplications

1. $987 \times 694 = ?$
2. $874 \times 468 = ?$
3. $787 \times 969 = ?$
4. $386 \times 739 = ?$
5. $698 \times 896 = ?$

Directions for questions 6 to 10: Percentages

6. 16.4% of 745 = ?
7. 88.96% of 972 = ? (to the nearest integer)
8. 46.45% of 7777 = ? (up to one place of decimal)
9. 73.85% of 8496 = ?
10. What percent of 80 is 360?

Directions for questions 11 to 13: Find the minimum of the following fractions.

11. $\frac{37}{75}, \frac{38}{77}, \frac{39}{79}, \frac{40}{81}, \frac{41}{83}$
12. $\frac{24}{95}, \frac{17}{67}, \frac{22}{87}, \frac{18}{71}, \frac{19}{75}$
13. $\frac{99}{75}, \frac{67}{51}, \frac{91}{69}, \frac{83}{63}, \frac{71}{54}$

Directions for questions 14 and 15: Which among the following is neither the least nor the highest?

14. $\frac{56}{169}, \frac{47}{140}, \frac{68}{204}$
15. $\frac{28}{141}, \frac{19}{96}, \frac{21}{106}$

Directions for questions 16 to 20: Find the LCM and HCF of the following numbers.

		LCM	HCF
16.	96, 128, 192		
17.	68, 119, 187		
18.	46, 115, 184		
19.	27, 108, 162		
20.	62, 124, 186		

Directions for questions 21 to 25: Additions/subtractions

21. $9836 - 1452 + 7834 - 2345 + 1784 = ?$
22. $3614 - 1983 - 8423 - 1234 + 8461 = ?$
23. $8317 - 6432 + 2469 + 6389 - 8493 = ?$
24. $4726 + 9314 + 6789 - 4346 - 7589 = ?$
25. $44316 + 9872 - 39851 - 6723 + 4239 = ?$

Speed Enhancement Test - 4
(Recommended time : 20 min.)

Directions for questions 1 to 5: From the given choices, select the correct alternative which gives an approximate value to replace the question mark (?).

1. $25.001 \times 13.997 - 18.01 \times 5.99 = ?$
(A) 228 (B) 242 (C) 236 (D) 240
2. $335.998 \div 6.002 - 9.01 \times 4.98 = ?$
(A) 11 (B) 9 (C) 13 (D) 7
3. $\sqrt{64.03} \div \sqrt{15.97} + 81.003 \div 8.988 = ?$
(A) 9 (B) 10 (C) 11 (D) 12
4. $345.99 \div 173.01 + 9.02 \times 7.99 = ?$
(A) 71 (B) 72 (C) 73 (D) 74
5. $986.93 + 234.02 - 884.92 = ?$
(A) 352 (B) 344 (C) 336 (D) 328

Directions for questions 6 to 10: Fractions

6. $\frac{8}{25} + \frac{7}{15} + \frac{4}{75} = ?$
7. $\frac{9}{72} + \frac{4}{36} + \frac{96}{144} = ?$
8. $\frac{3}{22} + \frac{9}{11} + \frac{11}{12} = ?$
9. Find the highest among the following fractions
 $\frac{6}{23}, \frac{9}{35}, \frac{11}{43}, \frac{16}{45}$
10. Arrange the following fractions in the descending order.
 $\frac{49}{101}, \frac{74}{223}, \frac{91}{227}, \frac{87}{260}, \frac{65}{229}$

Directions for questions 11 to 15: Additions/subtractions

11. $9876 + 3458 + 8427 + 9318 + 7869 = ?$
12. $6429 + 7437 + 8932 + 1986 + 4317 = ?$
13. $9873 - 3456 + 8732 - 1939 + 1238 = ?$
14. $843 - 173 + 928 - 726 + 316 = ?$
15. $1892 - 1345 - 2673 - 3458 + 9316 = ?$

Directions for questions 16 to 20: Percentages

16. 24.92% of 4800 = ?
17. 49% of 1636 = ?
18. 6.66% of 4896 = ?
19. 85.5% of 5676 = ?
20. 283 is what percentage of 864? (upto one place of the decimal)

Directions for questions 21 to 25: Multiplications

21. $637 \times 734 = ?$
22. $987 \times 785 = ?$
23. $836 \times 692 = ?$
24. $316 \times 912 = ?$
25. $282 \times 1983 = ?$

Speed Enhancement Test - 5
(Recommended time : 20 min.)

Directions for questions 1 to 5: Percentages

1. What is $76\frac{2}{3}\%$ of 1542 = ?
2. What is 63.33% of 2883 = ?
3. What is 94.5% of 3480 = ?
4. What is 77.2% of 4560 = ?
5. What is 29.4% of 5894 = ?

Directions for questions 6 to 10: Multiplications

6. $254 \times 508 = ?$
7. $275 \times 725 = ?$
8. $496 \times 1004 = ?$
9. $546 \times 765 = ?$
10. $777 \times 888 = ?$

Directions for questions 11 to 15: Fractions

11. Arrange the following in ascending order
 $\frac{34}{56}, \frac{48}{74}, \frac{55}{92}, \frac{60}{96}$
12. Arrange the following in descending order
 $\frac{27}{89}, \frac{13}{54}, \frac{34}{123}, \frac{43}{185}$
13. If $\frac{652}{489} = \frac{36}{X}$, find the value of x.

14. Arrange the following fractions in ascending order

$$\frac{83}{99}, \frac{54}{87}, \frac{93}{123}, \frac{131}{293}$$

15. Arrange the following fractions in descending order

$$\frac{48}{90}, \frac{50}{92}, \frac{49}{91}, \frac{47}{89}$$

Directions for questions 16 to 20: Additions/Subtractions

16. $7583 + 4357 + 3428 + 2985 + 5803 = ?$
17. $8543 + 2890 + 3038 + 8943 + 2984 = ?$
18. $8722 + 9203 + 4935 + 58390 = ?$
19. $75892 + 78554 + 40589 + 28473 = ?$
20. $8432 + 5283 + 3289 + 3494 + 7824 = ?$

Directions for questions 21 to 25: Find the LCM and HCF of following numbers

		LCM	HCF
21.	36, 54, 135		
22.	18, 45, 72		
23.	56, 63, 84		
24.	48, 80, 384		
25.	32, 128, 256		

Speed Enhancement Test - 6
(Recommended time : 20 min.)

Directions for questions 1 to 5: Multiplications

1. $243 \times 674 = ?$
2. $464 \times 244 = ?$
3. $973 \times 234 = ?$
4. $576 \times 243 - 376 \times 246 = ?$
5. $436 \times 462 - 764 \times 133 = ?$

Directions for questions 6 to 10: Additions/Subtractions

6. $8743 + 4326 + 7643 + 1865 = ?$
7. $4309 + 9582 + 6735 + 8455 = ?$
8. $5788 + 8942 + 7583 - 6274 + 4784 - 7645 = ?$
9. $8395 + 3805 + 9478 + 5894 + 7758 = ?$
10. $4356 - 4796 + 7843 - 2344 + 5870 = ?$

Directions for questions 11 to 15: Percentages

11. 34.45 % of 8943 = ?
12. 43.87 % of 5674 = ?
13. 78.53 % of 9848 = ?
14. What percentage of 3948 is 1345?
15. 934 is what percentage of 4345?

Directions for questions 16 to 20: Fractions

16. Arrange the following fractions in ascending order

$$\frac{95}{189}, \frac{45}{89}, \frac{113}{225}, \frac{78}{155}$$

17. Arrange the following fractions in descending order

$$\frac{58}{32}, \frac{94}{45}, \frac{125}{54}, \frac{189}{92}$$

18. If $\frac{1124}{824} = \frac{562}{x}$, find the value of x.

19. $\frac{22}{24} + \frac{34}{32} - \frac{40}{48} = ?$

20. $\frac{32}{41} - \frac{76}{82} + \frac{108}{123} = ?$

Directions for questions 21 to 25: Find the LCM and HCF of the following set of numbers

		LCM	HCF
21.	54, 162, 198		
22.	136, 374, 476		
23.	138, 161, 207		
24.	75, 104, 130		
25.	$\frac{121}{27}, \frac{51}{8}, \frac{153}{29}$		

Speed Enhancement Test - 7
(Recommended time : 20 min.)

Directions for questions 1 to 5: Percentages

1. What percentage of 892 is 740?
2. What percentage of 735 is 136?
3. What percentage of 998 is 634?
4. What percentage of 659 is 162?
5. What percentage of 786 is 548?

Directions for questions 6 to 10: Multiplications

6. $189 \times 346 = ?$
7. $734 \times 857 = ?$
8. $932 \times 636 = ?$
9. $129 \times 921 = ?$
10. $369 \times 123 = ?$

Directions for questions 11 to 15: Additions/Subtractions

11. $784 + 8432 + 9316 + 648 + 7139 = ?$
12. $8937 + 9834 + 6317 + 5892 + 1839 = ?$
13. $8932 - 3456 + 9873 - 4962 + 1384 = ?$
14. $61456 - 32963 + 38962 - 26738 = ?$
15. $98326 - 64315 - 12896 + 9673 - 189 = ?$

Directions for questions 16 to 20: Fractions

16. Simplify : $\frac{77}{48} + \frac{83}{96} - \frac{29}{32}$

17. Simplify : $\frac{18}{95} - \frac{27}{76} + \frac{23}{57}$

18. Arrange the following in ascending order.

$$\frac{43}{13}, \frac{55}{17}, \frac{61}{19}, \frac{79}{25}, \frac{94}{30}$$

19. Arrange the following in descending order.

$$\frac{123}{196}, \frac{81}{152}, \frac{23}{35}, \frac{46}{93}, \frac{72}{95}$$

20. Compare the following sets of fractions.

(a) $\frac{63}{197}$ and $\frac{44}{127}$

(b) $\frac{235}{704}$ and $\frac{326}{983}$

Directions for questions 21 to 25: From the given choices, select the correct alternative which gives an appropriate value to replace the question mark (?).

21. $\frac{9}{27} + \frac{8}{32} - \frac{6}{30} + \frac{5}{15} = ?$

- (A) 0.832 (B) 0.914 (C) 0.717 (D) 1.023

22. $\frac{3^2 \times 7 \times 2^2 + 5 \times 7^2 \times 6}{42} = ?$

- (A) 36 (B) 41 (C) 48 (D) 54

23. $932.64 + ? - 823.16 = 735.86 + 243.35$

- (A) 896.23 (B) 869.73 (C) 876.43 (D) 884.53

24. $9186 - 5672 + 8423 - 3827 = ?$

- (A) 8110 (B) 8234 (C) 8130 (D) 8230

25. $8493 + 3846 + 7312 + 9457 - 1836 = ?$

- (A) 26726 (B) 29312 (C) 28436 (D) 27272

Speed Enhancement Test - 8
(Recommended time : 20 min.)

Directions for questions 1 to 5: Multiplications

1. $345 \times 355 = ?$
2. $839 \times 639 = ?$
3. $666 \times 892 = ?$
4. $369 \times 246 = ?$
5. $1953 \times 197 = ?$

Directions for questions 6 to 10: Percentages

6. 84% of 3269 = ?
7. $68\frac{2}{3}\%$ of 639 = ?
8. 56% of 758 = ?
9. 35% of 932 = ?
10. 40% of $\frac{45}{91} = ?$

Directions for questions 11 to 15: Fractions

11. Arrange the following in ascending order.
 $\frac{15}{62}, \frac{11}{50}, \frac{44}{123}, \frac{65}{184}$
12. Arrange the following in descending order.
 $\frac{9}{23}, \frac{11}{56}, \frac{18}{73}, \frac{22}{145}$

13. $\frac{15}{22} + \frac{17}{110} - \frac{35}{66} = ?$

14. $\frac{15}{16} + \frac{17}{32} + \frac{19}{64} + \frac{5}{8} + \frac{1}{4} = ?$

15. Arrange the following fractions in descending order.

$\frac{13}{170}, \frac{12}{151}, \frac{18}{199}, \frac{15}{161}, \frac{14}{157}$

Directions for questions 16 to 20: Find the HCF and LCM of the given set of numbers

		HCF	LCM
16.	57, 171, 228		
17.	32, 80, 192		
18.	$\frac{17}{22}, \frac{51}{44}, \frac{102}{121}$		
19.	62, 155, 248		
20.	128, 288, 64		

Directions for questions 21 to 25: Additions/Subtractions

21. $3674 + 5789 + 8432 + 3456 + 7813 = ?$
22. $9632 + 3649 + 17457 + 16362 = ?$
23. $9346 - 4562 + 7849 - 6345 + 7896 = ?$
24. $547 - 6136 + 8972 - 3289 + 16347 = ?$
25. $18962 - 3145 + 7896 - 8493 = ?$

Speed Enhancement Test - 9
(Recommended time : 20 min.)

Directions for questions 1 to 5: Percentages

1. 284 is what percentage of 1238?
2. 88% of 3948?
3. 78.43 % of 7823 = ? (to the nearest integer)
4. 54% of 89.35?
5. 894 is what percentage of 2344?

Directions for questions 6 to 10: Find the LCM and HCF of following numbers and complete the table.

		LCM	HCF
6.	24, 72, 96		
7.	112, 168, 252		
8.	148, 222, 333		
9.	48, 72, 108		
10.	124, 186, 279		

Directions for questions 11 to 15: Fractions

11. Simplify: $\frac{13}{39} + \frac{34}{52} - \frac{114}{156}$
12. Simplify: $\frac{18}{21} + \frac{54}{77} + \frac{133}{231}$
13. Simplify: $\frac{35}{48} + \frac{43}{60} - \frac{94}{75}$

14. Arrange the following fractions in ascending order

$$\frac{78}{43}, \frac{58}{45}, \frac{45}{34}, \frac{179}{94}$$

15. Which of the following fractions is the smallest?

$$\frac{89}{58}, \frac{98}{78}, \frac{124}{84}, \frac{133}{89}$$

Directions for questions 16 to 20: Multiplications

16. $256 \times 625 = ?$
17. $953 \times 305 = ?$
18. $985 \times 412 = ?$
19. $724 \times 676 = ?$
20. $478 \times 899 = ?$

Directions for questions 21 to 25: Additions/Subtractions

21. $984 + 566 - 659 - 254 = ?$
22. $5409 + 3059 + 2354 - 8744 + 83 = ?$
23. $78494 + 98245 - 58903 = ?$
24. $5662 + 936 - 3459 + 345 = ?$
25. $903 + 743 + 924 + 264 + 348 + 9346 = ?$

Speed Enhancement Test - 10
(Recommended time : 20 min.)

Directions for questions 1 to 5: Fractions

1. $\frac{4}{32} + \frac{104}{128} - \frac{348}{512} = ?$

2. $\frac{17}{27} - \frac{204}{432} + \frac{14}{24} = ?$

3. If $\frac{768}{714} = \frac{512}{x}$, find the value of x.

4. Arrange the following fractions in ascending order

$\frac{46}{68}, \frac{74}{98}, \frac{78}{102}, \frac{86}{133}, \frac{89}{142}$

5. Arrange the following fractions in descending order

$\frac{53}{34}, \frac{78}{45}, \frac{89}{56}, \frac{94}{64}, \frac{98}{67}$

Directions for questions 6 to 10: Additions/Subtractions

6. $903 + 548 + 4543 + 9458 - 4739 = ?$

7. $894 - 448 + 748 - 548 + 893 - 849 = ?$

8. $8945 + 3894 + 9354 + 8232 + 242 = ?$

9. $98345 - 49854 + 835 - 5489 + 78934 = ?$

10. $7843 + 8948 + 3493 + 2093 - 9882 = ?$

Directions for questions 11 to 15: Multiplications

11. $834 \times 239 = ?$

12. $542 \times 903 = ?$

25.
$$\frac{21.2^3 + 22.2^3 + 23.2^3 - 3 \times 21.2 \times 22.2 \times 23.2}{21.2^2 + 22.2^2 + 23.2^2 - 21.2 \times 22.2 - 22.2 \times 23.2 - 23.2 \times 21.2}$$

(A) 22.2 (B) 33.3 (C) 44.4 (D) 66.6

13. $894 \times 204 = ?$

14. $935 \times 322 = ?$

15. $349 \times 533 = ?$

Directions for questions 16 to 20: Percentages

16. 68.65% of 8458

17. 43.7% of 4985

18. 88.46% of 9452

19. 34.57% of 8450

20. 98.48% of 4393

Directions for questions 21 to 25: From the choices, select the one which gives an appropriate value to replace the question mark (?)

21. $[57 \div [9 \text{ of } 8 - 8 - 3 + 15 \times 4 + 29]] = ?$

(A) $\frac{7}{47}$ (B) $\frac{19}{52}$ (C) $\frac{11}{57}$ (D) $\frac{13}{59}$

22. $[49 + 4 \text{ of } 8 - 415 + 16 \times 25] \times [6^2 + 5^2 - 9^2 + 3^3] = ?$

(A) 462 (B) 584 (C) 625 (D) 678

23. $[72^2 - 69 \times 47] + [9^2 + 13 \times 41] = ?$

(A) 2525 (B) 2530 (C) 2555 (D) 2575

24. $\left\{ (47 + 23)^2 + (47 - 23)^2 \right\} \times \frac{2}{37} + 148 = ?$

(A) 1 (B) 2 (C) 3 (D) 4

Speed Enhancement Test - 11
(Recommended time : 18 min.)

Directions for questions 1 to 5: Additions/Subtractions

1. $6378 + 9832 - 1456 + 2346 + 6973 = ?$
2. $645 - 728 + 345 - 98.6 - 98 = ?$
3. $989 - 3245 + 7896 - 456 + 3987 = ?$
4. $9834 - 3648 + 8493 - 6.72 + 868 = ?$
5. $-8326 + 8415 - 392 + 687 + 8932 = ?$

Directions for questions 6 to 10: Find the LCM and HCF of the following numbers

		LCM	HCF
6.	135, 90, 45		
7.	84, 72, 48		
8.	16, 39, 45		
9.	34, 119, 85		
10.	19, 57, 95		

Directions for questions 11 to 15: Fractions

11. Find the largest of the following fractions.
 $\frac{46}{89}, \frac{53}{121}, \frac{35}{71}, \frac{26}{83}, \frac{19}{75}$
12. Arrange the following fractions in ascending order.
 $\frac{242}{501}, \frac{86}{195}, \frac{63}{159}, \frac{42}{127}, \frac{39}{92}$
13. If $\frac{96}{384} = \frac{215}{43 \times x}$, then $x = ?$

14. $\frac{35}{122} - \frac{17}{244} + \frac{11}{488} = ?$

15. Arrange the following in descending order.

$\frac{35}{122}, \frac{89}{306}, \frac{97}{183}, \frac{68}{225}, \frac{57}{134}$

Directions for questions 16 to 20: Percentages

16. 77% of 896
17. 64.28% of 980
18. 18.125% of 1760
19. 95% of 18
20. 71 is what percent of 450? (upto two places of decimals)

Directions for questions 21 to 25: Multiplications.

21. 435×565
22. 251×252
23. 994×998
24. 789×811
25. 625×725

Speed Enhancement Test - 12
(Recommended time : 18 min.)

Directions for questions 1 to 5: Multiplications

1. 560×740
2. 157×1926
3. 76×98
4. 146×510
5. 569×748

Directions for questions 6 to 10: Percentages

6. 53.33% of 1890
7. 60.07% of 4600
8. $5\frac{1}{3}\%$ of 945
9. 63 is what percentage of 108? (up to two decimal places)
10. 136 is what percentage of 1632? (up to two decimal places)

Directions for questions 11 to 15: Fractions

11. Find the difference between the smallest and largest fractions of the following: $\frac{25}{78}, \frac{16}{52}, \frac{23}{71}, \frac{29}{78}, \frac{63}{142}$
12. $\frac{17}{357} - \frac{18}{216} + \frac{3}{84} = ?$

13. $\frac{15}{92} + \frac{19}{138} - \frac{5}{207} = ?$

14. If $\frac{78}{564} = \frac{65}{x}$, then $x = ?$

15. $\frac{32}{35} + \frac{19}{25} - \frac{11}{20} = ?$

Directions for questions 16 to 20: Additions/Subtractions

16. $6348 + 8219 + 7846 + 6389 - 5468 = ?$
17. $19832 + 3724 - 5163 + 823 - 962 = ?$
18. $6979 + 9843 - 1432 - 198 - 3481 = ?$
19. $832 + 9462 + 7382 + 1965 + 2483 = ?$
20. $-1983 - 2456 + 896 - 1326 + 9456 = ?$

Directions for questions 21 to 25: Find the LCM of HCF of the following numbers

		LCM	HCF
21.	35, 70, 45		
22.	36, 27, 72		
23.	105, 84, 28		
24.	58, 145, 232		
25.	75, 125, 225		

Speed Enhancement Test - 13
(Recommended time : 18 min.)

Directions for questions 1 to 5: From the given choices, select the correct alternative which gives an approximate (to the nearest integer) value to replace the question mark (?)

1. $447.36 \div 8 - 149.92 = ?$
2. $463.57 + 249.13 - 704.25 + 24.45 = ?$
3. $(88.88\% \text{ of } 697.72 + 47 - 15) \div ? = 5$
4. $11.949\% \text{ of } 5469 \div 4 - 32.07 = ?$
5. $57.84 - 98.43 + 849.36 \div 11 \times 3 = ?$

Directions for questions 6 to 10: Percentages

6. 783 is what percentage of the 1234?
7. 435 is what percentage of 1487?
8. 46.3% of 745?
9. 89.54% of 384? (rounded off to the nearest integer)
10. 54% of 645?

Directions for questions 11 to 15: Additions/Subtractions

11. $4985 + 5890 + 9324 - 8723 - 8743 = ?$
12. $9342 + 8943 + 7436 + 5456 - 7634 = ?$
13. $9842 - 3443 - 3254 - 133 - 1343 = ?$
14. $8934 + 4383 + 7354 + 7833 + 1545 = ?$

15. $7782 + 7845 - 3549 - 4632 - 5322 = ?$

Directions for questions 16 to 20: Multiplications

16. $854 \times 893 = ?$
17. $245 \times 743 = ?$
18. $783 \times 825 = ?$
19. $943 \times 673 = ?$
20. $783 \times 934 = ?$

Directions for questions 21 to 25: Fractions

21. $4\frac{1}{3} \times 5\frac{2}{3} \div 7\frac{1}{3} \div 2\frac{7}{11}$

22. Arrange the following in ascending order.
 $\frac{23}{54}, \frac{543}{785}, \frac{744}{898}, \frac{134}{234}$

23. Find x, given that $\frac{1083}{361} = \frac{132}{x}$.

24. Find the greatest and least of the following fractions
 $\frac{34}{23}, \frac{345}{245}, \frac{674}{453}, \frac{889}{546}$

25. Find x, given that $\frac{x}{276} = \frac{273}{156}$.

Speed Enhancement Test - 14
(Recommended time : 18 min.)

Directions for questions 1 to 5: Fractions

1. $\frac{38}{44} + \frac{56}{110} - \frac{32}{55} = ?$

2. $\frac{13}{160} + \frac{21}{40} + \frac{17}{80} + \frac{5}{32} = ?$

3. $\frac{43}{210} + \frac{8}{70} + \frac{14}{105} = ?$

4. $\frac{11}{98} + \frac{9}{14} = ?$

5. $1\frac{1}{3} + 2\frac{1}{8} + 2\frac{1}{4} + 4\frac{5}{6} - 7\frac{7}{32} = ?$

Directions for questions 6 to 10: Find the LCM and HCF of the given numbers

6. $\frac{1}{60}, \frac{11}{48}, \frac{1}{32}$

7. 102, 187, 272 (Express the answer as a product of prime factors)

8. 144, 180, 204 (Express the answer as a product of prime factors)

9. 114, 247, 342

10. 108, 192, 228

Directions for questions 11 to 15: Multiplications

11. $765 \times 57 = ?$

12. $703 \times 997 = ?$

13. $1015 \times 414 = ?$

14. $903 \times 1097 = ?$

15. $734 \times 232 = ?$

Directions for questions 16 to 20: Percentages

16. 43% of 9834?

17. 34.2% of 6732?

18. 74.73% of 1376?

19. 763 is what percentage of 4566?

20. 825 is what percentage of 4324?

Directions for questions 21 to 25: Additions/subtractions

21. $8343 + 3487 + 6735 + 7843 + 3242 = ?$

22. $8954 + 7353 + 3246 + 4667 + 7899 = ?$

23. $87437 + 34833 - 63423 + 67233 - 63543 = ?$

24. $643 + 733 + 298 - 6763 + 56324 - 9889 = ?$

25. $82 - 38 + 633 - 732 + 7634 - 7232 = ?$

Speed Enhancement Test - 15
(Recommended time : 18 min.)

Directions for questions 1 to 5: Find the LCM and HCF of the following numbers.

		LCM	HCF
1.	72, 12, 32		
2.	16, 24, 18		
3.	18, 36, 80		
4.	15, 27, 64		
5.	49, 140, 35		

Directions for questions 6 to 10: Percentages

6. $47\frac{3}{5}\%$ of 1245

7. $12\frac{3}{4}\%$ of 724

8. 30.3% of 2610

9. 140 is what percentage of 2450? (Correct to two places of decimals)

10. 415 is what percentage of 913? Correct to three places of decimals)

19. Find the value of the expression

$$\frac{(0.283^2 + 0.165^2 - 2 * 0.283 * 0.165)(0.283^2 + 0.165^2 + 2 * 0.283 * 0.165)}{(0.448)(0.118)}$$

20. $\frac{4}{63} + \frac{15}{17} + \frac{4}{5} = ?$

Directions for questions 21 to 25: Multiplications

21. $992 \times 98 =$

22. $62 \times 189 =$

Directions for questions 11 to 15: Additions/Subtractions

11. $4325 + 1286 - 3245 + 4826$

12. $2186 + 1253 - 489 - 1647$

13. $4589 + 6598 - 2199 + 2551$

14. $9156 - 4512 - 1234 - 1122$

15. $9288 + 3256 - 6220 - 4595$

Directions for questions 16 to 20: Fractions

16. Find the value of X to two decimal places

$$\frac{X}{629} = \frac{15}{721}$$

- (A) 13.01 (B) 13.04
(C) 13.08 (D) 13.19

17. Find the value of X to two decimal places

$$\frac{X}{61} = \frac{120}{11}$$

18. Arrange the following fractions in ascending order

$$\frac{8}{15}, \frac{9}{20}, \frac{19}{30}, \frac{5}{7}$$

23. $512 \times 488 =$

24. $213 \times 355 =$

25. $999 \times 1234 =$

Speed Enhancement Test - 16
(Recommended time : 18 min.)

Directions for questions 1 to 5: Percentages

1. 79.166% of 5088 = ? (Round of to the nearest integer)
2. 69.925% of 3699 = ? (Round of to the nearest integer)
3. 43.4545% of 13255
4. 123.21 is what percentage of 555?
5. 20 is what percentage of 1826? (Upto two places of decimal)

Directions for questions 6 to 10: Additions/Subtractions

6. $7288 - 3126 - 2220 - 1595$
7. $4421 + 1355 + 4214 - 5566$
8. $2253 + 3364 + 4475 - 1142$
9. $9896 + 8456 - 234 + 123$
10. $5364 - 1598 - 2460 - 153$

Directions for questions 11 to 15: Multiplications

11. 406×444
12. $43 \times 433 =$
13. $85 \times 77 =$
14. $216 \times 437 =$
15. $628 \times 123 =$

Directions for questions 16 to 20: Find LCM and HCF of the following numbers.

		LCM	HCF
16.	88, 143, 77		
17.	10, 25, 75		
18.	45, 55, 6		
19.	32, 64, 12		
20.	36, 27, 81		

Directions for questions 21 to 25: Fractions

21. Arrange the following fractions in ascending order.

$$\frac{93}{38}, \frac{60}{39}, \frac{134}{47}, \frac{65}{23}$$

22. Find the value of X, given that $\frac{X}{115} = \frac{72}{276}$

23. Find the value of X correct to one decimal place,
given that $\frac{X}{63} = \frac{505}{6969}$

24. $\frac{8}{21} + \frac{9}{35} + \frac{7}{15} = ?$

25. Arrange the following fractions in the descending order.

$$\frac{1024}{26244}, \frac{768}{8748}, \frac{320}{1620}$$

Speed Enhancement Test - 17
(Recommended time : 18 min.)

Directions for questions 1 to 5: Percentages

1. 38.57% of 686 = ?
2. 49.44% of 891 = ?
3. 61.66% of 1296 = ?
4. What percentage of 1348 is 973?
5. By what percentage is 1975 more than 750?

Directions for questions 6 to 10: Additions/Subtractions.

6. $36542 + 89439 + 76542 + 38964 = ?$
7. $9357 - 8482 + 7659 - 6858 + 8432 = ?$
8. $6359 + 7498 - 5432 - 4386 - 3294 = ?$
9. $9876 - 983 + 7432 - 8456 + 947 = ?$
10. $19856 - 9432 - 856 + 1234 - 8329 = ?$

Directions for questions 11 to 15: Multiplications

11. 69×786
12. 348×739
13. 699×487
14. 764×619
15. 948×764

Directions for questions 16 to 20: Fractions

16. Arrange the following fractions in descending order.
 $\frac{56}{23}, \frac{84}{37}, \frac{168}{77}, \frac{96}{41}$
17. Arrange the following fractions in ascending order.
 $\frac{26}{15}, \frac{45}{21}, \frac{365}{189}, \frac{556}{313}$
18. Find the approximate value of x, if $\frac{x}{19} = \frac{21}{346}$
(A) 0.95 (B) 1.15 (C) 0.87 (D) 1.23
19. Find the fractional value of x satisfying the equation
 $\frac{169x}{204} = \frac{728}{2176}$
20. Arrange the following fractions in descending order.
 $\frac{75}{83}, \frac{64}{77}, \frac{61}{109}, \frac{98}{137}$

Directions for questions 21 to 25: LCM and GCD

21. Find the LCM of 121, 66 and 132
22. Find the GCD of 663, 793 and 923
23. Find the LCM of 72, 48 and 180
24. Find the GCD of 428, 648 and 968
25. Find the LCM and HCF of 324, 468 and 792

Speed Enhancement Test - 18
(Recommended time : 18 min.)

Directions for questions 1 to 5: Multiplications

1. $786 \times 694 = ?$
2. $635 \times 748 = ?$
3. $1029 \times 231 = ?$
4. $856 \times 648 = ?$
5. $146 \times 984 = ?$

Directions for questions 6 to 10: Percentages

6. 56.29% of 760 = ?
7. 37.9% of 1860 = ?
8. 79.8% of 980 = ?
9. What percentage of 646 is 989?
10. By what percentage is 158 less than 472?

Directions for questions 11 to 15: Additions/Subtractions

11. $689 + 968 - 78 + 539 + 648 = ?$
12. $3046 + 6043 + 3406 + 6034 + 3064 = ?$
13. $9346 - 7342 + 5489 - 3216 + 189 = ?$
14. $81345 - 68369 + 24562 - 7892 + 647 = ?$
15. $9326 - 8648 + 9345 + 7816 + 8649 = ?$

Directions for questions 16 to 20: Fractions

16. Arrange the following fractions in ascending order
 $\frac{52}{57}, \frac{63}{67}, \frac{71}{77}, \frac{83}{87}$
17. Arrange the following fractions in descending order
 $\frac{53}{75}, \frac{48}{65}, \frac{39}{55}, \frac{76}{85}$

18. Find x, given that $\frac{856}{225} = \frac{x}{175}$

19. Find x, given that $\frac{87}{348} = \frac{x}{54}$
(A) 13.5 (B) 13.65 (C) 13.8 (D) 13.95

20. Find x, given that $\frac{x}{112} = \frac{232^2 - 8^2}{224^2}$

Directions for questions 21 to 25: From the choices, select the one which gives an appropriate value to replace the question mark (?).

21. $\frac{18(37+12) - 9(102-5)}{35(9-7) - 17(56-52)} = ?$
(A) 4.5 (B) 3.5 (C) 1.5 (D) 2.5

22. $\left[16 \text{ of } \frac{145}{80} - 23 \text{ of } \frac{75}{69} + 48 \text{ of } \frac{1}{8} \right] \times \{ [16 - 36 \div 6 + 1] - 10 \} = ?$
(A) 24 (B) 36 (C) 10 (D) 48

23. $\left[3\% \text{ of } 4\% \text{ of } 5\% \text{ of } \frac{800000}{16} \right] - \left[45 \div 9 \times 3 - \left(\frac{84+72}{12} \right) \right] = ?$
(A) 1 (B) 4 (C) 2 (D) 3

24. $\left[12\% \text{ of } 16\% \text{ of } 20\% \text{ of } 40\% \text{ of } \frac{(100)^4}{96} \right] \div \{ [196 - 84 \div 12 + 11] \times 10 \} = ?$
(A) $\frac{5}{6}$ (B) $\frac{3}{4}$ (C) $\frac{1}{2}$ (D) $\frac{4}{5}$

25. $\left[9 + \left\{ 23 - \frac{52-56}{52-56} \right\} \text{ of } \frac{11}{27} \right] \times \left[\frac{212(10^4 - 2 \times 300 + 6^2)}{(106)^3 - 1800 \times 106} \right] = ?$
(A) 44 (B) 40 (C) 42 (D) 41

Speed Enhancement Test - 19
(Recommended time : 18 min.)

Directions for questions 1 to 3: Fractions

1. $\frac{1}{12} + \frac{5}{16} + \frac{7}{48} + \frac{9}{64} = ?$
2. $\frac{41}{72} + \frac{23}{54} = ?$
3. Arrange the following in ascending order.
 $\frac{10}{31}, \frac{17}{52}, \frac{29}{88}, \frac{22}{67}$

Directions for questions 4 and 5: Find the approximate value of x.

4. $\frac{51}{38} = \frac{306}{x}$
5. $\frac{441}{x} = \frac{27}{39}$

Directions for questions 6 to 10: LCM and HCF.

6. Find the LCM of 54, 48 and 108
7. Find the LCM of 48, 72 and 288
8. Find the HCF and LCM of 224, 280 and 336
9. Find the HCF and LCM of 245, 330 and 375
10. Express the LCM as a product of prime factors for 1032, 1260, 1568.

Directions for questions 11 to 15: Multiplications

11. $734 \times 834 = ?$
12. $348 \times 934 = ?$
13. $729 \times 235 = ?$
14. $675 \times 824 = ?$
15. $345 \times 473 = ?$

Directions for questions 16 to 20: Additions/Subtractions

16. $5345 + 8458 + 4812 + 2458 = ?$
17. $348 + 647 + 435 + 8934 + 3459 = ?$
18. $7843 - 8745 + 9845 - 8534 + 7854 + 633 = ?$
19. $78454 + 83478 - 73483 + 34522 = ?$
20. $34 - 543 + 7548 - 3243 = ?$

Directions for questions 21 to 25: Percentages

21. 87.84% of 782 = ?
22. 44.64% of 3476 = ?
23. 85.67% of 8437 = ?
24. 845 is what percentage of 7342?
25. By what percentage should 8923 be increased to become 9234?

Speed Enhancement Test - 20
(Recommended time : 18 min.)

Directions for questions 1 to 5: Multiplications

1. $348 \times 843 = ?$

2. $457 \times 553 = ?$

3. $734 \times 945 = ?$

4. $638 \times 732 = ?$

5. $363 \times 893 = ?$

Directions for questions 6 to 10: Fractions

6. $\frac{12}{45} + \frac{15}{35} - \frac{98}{315} = ?$

7. $\frac{13}{56} + \frac{17}{32} - \frac{123}{224} = ?$

8. If $\frac{286}{308} = \frac{x}{14}$, find x.

9. Find y given that $\frac{46}{23} = \frac{y}{32}$.

10. Find y given that $\frac{72}{192} = \frac{y}{32}$.

Directions for questions 11 to 15: Find the LCM and HCF of the following numbers.

11. 8, 36, 44

12. 23, 51, 121

13. 51, 125, 172

14. 34, 56, 132

15. 48, 76, 162

Directions for questions 16 to 20: Percentages

16. 143.2 % of 8453 = ?

17. 56.31 % of 7343 = ?

18. 73.6 % of 8723 = ?

19. What percent of 632 is 223?

20. 532 when increased by 62.1% becomes?

Directions for questions 21 to 25: Additions/Subtractions

21. $763 + 346 + 903 + 895 + 943 = ?$

22. $7845 + 4763 + 8534 + 3472 + 5634 = ?$

23. $6344 + 7834 + 6784 + 8345 - 9843 = ?$

24. $23334 - 8923 - 8945 + 763 - 7344 = ?$

25. $6734 - 7834 + 8343 - 8345 + 7823 + 52 = ?$

Speed Enhancement Test - 21
(Recommended time : 15 min.)

Directions for questions 1 to 5: Percentages

1. 43.76% of 762 = ?
2. 78.2% of 824 = ?
3. 56.32% of 462 = ?
4. 487 is what percentage of 723?
5. What percentage of 873 is 576?

Directions for questions 6 to 10: Find the GCD and LCM of the following sets of numbers.

		GCD	LCM
6.	57, 95, 133		
7.	36, 54, 108		
8.	56, 98, 126		
9.	72, 132, 168		
10.	80, 144, 160		

Directions for questions 11 to 15: Additions/Subtractions

11. $376 + 763 - 786 + 904 - 734 = ?$
12. $7894 + 8733 + 3487 + 9883 + 8932 = ?$
13. $8343 - 7634 + 9033 - 633 + 783 = ?$
14. $7343 - 83 + 873 + 2341 + 7322 = ?$
15. $-8934 + 7344 + 7823 + 1256 + 6512 = ?$

Directions for questions 16 to 20: Multiplications

16. $143 \times 157 = ?$
17. $164 \times 146 = ?$
18. $139 \times 931 = ?$
19. $872 \times 238 = ?$
20. $122 \times 444 = ?$

Directions for questions 21 to 25: From the choices select the one which gives an approximate value to replace the question mark (?)

21. $6382 \div 16 \times 3.92 - 59.68 = ?$
22. $4.28 \times 4.28 \times 4.28 + 6.17 \times 6.17 \times 6.17 + 3 \times 4.28 \times 4.28 \times 6.17 + 3 \times 6.17 \times 6.17 \times 4.28 = ?$
23. $0.00000347 \times 40 \times 10^6 = \sqrt{?}$
24. $\sqrt{729} \times 12 = 28 \times ?$
25. $932.83 \div 34 \times 56 + 137.73 - 231.32 = ?$

Speed Enhancement Test - 22
(Recommended time : 15 min.)

Directions for questions 1 to 5: Multiplications

1. $832 \times 923 = ?$
2. $345 \times 983 = ?$
3. $763 \times 782 = ?$
4. $891 \times 243 = ?$
5. $128 \times 912 = ?$

Directions for questions 6 to 10: Additions/Subtractions

6. $82378 + 78324 + 89234 + 34908 = ?$
7. $8344 + 7324 - 8234 + 7354 - 7234 = ?$
8. $2453 - 9243 + 7823 - 8234 + 7223 = ?$
9. $8123 - 7823 + 7234 + 8734 + 9343 = ?$
10. $92 + 782 + 8923 + 23455 - 19823 = ?$

Directions for questions 11 to 15: Fractions

11. Arrange the following fractions in descending order
 $\frac{23}{74}, \frac{34}{93}, \frac{84}{122}, \frac{89}{134}$
12. Arrange the following fractions in ascending order
 $\frac{12}{67}, \frac{54}{89}, \frac{34}{86}, \frac{23}{74}$
13. If $\frac{258}{387} = \frac{x}{132}$, then find the value of x.
14. Arrange the following fractions in descending order
 $\frac{45}{121}, \frac{54}{234}, \frac{56}{324}, \frac{66}{353}$

15. $\frac{76}{84} + \frac{56}{92} = ?$

Directions for questions 16 to 20: Give the correct answer for the following

16. A four digit number is a perfect square. The number formed by first two digits is less than the number formed by last two digits by 17. Sum of the numbers formed by first two digits and last two digits is 55. What is the square root of the four digit number?
17. The sum of a square of a number and the cube of another natural number is 737. The difference between the two natural numbers is a prime number. Find the sum of the two numbers.
18. The square of a two digit natural number exceeds the cube of a single digit natural number by 71. Find the sum of the two numbers.
19. Find the value of $\sqrt{58081}$
20. Find the value of cube root of 1225043.

Directions for questions 21 to 25: Percentages

21. What is 73% of 7823?
22. What is 91% of 8232?
23. What is 24% of 4565?
24. What is 82% of 9322?
25. What is 45% of 4243?

Speed Enhancement Test - 23
(Recommended time : 15 min.)

Directions for questions 1 to 5: What will come in place of question mark (?)

1. $(594 \times 135) - 1357 = ?$
2. $(648 \times 14) - 246 = ?$
3. $(9 + 487 + 1356)4 - \frac{5346}{3} = ?$
4. $(292 \times 361) + 3456 = ?$
5. $\frac{(14.31)^3 - (11.26)^3}{204.7761 + (14.31)(11.26) + 126.7876} = ?$

Directions for questions 6 to 10: Percentages

6. What is 73% of 987?
7. What is 68% of 846?
8. What is 48% of 569?
9. What is 39% of 764?
10. What is 92% of 236?

Directions for questions 11 to 15: Find the LCM and HCF of the following numbers.

		LCM	HCF
11.	32, 96, 128		
12.	21, 28, 70		
13.	33, 55, 110		
14.	54, 18, 81		
15.	48, 12, 78		

Directions for questions 16 to 20: Additions/Subtractions

16. $86432 - 98645 + 63876 - 78916 + 54739 = ?$
17. $986 - 7842 + 15432 - 8678 + 6854 = ?$
18. $7816 - 376 + 19832 - 8461 + 88 = ?$
19. $98364 + 34567 - 83156 - 78932 + 64568 = ?$
20. $79 + 86 + 54 + 39 + 26 - 345 + 8416 - 982 + 8314 = ?$

Directions for questions 21 to 25: Multiplications

21. $716 \times 45 = ?$
22. $598 \times 6450 = ?$
23. $94 \times 76 = ?$
24. $96 \times 998 = ?$
25. $346 \times 374 = ?$

Speed Enhancement Test - 24
(Recommended time : 15 min.)

Directions for questions 1 to 5: Additions/Subtractions

1. $9835 + 7846 + 3542 + 6891 + 5193 = ?$
2. $930 - 876 + 9845 - 836 + 146 - 732 = ?$
3. $94 + 76 - 89 - 68 + 56 - 73 + 84 - 38 = ?$
4. $936 - 78 + 848 - 39 + 346 = ?$
5. $90132 + 89648 - 34567 - 83218 + 12345 = ?$

Directions for questions 6 to 10: In each of the following questions, there are four parts numbered (A), (B), (C) and (D) of which three are exactly equal. Mark the number of that part which is not equal to the remaining three parts as the answer.

6. $(26 \div 13 + 48 \div 48) \div 3 + 30 \times 50 \div 300 \times 6 - 25 =$
(A)
 $340 \div 17 + 18 - 36 + 54 \div 27 - 56 \div 7 + 10 =$
(B)
 $48 \times 6 \div 36 + 12 \times 96 \div 24 - 36 \div 6 - 48 + 4 =$
(C)
 $576 \div 24 \times 2 - 192 \div 96 - 72 \div 18 \times 8$
(D)
7. $17 \times 68 \div 34 + 54 \times 12 \div 36 - 18 \times 108 \div 27 =$
(A)
 $156 \div 39 + 84 \times 21 \div 42 - 86 \div 43 - 64 =$
(B)
 $800 \div 200 \times 500 - 999 \div 111 + 156 \times 12 \div 36 + 14 =$
(C)
 $925 \div 25 + 45 \div 15 \times 12 - 52 \div 13 \times 25 + 9 - 2$
(D)
8. $545 - (389 - 96) =$
(A)
 $348 + (836 - 1052) =$
(B)
 $888 - 666 - 90 =$
(C)
 $856 - (436 + 288)$
(D)
9. $\frac{3}{5} + \frac{5}{6} - \frac{7}{5} =$
(A)
 $\frac{2}{5} + \frac{10}{12} - \frac{6}{5} =$
(B)
 $\frac{12}{5} + \frac{5}{7} - \frac{8}{5} =$
(C)
 $\frac{11}{10} - \frac{6}{5} + \frac{2}{15} =$
(D)

10. $20\% \text{ of } 60 + 50\% \text{ of } 600 + 500\% \text{ of } 600 =$
(A)
 $110.4\% \text{ of } 3000 =$
(B)
 $200\% \text{ of } 600 + 50\% \text{ of } 4224 =$
(C)
 $180\% \text{ of } 180 + 360\% \text{ of } 1000$
(D)

Directions for questions 11 to 15: Multiplications/squares

11. 9963×37
12. $256^2 + 345^2 + 512 \times 345$
13. 834×166
14. 194×206
15. 189×183

Directions for questions 16 to 20: Percentages

16. Find 87% of 563
17. Find 93% of 963
18. Find 78% of 864
19. Find 62% of 626
20. Find 73% of 767

Directions for questions 21 to 25: Fractions

21. Arrange the following fractions in descending order
 $\frac{27}{127}, \frac{47}{147}, \frac{37}{137}, \frac{57}{157}, \frac{67}{167}$
22. Arrange the following fractions in ascending order
 $\frac{45}{52}, \frac{52}{59}, \frac{59}{68}$
23. Arrange the following fractions in descending order
 $\frac{15}{26}, \frac{18}{31}, \frac{19}{39}$
24. $\frac{35}{88} + \frac{59}{242} = \underline{\hspace{2cm}}$
25. $\left(\frac{10^2 + 4.7^2}{2.65^2 + 7.35^2} \right) + \frac{8}{9} - \frac{3}{4} = \underline{\hspace{2cm}}$

Speed Enhancement Test - 25
(Recommended time : 15 min.)

Directions for questions 1 to 5: Multiplication

1. $6276 \times 5926 = ?$
2. $9999 \times 66666 = ?$
3. $743 \times 239 = ?$
4. $936 \times 712 = ?$
5. $139 \times 96 = ?$

Directions for questions 6 to 10: Finding the LCM and HCF of following numbers.

6. 223, 323, 127
7. 341, 527, 713
8. 1824, 1957, 2109
9. 1016, 2024, 3032
10. 211, 421, 1684

Directions for questions 11 to 15: Percentages

11. 97% of 687 = ?
12. 48% of 936 = ?
13. 52% of 624 = ?
14. What percentage of 198 is 77.22?
15. What percentage of 364 is 118.3?

Directions for questions 16 to 20: Additions/Subtractions

16. $9856 + 5984 + 3278 + 6392 + 9876 = ?$

17. $3457 - 719 + 8436 - 927 + 3297 = ?$

18. $9432 + 4578 + 4986 + 5938 + 2437 = ?$

19. $21212121 + 212121 + 2121 + 21 = ?$

20. $563 + 798 + 457 + 986 + 632 = ?$

Directions for questions 21 to 25: From choices, select the one which gives an appropriate value to replace the question mark (?)

21. $\frac{30 \times 30 \times 30 \times 30 - 30 \times 30}{832 + 45 + 22} = ?$
(A) 899 (B) 900 (C) 901 (D) 902

22. $\sqrt{5.4756} = ?$
(A) 2.34 (B) 2.24 (C) 2.36 (D) 2.26

23. $\left(\frac{\sqrt{12100} \times \sqrt{8100}}{\sqrt{108900} \times \sqrt[3]{27}} \right)$ of $5^3 + 4^2 - 3^3 = ?$
(A) 114 (B) $\frac{-114}{5}$ (C) 57 (D) 1239

24. $972 \div 9$ of 6 of $2 + 3^4 \times 20 = ?$
(A) 1611 (B) 1621 (C) 1629 (D) 1639

25. $16 + 1008 \div (7 \times 36 \div 2) \frac{1}{6} \times 3 - 5 = ?$
(A) 155 (B) $\frac{1098}{7}$ (C) 158 (D) $\frac{1089}{7}$

Speed Enhancement Test - 26
(Recommended time : 15 min.)

Directions for questions 1 to 5: Fractions

1. $\frac{34}{39} + \frac{15}{26} + \frac{63}{79} - \frac{21}{52} = ?$

2. $\frac{9}{23} - \frac{8}{69} + \frac{7}{34} - \frac{5}{51} = ?$

3. $9\frac{2}{3} - 8\frac{5}{6} + 7\frac{11}{18} - 6\frac{5}{36} = ?$

4. $\frac{11}{39} - \frac{16}{57} + \frac{121}{156} - \frac{3}{19} = ?$

5. $\frac{23}{36} + \frac{7}{90} + \frac{13}{54} = ?$

Directions for questions 6 to 10: Additions/Subtractions

6. $2345 + 5689 - 7346 + 8641 - 9356 = ?$

7. $986 - 784 + 396 - 497 + 586 = ?$

8. $12378 - 14563 + 16892 - 13214 + 15832 = ?$

9. $1031 + 8342 + 968 - 32 + 558 = ?$

10. $936 - 84 + 943 - 89 + 957 - 34 = ?$

Directions for questions 11 to 15: Percentages

11. 28.125% of 6400 = ?

12. 27.78% of 1836 = ?

13. 587.25 is what percentage of 2506? (Express as an integer)

14. 56 is what percentage of 728?

15. 89 is approximately what percentage of 4560?

Directions for questions 16 to 20: Find the LCM and HCF of following numbers.

		LCM	HCF
16.	52, 69, 299		
17.	63, 105, 168		
18.	54, 62, 78		
19.	18, 324, 90		
20.	28, 63, 98		

Directions for questions 21 to 25: Multiplications

21. $9898 \times 998 = ?$

22. $536 \times 789 = ?$

23. $763 \times 747 = ?$

24. $489 \times 649 = ?$

25. $912 \times 713 = ?$

Speed Enhancement Test - 27
(Recommended time : 15 min.)

Directions for questions 1 to 5: For the following questions which gives an appropriate value to replace the question mark (?)

1. $\frac{1}{13}$ of $\left[\left(126 \div (42 \div 3) \times \frac{1}{2} \right) + \frac{1}{63} \right] = ?$

2. $\frac{49}{19} \div \frac{2401}{231} \left[\frac{6}{11} \times \frac{132}{108} + \left(\frac{1}{12} + \frac{4}{9} \right) \right] = ?$

3. $\frac{14}{21}$ of $\frac{84}{126} \left[\frac{84}{7} + \left(\frac{2}{13} - \frac{1}{26} \right) \right] \div \frac{16}{15} = ?$

4. $\frac{9}{94}$ of $\frac{47}{81}$ of $\frac{361}{7}$ of $\frac{444}{9} \left[\left(\frac{49}{6} - \frac{34}{6} \right) + \frac{1}{6} \right] = ?$

5. $\frac{49}{155}$ of $\frac{31}{7}$ of $\left[(8 \times 9 - 7 \times 3) + \left(7 \times 14 - \frac{1}{7} \text{ of } 91 \div 13 \right) \right] = ?$

Directions for questions 6 to 10: Percentages

6. 83.73% of 84323 = ?

7. 43.91% of 23875 = ?

8. $23\frac{8}{9}\%$ of 98345 = ?

9. What percentage of 8734 is 3222?

10. 98.62% of 23290 = ?

Directions for questions 11 to 15: Multiplications

11. $7634 \times 1234 = ?$

12. $943 \times 824 = ?$

13. $732 \times 945 = ?$

14. $794 \times 234 = ?$

15. $3784 \times 2354 = ?$

Directions for questions 16 to 20: Fractions

16. $1\frac{2}{18} - 2\frac{4}{9} + 3\frac{5}{18} - 3\frac{4}{30} = ?$

17. $\frac{1}{4} - \frac{146}{156} + \frac{14}{13} = ?$

18. $\frac{2}{9} + 3\frac{4}{6} - \frac{25}{27} = ?$

19. $\frac{1}{70} + \frac{3}{28} + \frac{9}{56} = ?$

20. $\frac{32}{90} + \frac{13}{72} - \frac{198}{120} = ?$

Directions for questions 21 to 25: Additions/Subtractions

21. $834 + 783 + 843 + 768 + 236 + 893 = ?$

22. $8432 + 9998 - 3378 - 7843 + 7322 = ?$

23. $834 + 237 - 732 + 874 - 332 = ?$

24. $68342 + 87543 + 13343 - 93746 = ?$

25. $8934 + 2343 - 8345 + 2433 - 7322 = ?$

Speed Enhancement Test - 28
(Recommended time : 15 min.)

Directions for questions 1 to 5: Find the HCF and LCM of the following numbers.

		HCF	LCM
1.	84, 105, 168		
2.	81, 72, 54		
3.	105, 135, 180		
4.	114, 380, 532		
5.	322, 966, 1173		

Directions for questions 6 to 10: Multiplications

6. $984 \times 489 = ?$
7. $4035 \times 6035 = ?$
8. $1336 \times 8875 = ?$
9. $495 \times 505 = ?$
10. $678 \times 659 = ?$

Directions for questions 11 to 15: Additions/Subtractions

11. $9876 - 3452 + 8329 - 8546 + 3984 - 3249 = ?$
12. $5672 + 45678 - 59346 - 89326 + 78946 = ?$
13. $9031 - 8423 - 5426 - 8312 + 9984 + 5678 = ?$
14. $93867 - 8594 + 983 - 63214 + 52 = ?$
15. $98765 - 9314 + 63 - 43156 + 84 = ?$

Directions for questions 16 to 20: Select the correct alternative from the given choices.

16. A, B, C, D and E are distinct single digit natural numbers. If $(AB)^2 = CDEB$, which of the following can be the value of B if EB is eight times of CD?
(A) 1
(B) 5
(C) 6
(D) More than one of the above

17. A, B, and C are distinct non zero single digit numbers. If $(AB)^2 = CAB$, which of the following is a possible value of B?

(A) 1
(B) 5
(C) 6
(D) More than one of the above

18. 1234567×1111 has the left most digit equal to which of the following?

(A) 1 (B) 2
(C) 3 (D) 4

19. P, Q, R, S, and T are distinct non-zero single digit numbers. If $(PQ)(RS) = TTT$ and $RS < PQ < 50$, find the number of possible value of T.

(A) 1 (B) 2
(C) 3 (D) 4

20. Find the approximate number of hundreds in the product of 999 and 9270.

(A) 98612 (B) 92608
(C) 92609 (D) 92607

Directions for questions 21 to 25: Percentages

21. 133.33 is what percentage of 1600?
22. 56.77% of 19836 = ?
23. 62.62% of 6200 = ?
24. 36% of 1386 = ?
25. 185% of 6374 = ?

Speed Enhancement Test - 29
(Recommended time : 15 min.)

Directions for questions 1 to 5: Additions/Subtractions

1. $3458 + 4126 - 3256 + 4859$
2. $98004 + 2305 - 41657 - 2225 + 2145$
3. $8965 - 2145 - 6598 - 5689 + 5656$
4. $4589 + 7654 + 8459 - 7856$
5. $49456 + 36985 + 41258 - 74589 + 21456$

Directions for questions 6 to 10: In each question, four expressions (denoted by (A), (B), (C) and (D)) are given. Three of the expressions are equal. Mark the one which is not equal to the other three.

6. (A) $\frac{1020}{17} \times 40 + 15 \times 15 - 65$
(B) $33 \times 63 + (8 \times 8 + 6) \times \frac{16}{2} - 79$
(C) $\frac{1150}{23} \times 46 + \frac{1150}{23} \times 4 + 60$
(D) $\frac{1350}{27} \times 50 + 2 \times 78 - 6$
7. (A) $7 \div 4 \times (25 + 7) + (8 + 4) \div 3$
(B) $8 \times 9 - (25 + 11) \div 3$
(C) $7 \times 7 + (10 + 5) \times 2 \div 3 - 1$
(D) $8 \times (12 \times 3) \div 4 - 3 \times 7 + 3 \times 3$
8. (A) $2 \times 3 \times (4 \times 12 - 22 \times 2) + 1$
(B) $(4 \times 2 - 2) \times 3 \times 2 - 1$
(C) $3 \times 4 + 5 \times 6 - 2 \times 9 + 1$
(D) $7 \div 4 \times 8 - 4 + (3 \times 4 + 3)$
9. (A) $6 \times 4 \times 150 \div 3 + 5 \times 6 + 4 \times 3 + 8$
(B) $30 \times (4 \times 11 - 4) + 50$
(C) $(4 \times 40 - 100 - 10) \times 50$
(D) $11 \times 13 \times 7 + 3 \times 27 \times 3 + 6$
10. (A) $4 \times 9 \div 3 \times (5 + 6) + 13$
(B) $3 \times (11 \times 4 + 12 \times 4 \div 3 - 10)$
(C) $(3 \times 7 - 6) \times (6 \times 7 + 3) \div 3 - (2 \times 7 + 1) \times 5$
(D) $4 \times (10 + 6) \times (10 - 6) - 106$

Directions for questions 11 to 15: Multiplications

11. 992×1008

12. 488×524

13. 612×556

14. 576×416

15. 334×366

Directions for questions 16 to 20: Percentages

16. 68.666% of $2457 = ?$

17. 31.5% of $4596 = ?$

18. 89.5% of $4050 = ?$

19. 16% of $540 = ?$

20. 25.5% of $25.5 = ?$

Directions for questions 21 to 25: From the choices, select the one which gives an appropriate value to replace the questions mark(?)

21. $\frac{125}{216} + \frac{120}{144} = ?$

- (A) $\frac{250}{144}$ (B) $\frac{245}{216}$ (C) $\frac{10}{7}$ (D) $\frac{305}{216}$

22. $\frac{96}{216} = \frac{?}{108}$

- (A) 36 (B) 48 (C) 72 (D) 108

23. If $a = 2/3$, $b = 9/13$ and $c = 15/19$, then the ascending order of a, b and c is _____.
(A) abc (B) bac (C) acb (D) bca

24. $\frac{5}{48} \times \frac{28}{35} \times \frac{\sqrt{36}}{\sqrt{81}} \div \frac{6}{14} = ?$

- (A) $\frac{5}{23}$ (B) $\frac{7}{52}$ (C) $\frac{7}{54}$ (D) $\frac{8}{59}$

25. If $a = 7/30$, $b = 5/16$ and $c = 12/71$, then the descending order of a, b and c is _____.
(A) abc (B) acb (C) bac (D) bca

Speed Enhancement Test - 30
(Recommended time : 15 min.)

Directions for questions 1 to 5: Percentages

1. 4.1666% of 828 = ?
2. 87.5% of 3460
3. 788.9 is what percentage of 805?
4. 537 is what percentage of 746? (Correct to the nearest integer)
5. Find the value of 137.5% of 450

Directions for questions 6 to 10: Multiplications Find the last two digits of the following product.

6. 265×526
7. 743×347
8. 259×295
9. 694×697
10. 465×248

Directions for questions 11 to 15: From the choices, select the one which gives an appropriate value to replace the questions mark(?)

11. $\frac{36}{15}$ of 25% of 60% of $165 \times \left(8 + \frac{1}{3}\right) - \frac{1}{3}$
(A) $475\frac{1}{5}$ (B) $474\frac{2}{3}$ (C) $495\frac{1}{5}$ (D) $494\frac{2}{3}$
12. $\frac{1}{2} \times \left(117 \times \frac{11}{13} + 23 \times \frac{128}{16} - 163\right) - \frac{45}{3} = ?$
(A) 45 (B) 60 (C) 63 (D) 75
13. $130 \div 230 \times 391 + 2524 - 1273 \times 8 + 504 \div 12$
(A) 7839 (B) -7397 (C) 7389 (D) -7389

14. $\frac{49}{48}$ of $\left(\frac{12}{5} \div \frac{4}{3} + \frac{1}{5}\right) = ?$
(A) $\frac{49}{96}$ (B) 4 (C) $\frac{49}{24}$ (D) $\frac{7}{24}$
15. $\frac{12}{315} \div \frac{24}{63} \left(\frac{1000}{18} \text{ of } \frac{21}{175} \times \frac{96}{32} + 80\right)$
(A) $\frac{1}{1000}$ (B) $\frac{1}{100}$ (C) $\frac{1}{10}$ (D) 10

Directions for questions 16 to 20: Find LCM and HCF of the following numbers.

		LCM	HCF
16.	96, 54, 24		
17.	85, 51, 34		
18.	126, 414, 324		
19.	108, 54, 126		
20.	96, 72, 288		

Directions for questions 21 to 25: Additions/Subtractions

21. $4781 + 5412 + 2395 + 1263 = ?$
22. $8712 - 3643 + 1258 - 4654 = ?$
23. $7859 - 785 + 2369 - 963 - 791 = ?$
24. $512 + 463 - 375 + 216 = ?$
(A) 816 (B) 764 (C) 732 (D) 854
25. $9125 + 1245 - 1368 - ? = -2064$
(A) 9884 (B) 10126 (C) 11066 (D) 12032