QUESTION BOX

QUANTITATIVE APTITUDE

by:

TOP RANKERS ™
where career starts

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Covered in this Session:
PAST YEAR QUESTIONS

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1. Multiple Choice Questions

PAST YEAR QUESTIONS

NUMBER SYSTEM

1. The product of three consecutive even numbers is 4032. The product of the first and the third number Is 252. What is five times the second number?
    (1) 80   (2) 100   (3) 60   (4) 70
    (5) 90

    (SBI PO Prelims 2014, IBPS Bank PO /MT CWE 17.08.2012)

2. The digit in the unit's place of a three digit number is thrice the digit in the ten's place and the digit in the hundred's place is two-third of the digit in the ten's place. If the sum of the three digits of the number is 14, what is the three digit number?
    (1) 932   (2) 239   (3) 326
    (4) Cannot be determined   (5) None of these

    (SBI PO Prelims 2015, United Bank of India PO Exam 14.11.2010)

3. Two-third of the first number is equal to the cube of the second number. If the second number Is equal to twelve percent of 50, what Is the sum of the first and the second number?
    (1) 330   (2) 360   (3) 390   (4) 372
    (5) None of these

    (IBPS PO Prelims 2014, Punjab & Sind Bank PO Exam. 16.05.2010)

4. The sum of the digits of a two digit number is 15 and the difference between the two digits of the two digit number Is 3. What Is the product of the two digits of the two-digit number?
    (1) 56   (2) 63   (3) 42
    (4) Cannot be determined   (5) None of these

    (IBPS Clerk Prelims 2015, PNB Management Trainee Exam. 28.11.2010)

5. The sum of six consecutive even numbers of set-A Is 402. What Is the sum of another set-B of four consecutive numbers whose lowest number is 15 less than double the lowest number of set-A?
    (1) 444   (2) 442   (3) 440   (4) 446
    (5) None of these

    (IBPS PO Prelims 2014, Allahabad Bank PO Exam. 17.04.2011)

6. The difference between the sum of four consecutive odd numbers and three consecutive even numbers together is 20. Also, the largest even number Is 5 more than the largest odd number. What Is the sum of the smallest odd number and the smallest even number?
    (1) 75   (2) 77   (3) 85
    (4) Cannot be determined   (5) None of these

    (IBPS clerk Prelims 2015, UCO Bank PO Exam. 30.01.2011)

7. Sum of two numbers Is equal to sum of square of 11 and cube of 9. Larger number Is $(5)^2$ less than square of 25. What Is the value of the sum of twice of 24 percent of the smaller number and half of the larger number?
    (1) 415   (2) 400   (3) 410   (4) 425
    (5) None of these

    (SBI PO Prelims 2014, UCO Bank PO Exam. 30.01.2011)

8. If the numerator of a fraction is increased by 150% and the denominator of the fraction Is in-creased by 350%, the resultant fraction is $\frac{25}{51}$, what is the original fraction?
    (1) $\frac{11}{17}$ (2) $\frac{11}{15}$ (3) $\frac{15}{17}$ (4) $\frac{13}{15}$
    (5) None of these

    (SBI PO Prelims 2015, Corporation Bank PO Exam. 09.06.2010)

9. The sum of three consecutive odd numbers and three consecutive even numbers together is 231. Also, the smallest odd number is 11 less than the smallest even number. What is the sum of the largest odd number and the largest even number?
    (1) 82   (2) 83   (3) 74
    (4) Cannot be determined   (5) None of these

    (SBI Clerk Prelims 2014, Punjab & Sind Bank PO Exam.16.05.2010)

10. The sum of the squares of two consecutive even numbers is 6500. Which is the smaller number?
(1) 54   (2) 52   (3) 48   (4) 56
(5) None of these

(SBI Clerk Prelims 2015, PNB Management Trainee Exam. 28.11.2010)

11. The product of two successive numbers is 4032. Which Is the greater of the two numbers?
(1) 63   (2) 64   (3) 65   (4) 66
(5) None of these

(United India Insurance AO Exam2013)

12. The sum of five consecutive number is 270. What is the sum of the second and the fifth number?
(1) 108   (2) 107   (3) 110
(4) Cannot be determined   (5) None of these

(Bank Of Baroda PO Exam.30.05.2010)

13. The sum of five consecutive even numbers of set-A is 220. What is the sum of a different set of five consecutive numbers whose second lowest number is 37 less than double of the lowest number of set - A?
(1) 223   (2) 225   (3) 235   (4) 243
(5) None of these

(Central Bank Of India PO Exam. 25.07.2010)

14. What Is the least number to be subtracted from 945 to make it a perfect square?
(1) 16   (2) 30   (3) 24   (4) 45
(5) None of these

(PNB Management Trainee Exam. 28.11.2010)

15. If the numerator of a fraction is increased by 200% and the denominator of the fraction is increased by 250%, the resultant fractions is $\frac{3}{14}$. What is the original fraction?
(1) $\frac{1}{2}$ (2) $\frac{3}{14}$ (3) $\frac{1}{6}$ (4) $\frac{2}{3}$
(5) None of these

(PNB Management Trainee Exam. 28.11.2010)

16. The sum of five consecutive even numbers of set - A is 280. What is the sum of different set of five consecutive numbers whose lowest number Is 71 less than double the lowest number of set—A?
(1) 182   (2) 165   (3) 172   (4) 175
(5) None of these

(Bank Of Maharashtra Exam. 19.12.2010)

17. What is the least number that can be added to the number 1020 to make It a perfect square?
(1) 65   (2) 12   (3) 59   (4) 4
(5) None of these

(Indian Bank PO Exam. 02.01.2011)

18. If the numerator of a fraction is Increased by 150% and the denominator of the fraction is increased by 300%, the resultant fraction is $\frac{5}{18}$. What is the original fraction?
(1) $\frac{4}{9}$ (2) $\frac{4}{5}$ (3) $\frac{8}{9}$ (4) $\frac{8}{11}$
(5) None of these

(Punjab & Bind Bank PO Exam. 23.01.2011)

19. The difference between the sum of four consecutive odd numbers and three consecutive even numbers together is 20. Also, the largest even number Is 5 more than the largest odd number. What Is the sum of the smallest odd number and the smallest even number?
(1) 75   (2) 77   (3) 85
(4) Cannot be determined   (5) None of these

(UCO Bank PO Exam. 30.01.2011)

20. Sum of square of first number and cube of second number together Is 568. Also square of the second number Is 15 less than square of 8. What Is the value of three-filth of the first number? (assuming both the numbers are positive)
(1) 18   (2) 8   (3) 9   (4) 16
(5) None of these

21. The sum of nine consecutive odd numbers of set-A Is 621. What is the sum of different set of six consecutive even numbers whose lowest number is 15 more than the lowest number of set-A?

    (1) 498   (2) 468   (3) 478   (4) 488

    (5) None of these

(Indian Overseas Bank PO Exam. 22.05.2011)

ANSWER KEY									
1.	(1)	**2.**	(2)	**3.**	(1)	**4.**	(5)	**5.**	(2)
6.	(5)	**7.**	(5)	**8.**	(3)	**9.**	(5)	**10.**	(4)
11.	(2)	**12.**	(5)	**13.**	(5)	**14.**	(4)	**15.**	(5)
16.	(4)	**17.**	(4)	**18.**	(1)	**19.**	(2)	**20.**	(3)
21.	(5)								

SIMPLIFICATIONS

1. What will come in place of the question mark (?) in the following question?

   $$\frac{(?)^{\frac{4}{5}}}{36} = \frac{9}{(?)^{\frac{1}{5}}}$$

   (1) 324   (2) 342   (3) 18   (4) 361

   (5) 4

   (IBPS PO prelims 2014, Corporation Bank Specialist Officer (Marketing)Exam. 22.02.2014)

2. If A's salary is Rs. 10,000 less than B's salary, B's salary Is 15,000 less than C's salary and the sum of A. B and C's salary is Rs. 65,000, find the salary of A.

   (1) Rs. 10000   (2) Rs. 12000   (3) Rs. 15000   (4) Rs. 25000

   (5) None of these

   (IBPS clerk prelims 2015, RRBs Officer Scale-ICWE. 06.09.2014)

3. $1767 = ? \times 57$

   (1) 27   (2) 31   (3) 39   (4) 37

   (5) None of these

   (SBI clerk Prelims 2014, RRB Officer Assistant CWE Exam. 09.09.2012)

DIRECTIONS: What should come in place of the question mark (?)

(SBI PO Prelims 2015, Indian Bank Rural Marketing Officer Exam03.01.2010)

4. $361 \times 250 + 50 = 25 \times ?$

   (1) 74.2   (2) 72.2   (3) 70.4   (4) 72.4

   (5) None of these

5. $\frac{1}{4} \times 5620 - \frac{2}{5} \times ? = 373$

   (1) 2850   (2) 2540   (3) 2560   (4) 2480

   (5) None of these

6. $(?)^3 \div 32 = 54$

   (1) 18   (2) 2744   (3) 1728   (4) 12

   (5) None of these

7. 36% of 365 + ?% of 56.2 = 156.69

   (1) 35   (2) 30   (3) 45   (4) 40

   (5) None of these

8. $\sqrt{2916} \times \sqrt{?} = 2268$

   (1) 1764   (2) 42   (3) 1936   (4) 44

   (5) None of these

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

(IBPS PO Prelims 2014,Bank Of India Banking Officer Exam. 24.01.2010)

9. 14% of 250 × ?% 150 = 840
   (1) 15   (2) 18   (3) 16   (4) 12
   (5) None of these

10. $(?)^3 = 729$
    (1) 14   (2) 7   (3) 19   (4) 11
    (5) None of these

11. $15.4 \times 13.5 \times 7 = 2598.75$
    (1) 13.4   (2) 10.5   (3) 11.4   (4) 12.5
    (5) None of these

12. $6435.9 + 7546.4 + 1203.5 = ?$
    (1) 15188.5   (2) 15185.8   (3) 15155.5   (4) 15815.8
    (5) None of these

13. $4.5 \times 437 + 19 = ?$
    (1) 103.5   (2) 115.3   (3) 105.3   (4) 113.5
    (5) None of these

DIRECTIONS: What should come in place of the question mark (?) in the following questions?

(IBPS PO Prelims 2015, Allahabad Bank P0Exam. 21.02.2010)

14. 40% of 265 + 35% of 180 = 50% of ?
    (1) 338   (2) 84.5   (3) 253.5   (4) 169
    (5) None of these

15. $460 \times 15 - 5 \times 20 = ?$
    (1) 92000   (2) 4600   (3) 137800   (4) 7000
    (5) None of these

16. $5163 - 4018 + 3209 = ?$
    (1) 4174   (2) 4264   (3) 4804   (4) 4354
    (5) None of these

17. $4\frac{1}{5} \times 3\frac{1}{3} + ? = 20\%$ of 120
    (1) $10\frac{1}{15}$ (2) 10   (3) 5   (4) 15
    (5) None of these

18. $4848 \div 24 \times 11 - 222 = ?$
    (1) 200   (2) 2444   (3) 2000   (4) $115\frac{3}{8}$
    (5) None of these

19. 32% of 150 × 53% of ? = 7632
    (1) 480   (2) 324   (3) 300   (4) 298
    (5) None of these

DIRECTIONS: What should come in place of the question mark (?) In the following questions?

(SBI PO Prelims 2014, Corporation Bank P0Exam. 09.05.2010)

20. $7960 + 2956 - 8050 + 4028 = ?$
    (1) 6984   (2) 6884   (3) 6894   (4) 6954
    (5) None of these

21. $25 \times 3.25 + 50.4 + 24 = ?$
    (1) 84.50   (2) 83.35   (3) 83.53   (4) 82.45
    (5) None of these

22. 350% of ? + 50 + 248 = 591
    (1) 4900   (2) 4890   (3) 4850   (4) 4950
    (5) None of these

23. $\frac{1}{2}$ of 3842 + 15% of ? = 2449
    (1) 3520   (2) 3250   (3) 3350   (4) 3540
    (5) None of these

24. $(833.25 - 384.45) + 24 = ?$

(1) 1.87   (2) 20.1   (3) 2.01   (4) 18.7
(5) None of these

25. $\frac{1}{5}$ of $\frac{2}{7}$ of $\frac{8}{3}$ of 4095 =?
(1) 642   (2) 598   (3) 648   (4) 475
(5) None of these

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

(SBI PO Prelims 2015, Punjab & Bind Bank P0Exam. 16.05.2010)

26. $\sqrt{360 - 225 \times 2 + 379}$ = ?
(1) 17   (2) 19   (3) $\sqrt{279}$ (4) 289
(5) None of these

27. $9^3 \times 81^2 + 27^3 = (3)^?$
(1) 3   (2) 4   (3) 5   (4) 6
(5) None of these

28. $572 + 26 \times 12 - 200 = (2)^?$
(1) 5   (2) 6   (3) 7   (4) 8
(5) None of these

29. $4\frac{1}{2} - 2\frac{5}{6} = ? - 1\frac{7}{12}$
(1) $3\frac{1}{4}$ (2) $3\frac{5}{12}$ (3) $2\frac{7}{12}$ (4) $3\frac{3}{4}$
(5) None of these

30. 36% of 245 - 40% of 210 = 10 - ?
(1) 4.2   (2) 6.8   (3) 4.9   (4) 5.6
(5) None of these

DIRECTIONS: What will come In place of the question mark (?) in the following questions?

(Bank Of Baroda P0Exam. 30.05.2010)

31. 36% of 420 - 56% of 350 = ?-94
(1) 48.2   (2) 49.2   (3) -138.8   (4) -158.8
(5) None of these

32. $\frac{2}{3}$ or $1\frac{2}{5}$ of 75% of 540 =?
(1) 378   (2) 756   (3) 252   (4) 332
(5) None of these

33. $\left(\sqrt{9}\right)^3 \times \left(\sqrt{81}\right)^5 \div (27)^2 = (3)^{(?)}$
(1) 5   (2) 4   (3) 7   (4) 6
(5) None of these

34. $36 \times 15 - 56 \times 784 + 112 =?$
(1) 138   (2) 238   (3) 158   (4) 258
(5) None of these

35. 28.314-31.427+ 113,928=?+ 29.114
(1) 81.711   (2) 80.701   (3) 71.711   (4) 81.701
(5) None of these

36. If a number Is subtracted by two- third of 75 per cent of 600. the value so obtained is 320. What is the number?
(1) 300   (2) 620   (3) 720   (4) 500
(5) None of these

ANSWER KEY									
1.	**(1)**	**2.**	**(1)**	**3.**	**(2)**	**4.**	**(2)**	**5.**	**(5)**
6.	**(4)**	**7.**	**(3)**	**8.**	**(1)**	**9.**	**(3)**	**10.**	**(5)**
11.	**(4)**	**12.**	**(2)**	**13.**	**(1)**	**14.**	**(1)**	**15.**	**(5)**
16.	**(4)**	**17.**	**(2)**	**18.**	**(3)**	**19.**	**(3)**	**20.**	**(3)**
21.	**(2)**	**22.**	**(1)**	**23.**	**(1)**	**24.**	**(4)**	**25.**	**(5)**
26.	**(1)**	**27.**	**(3)**	**28.**	**(2)**	**29.**	**(1)**	**30.**	**(5)**

RATIO AND PROPORTIONS

1. The ratio of the number of students studying in school A, B and C is 5 : 8 : 4 respectively. If the number of students studying In each of the school is increased by 20%, 25% and 30% respectively, what will be the new respective ratio of the students In school A, B and C?
   (1) 13: 25 : 15   (2) 20 : 25: 13
   (3) 15: 25 : 13   (4) Cannot be determined
   (5) None of these
   (IBPS PO Prelims 2014,Indian Bank Rural Marketing Officer Exam. 03.01.20 10)

2. The ratio between the angles of a quadrilateral is 7 : 2 : 5 : 6 respectively. What is the sum of double the smallest angle and half the largest angle of the quadrilateral?
   (1) 162°   (2) 198°   (3) 990   (4) 135°
   (5) None of these
   (IBPS clerk prelims 2015,Bank Of Baroda PO Exam. 30.08.2010)

3. Twenty five percent of Pranab's annual salary is equal to eighty percent of Suiya's annual salary. Suzya's monthly salary Is forty percent of Dheeru's monthly salary. If Dheeru's annual salary Is 6 lacs, what Is Pranab's monthly salary? (At some places annual Income and at some place monthly income are given)
   (1) Rs.7.68 lacs   (2) Rs.56,000   (3) Rs.8.4 lacs   (4) Rs.64,000
   (5) None of these
   (SBI PO Prelims 2014,Bank Of Maharashtra Exam. 19.12.2010)

4. The angles of a quadrilateral are in the ratio of 2 :4:7: 5.The smallest angle of the quadrilateral is equal to the smallest angle of a triangle. One of the angles of the triangle is twice the smallest angle of the triangle. What is the second largest angle of the triangle?
   (1) 80°   (2) 60°   (3) 120°
   (4) Cannot be determined   (5) None of these
   (SBI Clerk Prelims 2015,Central Bank Of India PO Exam. 28.07.2010)

5. Smallest angle of a triangle Is equal to two-third of the smallest angle of a quadrilateral. The ratio between the angles of the quadrilateral is 3: 4: 5 :6. Largest angle of the triangle is twice its smallest angle. What is the sum of second largest angle of the triangle and largest angle of the quadrilateral?
   (1) 160°   (2) 180°   (3) 190°   (4) 170°
   (5) None of these
   (IBPS PO Prelims 2014,Bank Of Baroda PO Exam. 13.03.2011)

6. The ratio between the three angles of a quadrilateral is 13:9:5 respectively. The value of the fourth angle of the quadrilateral is 36°. What is the difference between the largest and the 5cc- mid smallest angles of the quadrilateral?
   (1) 104°   (2) 108°   (3) 72°   (4) 96°
   (5) None of these
   (IBPS Clerk Prelims 2015,Allahabad Bank PO Exam. 17.04.2011)

7. The largest and the smallest angles of a triangle are in the ratio of 3:1 respectively. The second largest angle of the triangle is equal to 44°. What is the value of 150 per cent of the largest angle of the triangle?
   (1) 149   (2) 129   (3) 153   (4) 173
   (5) None of these
   (SBI clerk Prelims 2015,UCO Bank PO Exam. 30.01.2011)

8. The present age of Vishal and Shekhar are in the ratio of l4 :17 respectively. Six years from now, their age will be In the ratio of 17 : 20 respectively. What Is Shekhar's present age?
   (1) 17 years   (2) 51 years   (3) 34 years   (4) 28 years
   (5) None of these
   (IBPS PO Prelims 2014,Bank Of India Banking Officer Exam. 24.01.2010)

9. The largest and the second largest angles of a triangle are in the ratio of 4 : 3 respectively. The smallest angle is half the largest angle. What is the difference between the smallest and the largest angles of the triangle?
   (1) 30°   (2) 60°   (3) 40°   (4) 20°

(5)   None of these

10.   The respective ratio between the present age of Rain and Rakesh 1s6: 11. Four years ago the ratio of their age was 1: 2 respectively. What will be Rakesh's age after five years?
(1)   45 years   (2)   29 years   (3)   49 years   (4) Cannot be determined
(5)   None of these

11.   The ratio between the angles of a quadrilateral Is 3: 4 : 6 : 7. Half the second largest angle of the quadrilateral Is equal to the smaller angle of a parallelogram. What Is the value ')f adjacent angle of the parallelogram?
(1)   136°   (2) 126^0 (3)   94°   (4)   96°
(5)   None of these

12.   The ratio between the three angles of a quadrilateral is 1:4:5 respectively. The value of the fourth angle of the quadrilateral is 60°. What Is the difference between the value of the largest and the smallest angles of the quadrilateral?
(1)   120°   (2)   90°   (3)   110°   (4)   100°
(5)   None of these

13.   The ratio between the angles of a quadrilateral is 3 : 4 : 6 : 5. Two-third of the largest angle of the quadrilateral Is equal to the smaller angle of a parallelogram. What Is the value of adjacent angle of the parallelogram?
(1) 120^0 (2)   110°   (3)   100°   (4)   130°
(5)   None of these

14.   One of the angles of a triangle is two-third of sum of adjacent angles of parallelogram. Remaining angles of the triangle are In ratio 5 : 7 respectively. What is the value of second largest angle of the triangle?
(1)   25°   (2)   40°   (3)   35°
(4)   Cannot be determined   (5)   None of these

15.   One of the angles of quadrilateral is thrice the smaller angle of a parallelogram. The respective ratio between the adjacent angles of the parallelogram is 4:5 Remaining three angles of the quadrilateral are in ratio 4:11:9 respectively. What is the sum of the largest and the smallest angles of the quadrilateral?
(1)   255°   (2)   260°   (3)   265°   (4) 270^0
(5)   None of these

16.   The ratio between the adjacent angles of a parallelogram is 7 : 5 respectively. Also the ratio between the angles of quadrilateral is 5:6:7: 12. What is the sum of the smaller angle of parallelogram and second largest angle of the quadrilateral?
(1)   168°   (2)   228°   (3)   156°   (4)   224°
(5)   None of these

17.   The age of Sonal and Nitya are In the ratio of 9 : 5 respectively. After 8 years the ratio of their age will be 13 :9. What is the difference (in years) between their age?
(1)   4 years   (2)   12 years   (3)   6 years   (4)   14 years
(5)   None of these

18.   The ratio of the age of Tina and Rakesh is 9 : 10 respectively. Ten years ago the ratio of their age was 4: 5 respectively. What is the present age of Rakesh?
(1)   25 years   (2)   20 years   (3)   30 years   (4)   24 years
(5)   None of these

19. The ratio of the present age of Meena and Fiona is 16: 13 respectively. Four years ago the respective ratio of their age was 14: 11. What will be Fiona's age four years from now?
    (1) 28 years   (2) 32 years   (3) 26 years   (4) 36 years
    (5) None of these

    (United Bank Of India PO Exam. 14.11.2010)

20. The respective ratio of the present age of Swati and Trupti Is 4 : 5. Six years hence the respective ratio of their age will be 6 : 7. What is the difference between their age?
    (1) 2 years   (2) 3 years   (3) 4 years
    (4) Cannot be determined   (5) None of these

    (PNB Management Trainee Exam. 28.11.2010)

ANSWER KEY									
1.	**(3)**	**2.**	**(4)**	**3.**	**(4)**	**4.**	**(2)**	**5.**	**(2)**
6.	**(4)**	**7.**	**(3)**	**8.**	**(3)**	**9.**	**(3)**	**10.**	**(3)**
11.	**(2)**	**12.**	**(2)**	**13.**	**(3)**	**14.**	**(3)**	**15.**	**(2)**
16.	**(1)**	**17.**	**(5)**	**18.**	**(2)**	**19.**	**(5)**	**20.**	**(2)**

ALLIGATION AND MIXTURE

1. There was 120 litres of pure milk In a vessel. Some quantity of milk was taken out and replaced with 23 litres of water In such a way that the resultant ratio between the quantities of milk and water in the mixture was 4:1 respectively. Again 23 litres of the mixture was taken out and replaced with 27 litres of water. What is the respective ratio of milk and water In the resultant mixture?
   (1) 58 : 37   (2) 116: 69   (3) 69 : 43   (4) 101 : 37
   (5) 368: 227

   (SBI clerk Prelims 2015,BOB Junior Management Grade/Scale-I Exam. 18.04.2015)

2. Manish bought 25 kg of rice at Rs.32 per kg and 15kg of rice at Rs.36 per kg. What profit did he get when he mixed the two varieties together and sold it at Rs.40.20 per kg?
   (1) 25%   (2) 40%   (3) 30%   (4) 20%
   (5) None of these

   (IBPS clerk Prelims 2014, Bank P0/MT CWE- 28.10.2013)

3. 18 litres of pure water was added to a vessel containing 80 litres of pure milk. 49 litres of the resultant mixture was then sold and some more quantity of pure milk and pure water was added to the vessel In the respective ratio of 2:1. If the resultant respective ratio of milk and water in the vessel was 4:1.what was the quantity of pure milk added In the vessel ? (In litres)
   (1) 4   (2) 8   (3) 10   (4) 12
   (5) 2

   (IBPS PO Prelims 2015, Bank P0/MT CWE-V (Preliminary) 03.10.2015)

4. A vessel contains a mixture of milk and water in the respective ratio of 3:1. 32 litres of mixture was taken out and replaced with the same quantity of milk so that the resultant ratio between the quantities of milk and water in the mixture was 4:1 respectively. If 10 litres of mixture is again taken out from the vessel, what Is the resultant quantity of water in the mixture? (in litres)
   (1) 24   (2) 30   (3) 20   (4) 36
   (5) 32

   (SBI PO Prelims 2014,RET Officer Grade B' Phase-I Exam. 21.11.2015)

5. A container has 30 litres of water, if 3 litres of water is replaced by 3 litres of spirit and this operation is repeated twice, what will be the quantity of water In the new mixture?
   (1) 24 litres   (2) 23 litres   (3) 24.3 litres   (4) 23.3 litres
   (5) None of these

   (SBI clerk Prelims 2015,LIC Assistant Administrative Officer (AAO) Exam. 12.05.2013)

6. Two barrels contain a mixture of ethanol and gasoline. The content of the ethanol is 60% in the first barrel and 30% In the second barrel. In what ratio must the mixtures from the first and the second barrels be taken to form a mixture containing 50% ethanol?
   (1) 1:2   (2) 2:1   (3) 2:3   (4) 3:2
   (5) None of these

   (IBPS PO Prelims2014,General Insurance Corporation AAO Exam. 11.12.2011)

7. To x litres of an x% solution of acid, y litres of water is added to get (x—10)% solution of acid. If x> 20, then value of y is

(1) $\frac{x^2}{100}$ (2) $\frac{10x}{x-10}$ (3) $\frac{10x}{x+10}$ (4) $\frac{10x^2}{x-10}$

(5) None of these

(IBPS clerk Prelims 2015,Oriental Insurance Company AAO Exam. 08.04.2012)

8. From a container of milk, 5 litres of milk is replaced with 5 litres of water. This process Is repeated again. Thus in two attempts the ratio of milk and water became 81: 19. The initial amount of milk in the container was

(1) 50 litres   (2) 45 litres   (3) 40 litres   (4) 25 litres

(5) None of these

(SBI PO Prelims 2014,RB! Officer Grade B' Phase-I, Exam. 03.08.2014)

9. A vessel contains 100 litres mixture of milk and water In the respective ratio of 22 : 3. 40 litres of the mixture Is taken out from the vessel and 4.8 litres of pure milk and pure water each Is added to the mixture. By what percent Is the quantity of water in the final mixture less than the quantity of milk?

(1) $78\frac{1}{2}$ (2) $79\frac{1}{6}$ (3) $72\frac{5}{6}$ (4) 76

(5) $77\frac{1}{2}$

(IBPS RRBs Officer Scale.- I& II CWE 13.09.2016)

10. In a vessel, there Is a mixture of apple, orange and mango juices In the ratio of 3 : 5 : 4 respectively. A quantity of 12 litres from the mixture Is replaced by 8 litres of apple juice. Thereafter the quantities of apple and orange juices In the resultant mixture become same. Find out the Initial quantity of mixture In the vessel.

(1) 76 litres   (2) 65 litres   (3) 60 litres   (4) 80 litres

(5) None of these

(IBPS Bank PO/MT CWE-V (Preliminary) 10.10.20151st Sitting)

11. A vessel contains a mixture of Grape, Pineapple and Banana juices in the respective ratio of 4:6:5.15 litres of this mixture Is taken out and 8 litres of grape Juice and 2 litres of pineapple juice is added to the vessel. I the resultant quantity of grape Juice Is 10 litres less than the resultant quantity of pineapple Juice, what was the initial quantity of mixture in the vessel? (in litres)

(1) 120   (2) 150   (3) 105   (4) 135

(5) 90

(1BPS Bank PO/MT CWE(Preliminary) 10.10.2015

12. A 20 litre mixture contains milk and water In the respective ratio of 3:2. Then 10 litres of the mixture is removed and replaced with pure milk and the operations is repeated once more. At the end of the two removals and replacements, what Is the ratio of milk and water In the resultant mixture respectively?

(1) 17:3   (2) 9:1   (3) 4:17   (4) 5:3

(5) 3: 14

(1BPS Bank PO/MT CWE—V Main Exam. 31.10.2015)

13. Ajar has 60 litres of milk. From the jar, 12 litres of milk was taken out and replaced by an equal amount of water. If 12 litres of the newly formed mixture is taken out of the jar, what Is the final quantity of milk left In the Jar?

(1) 38.4 litres   (2) 40 Litres   (3) 36 litres   (4) 28.6 litres

(5) 36.5 litres

(1BPS Specialist Officer (IT) CWE 14.02.2015

14. In a vessel there is a certain quantity of mixture of milk and water in the ratio 5: 1 respectively. 24 litres of mixture Is taken out and same quantity of milk is added to the vessel. The ratio of milk and water now becomes 13: 2 respectively. Again 15 litres of mixture is taken out. What is the quantity of milk In the resulting mixture? (in litres)

(1) 85 litres   (2) 80 litres   (3) 81 litres   (4) 91 litres

(5) None of these

(RBI Officer Grade 'B Phase-I Online Exam. 22.112015)

15. When one litre of water is added to a mixture of acid and water, the new mixture contains 20% acid. When one litre of acid is added to the new mixture, then the resulting mixture contains $33\frac{1}{3}$ % acid. The percentage of acid In the original mixture was

(1) 20%   (2) 22%   (3) 24%   (4) 25%

(5) None of these

(New India Insurance AAO Exam. 22.06.2011)

ANSWER KEY

1.	(5)	2.	(4)	3.	(1)	4.	(2)	5.	(3)
6.	(2)	7.	(2)	8.	(1)	9.	(2)	10.	(3)
11.	(4)	12.	(2)	13.	(1)	14.	(4)	15.	(4)

PARTNERSHIP

1. A and B started a business with investments of Rs. 3500 and Rs. 2500 respectively. After 4 months C joined with Rs. 6000. If the difference between C's share and B's share In the annual profit was Rs. 1977, what was the total annual profit?
   (1) Rs. 15,620 (2) Rs. 16,240 (3) Rs. 14,690 (4) Rs. 12,770
   (5) Rs. 13,180
   (IBPS PO Prelims 2014, Specialist Officer (IT) CWE 14.02.2016)

2. A man gave 20% of his salary to his only son and only daughter. The ratio of amount given to son and daughter is 3 : 2 respectively. Twice the amount what he gave to his daughter. He invested in UC. Out of the remaining amount he gave one-fourth to his wife. After that he was left with Rs. 16800. Find out the amount invested in LIC.
   (1) Rs. 5600 (2) Rs. 5400 (3) Rs. 5800 (4) Rs. 6200
   (5) None of these
   (SBI PO Prelims 2015, Phase-I (Preliminary) Online Exam. 20.06.2015)

3. Tanvi started a business investing Rs.45,000. After 8 months Anisha joined her with a capital of Rs.52.000. At the end of the year the total profit was Rs.56,165. What is 'the share of profits of Anisha?
   (1) Rs.21,450 (2) Rs.24,440 (3) Rs.27635 (4) Rs.31,765
   (5) None of these
   (IBPS clerk Prelims 2014,United India Insurance AO Exam. 26.05.2013)

4. Mrudul invested an amount of Rs.29,500 In order to start a business. Shalaka joined her 4 months Later by Investing an amount of Rs.33,500. If the business earned a profit of Rs.1,20,575 at the end of two years, what was Mrudul's share of the profit?
   (1) Rs.60,725 (2) Rs.61,950 (3) Rs.59,250 (4) Rs.58,625
   (5) None of these
   (SBI clerk Prelims 2015,Indian Bank PO Exam. 02.01.2011)

5. Rs.73,689, are divided between Aand Bin the ratio4: 7. What Is the difference between thrice the share of A and twice the share of B?
   (1) Rs.36,699 (2) Rs.46,893 (3) Rs.20,097 (4) Rs.26,796
   (5) Rs.13,398
   (IBPS clerk Prelims2014, Bank PO/MT CWE 17.06.2012)

6. Geeta, Shweta and Sita started a business with investment ofRs.4200, 8400 and Rs.5400 respectively. In the end of the year there was a profit of Rs.24000. Sita Invested 32% of her share In profit In the business. The remaining amount of profit with Sita is?
   (1) Rs.4986 (2) Rs.4689 (3) Rs.4886 (4) Rs.4896
   (5) None of these
   (SBI PO Prelims 2014,Corporation Bank Specialist Officer (Marketing) Exam. 22.02.2014)

7. A starts a business with an Initial Investment of Rs.18000. After 4 months, B enters into the partnership with an investment of Rs.24000. Again after two months C enters with an investment of Rs.30000. If C receives Rs.1845 in the profit at the end of the year, what Is the total annual profit?
   (1) Rs.6027 (2) Rs.6327 (3) Rs.6527 (4) Rs.6080
   (5) None of these
   (IBPS PO Prelims 2015,Bank of Baroda PO Exam. 14.08.2014)

8. A, B and C started a business by Investing Rs. 20,000 Rn. 28,000 and Rs. 36,000 respectively. Alter 6 months. A and B withdrew an amount of Rs. 8,000 each and C Invested an additional amount of Rs. 8,000. All of them invested for equal period of time. if at the end of the year, C got Rs. 12,550 as his share of prof. It, what was the total profit earned?
   (1) Rs. 25,100 (2) Rs, 26,600 (3) Rs. 24,300 (4) Rs. 22,960
   (5) Rs. 21,440
   (IBPS clerk Prelims 2014, RRBs Officer Scale-I & II CWE 12.09.2015)

9. Sonu invested 10% more than Mona. Mona invested 10% less than Raghu. If the total sum of their Investment Is Rs.5,780, how much amount did Raghu Invest?
   (1) Rs.2010   (2) Rs.2000   (3) Rs.2100   (4) Rs.2210
   (5) None of these

   (Indian Bank PO Exam. 17.10.2010)

10. Gina Invests Rs.48,000 to start a business. Four months later Shrayon joins her by investing Rs.62,000 and another two months later Deepika joins them both by investing 80.000. At the end of one year the business earns a profit of 20,661. What is Pepika's share In the profit?
   (1) Rs.7,668   (2) Rs.6,603   (3) Rs.7,240   (4) Rs.6,390
   (5) None of these

   (United Bank of India PO Exam. 14.11.2010)

11. Three men A. B and C start a business together. They invest Rs.30000, Rs.24000 and Rs.42000 respectively In the beginning. After 4 months. B took out Rs.6000 and C tookout Rs.10000.They geta profit of Rs.11960 at the end of the year. B's share in the profit is
   (1) Rs.2700   (2) Rs.2803   (3) Rs.2900   (4) Rs.2785
   (5) None of these

   (IBPS Bank PO/MT CWE-Ifl 26. 10.2013)

12. A. B and C started a business in partnership with investments of Rs.12000, Rs.26000 and Rs.32000 respectively. After 4 months A leaves. After 6 months B leaves and A joins with an amount equal to his earlier Investment. After 10 months C leaves and B joins with his prior Investment. At the end of the year they earn a profit of Rs.53622. Find the share of B In the annual profit.
   (1) Rs.17221   (2) Rs.17212   (3) Rs.17222   (4) Rs.18212
   (5) None of these

   (SIDBI Bank Officer Exam. 09.09.2014)

13. Two persons A and B start a business with Investments of Rs.24000 and Rs.28000 respectively. After 4 months C also joined them with certain investment. Total profit at the end of the year was 19950. C's share In profit was Rs.7600. What was the C's Investment In the business?
   (1) Rs.48000   (2) Rs.45000   (3) Rs.50000   (4) Rs.40000
   (5) None of these

   (IBPS Bank PO/MT CWE-IV 18. 10.2014)

14. 'A' began a small business with a certain amount of money. After four months from the start of the business, 'B' joined the business with an amount which was Rs. 6,000 less than 'A's Initial investment. 'C' joined the business after seven months from the start of business with an amount which was Rs. 2.000 less than A's Initial Investment. At the end of the year total investment reported was Rs. 1,42,000. What will be A's share In the profit, If B received Rs. 8,000 as profit share? (in Rupees)
   (1) Rs. 48,000   (2) Rs. 46,500   (3) Rs. 46,000   (4) Rs. 42,000
   (5) Rs. 48,500

   (BOB Junior Management Grade/Scale—I Exam. 18.04.2018)

15. A started a business. After 4 months from the start of the business, B and C joined. The respective ratio between the investments of A, B and C was 4 : 6:5. If A's share in annual profit was Rs. 250 more than C's share, what was the total annual profit earned?
   (1) Rs. 3740   (2) Rs. 3910   (3) Rs. 4250   (4) Rs. 4350
   (5) None of these

   (IBPS Bank PO/MT CWE-V (Preliminary) 03.10.2015)

16. A and B started a business with the investments in the ratio of 5 3 respectively. After 6 months from the start of the business, C Joined them and the respective ratio between the Investments of B and C was 2:3.11 the annual profit earned by them was Rs. 12.300, what was the difference between B's share and C's share In the profit?
   (1) Rs. 900   (2) Rs. 800   (3) Rs. 600   (4) Rs. 400
   (5) Rs. 700

   (IBPS Bank PO/MT CWE-V (Preliminary) 04.10.2015)

17. A and B started a business with Initial Investments in the respective ratio of 18 : 7. After four months from the start of the business, A invested Rs. 2000 more and B invested Rs. 7000 more. At the end of one year, if the profit was distributed among them In the ratio of 2 : 1 respectively, what was the total Initial investment with which A and B started the business?
   (1) Rs. 50,000   (2) Rs. 25,000   (3) Rs. 1,50,000   (4) Rs. 75,000
   (5) Rs. 1,25,000

   (IBPS RRB. Officer Scale-I & II CWE 13.09.2015)

ANSWER KEY									
1.	(5)	**2.**	(1)	**3.**	(5)	**4.**	(2)	**5.**	(5)
6.	(4)	**7.**	(1)	**8.**	(1)	**9.**	(2)	**10.**	(4)
11.	(2)	**12.**	(2)	**13.**	(1)	**14.**	(1)	**15.**	(3)
16.	(1)	**17.**	(1)						

PROFIT AND LOSS

1. Meera purchased an Item for Rs.62,000 and sold It at loss of 25 percent. With that amount she purchased another item and sold it at a gain of 30 percent. What was her overall gain/loss?
   - (1) Loss of Rs.1560
   - (2) Profit of Rs.1560
   - (3) Loss of Rs.1550
   - (4) Profit of Rs.1550
   - (5) None of these

   (SBI clerk Prelims 2015,UCO Bank PO Exam. 30.01.201 1)

2. Seema purchased an Item for Rs.9,600 and sold It for a loss of 5 percent. From that money she purchased another item and sold It for a gain of 5 percent. What Is her overall gain/loss?
   - (1) Loss of Rs.36
   - (2) Profit of Rs.24
   - (3) Loss of Rs.54
   - (4) Profit of 36
   - (5) None of these

   (SBI clerk prelims 2014,Bank Of Baroda PO Exam. 13.03.2011)

3. What profit/loss per cent did Ravi earn If he purchased an item of ₹ 5600 and sold it at three-fourth of its cost price?
   - (1) Loss of 20 percent
   - (2) Gain of 25 percent
   - (3) Neither gain nor Loss
   - (4) Loss of 15 percent
   - (5) None of these

   (IBPS PO Prelims 2014,Oriental Bank Of Commerce PO Exam. 26.12.2010 (lit Sitting))

4. Prasad sold his work tools for 1,850 and earned a profit of 25 percent. At what price did Prasad buy the work tools?
   - (1) Rs.1,360
   - (2) Rs.1,300
   - (3) Rs.1,240
   - (4) Rs.1,480
   - (5) None of these

   (IBPS clerk Prelims 2015,Indian Bank PO Exam. 02.01.2011)

5. Rajni purchased a mobile phone and a refrigerator for ₹ 12,000 and ₹ 10.000 respectively. She sold the refrigerator at a loss of 12 per cent and mobile phone at a profit of 8 per cent. What is her overall loss/profit?
   - (1) Loss of Rs.280
   - (2) Profit of Rs.2,160
   - (3) Loss of Rs.240
   - (4) Profit of Rs.2,060
   - (5) None of these

   (SBI PO Prelims 2014,Punjab & Sind Bank PO Exam. 16.05.2010)

6. A shopkeeper sells notebooks at the rate of Rs. 45 each and earns a commission of 4%. He also sells pencil box at the rate of Rs.80 each and earns a commission of 20%. How much amount of commission will he earn in two weeks If he sells 10 notebooks and 6 pencil boxes a day?
   - (1) Rs. 1.956
   - (2) Rs. 1.586
   - (3) Rs. 1,496
   - (4) Rs. 1,596
   - (5) None of these

   (SBI clerk Prelims2015Central Bank Of India PO Exam. 26.07.2010)

7. The profit earned after selling an article for Rs.1,516 is the same as loss incurred after selling the article for Rs.1,112. What Is the cost price of the article?
   - (1) Rs.1,314
   - (2) Rs.1,343
   - (3) Rs.1,414
   - (4) Rs.1,434
   - (5) None of these

   (IBPS clerk Prelims 2014,United India Insurance A0 Exam. 26.06.2013)

8. A shopkeeper bought 84 identical shirts priced at Rs.240 each. He spent a total of Rs.3200 on transportation and packaging. He put the label of marked price of Rs.420 on each shirt. He offered a discount of 15% on each shirt at the marked price. What is the total profit of the shopkeeper in the whole transaction?
   - (1) Rs.6258
   - (2) Rs.6528
   - (3) Rs.6268
   - (4) Rs.6628
   - (5) None of these

   (IBPS Bank PO/MT CWE-IV 18. 10.2014)

9. An article is sold at a loss of 10%. Its cost price is Rs.800. A discount of 20% was offered on the labelled price while selling. What is the loss per cent at the labelled price?
   - (1) 10%
   - (2) 15%
   - (3) 20%
   - (4) 25%
   - (5) None of these

   (IBPS RRBs Officer Scale-I CWE, 06.09.2014)

10. Vinod makes a profit of Rs.110 if he sells a certain number of pencils he has at the price of Rs.2.5 per pencil and incurs a loss of Rs.55. if he sells the same number of pencils for Rs.1.75 per pencil. How many pencils does Vinod have?
(1) 220   (2) 240   (3) 200
(4) Cannot be determined   (5) None of these

(Indian Bank Rural Marketing Officer Exam. 03.01.2010)

11. A shopkeeper bought 30 kg. of wheat at the rate of Rs.45 per kg, He sold forty percent of the total quantity at the rate of Rs.50 per kg. Approximately, at what price per kg. Should he sell the remaining quantity to make 25 per cent overall profit?
(1) Rs.54   (2) Rs.52   (3) Rs.50   (4) Rs.60
(5) Rs. 56

(Allahabad Bank PO Exam. 21.02.2010)

12. Meenal purchased a car for Rs.2,50,000 and sold it for Rs.3,48,000. What is the percent profit she made on the car?
(1) 40%   (2) 39.2%   (3) 38.4%   (4) 38%
(5) None of these

(Corporation Bank PO Exam. 09.05.2010)

13. A man sold a wristwatch for Rs.2,400 at a loss of twenty five per cent. At what rate should he have sold the wristwatch to earn a profit of twenty five per cent?
(1) Rs.3,600   (2) Rs. 4,000   (3) Rs.3,500   (4) Rs.3,800
(5) None of these

(Bank Of India PO Exam. 31.10.2010)

14. Rehaan purchased a bike for Rs.54,000. He sold it at a loss of 8 per cent. With that money he again purchased another bike and sold it at a profit of 10 per cent., What Is his overall loss/profit?
(1) Loss of 657   (2) Profit of 567   (3) Loss of 648   (4) Profit of 648
(5) None of these

(Corporation Bank PO Exam. 16.01.2011)

ANSWER KEY									
1.	**(3)**	**2.**	**(5)**	**3.**	**(2)**	**4.**	**(4)**	**5.**	**(3)**
6.	**(4)**	**7.**	**(1)**	**8.**	**(4)**	**9.**	**(3)**	**10.**	**(1)**
11.	**(4)**	**12.**	**(2)**	**13.**	**(2)**	**14.**	**(4)**		

DISCOUNT

1. Ravi ate In a restaurant and got a membership discount of 30% on the original bill amount but he had to pay 10% as service tax and 8% service charge on the discounted bill amount. If Ravi paid Rs. 4,743.which Included a tip of Rs. 200, how much money did he give as service charge?
(1) Rs. 324   (2) Rs. 314   (3) Rs. 296   (4) Rs. 308
(5) Rs. 272

(SBI PO Prelims 2014,NABARD Officer Grade A Online Exam. 03.08.2014)

2. Giridhar purchased 100 sarees o 450 per piece. While selling he offered 10% discount on the labelled price and earned a profit of 20%. What was the labelled price of each saree?
(1) Rs.540   (2) Rs.650   (3) Rs.590   (4) Rs.600
(5) None of these

(SBI clerk PO Prelims 2015,PNB Specialist Officers Exam. 16.08.2009)

3. A man buys a single apple for 25. If he were to buy a dozen apples, he would have to pay a total amount of 250. What would be the approximate per cent discount he would get on buying a dozen apples?
(1) 32%   (2) 20%   (3) 12%   (4) 8%
(5) 17%

(Bank Of India Banking Officer Exam. 24.01.2010)

4. A discount of 15% is given on the marked price of an article. The shopkeeper charges sales tax of 6% on the discounted price. If the selling price be Rs.1081.20, what is the marked price of the article?
(1) Rs.1185.20   (2) Rs.1250.20   (3) Rs.302   (4) Rs.1200
(5) None of these

(Indian Overseas Bank PO Online Exam. 01.09.2013)

5. An article was purchased for Rs.78,350. Its price was marked up by 30%. It was sold at a discount of 20% on the marked up price. What was the profit percent on the cost price?

(1) 4%   (2) 7%   (3) 5%   (4) 3%

(5) 6%

(IBPS Bank PO/MT CWE 17.06.2012)

6. A trader sells an item to a retailer at 20% discount, but charges 10% on the discounted price, for delivery and packaging. The retailer sells it for Rs. 2046 more, thereby earning a profit of 25%. At what price had the trader marked the item?

(1) Rs. 9400   (2) Rs. 9000   (3) Rs. 8000   (4) Rs. 12000

(5) Rs. 9300

(IBPS RRBs Officer Scale—I & II CWE 13.09.2015)

7. A dealer allowed a discount of 25% on the marked price of Rs. 12000 on an article and incurred a loss of 10%. What discount should he allow on the marked price so that he gains Rs. 440 on the article?

(1) 11%   (2) 13%   (3) 19%   (4) 15%

(5) None of these

(SBI PO Phase-I (Preliminary) Online Exam. 20.06.2015)

8. A shopkeeper labelled the price of his articles so as to earn a profit of 30% on the cost price. He then sold the articles by offering a discount of 10% on the labelled price. What is the actual percent profit earned in the deal?

(1) 18%   (2) 15%   (3) 20%

(4) Cannot be determined   (5) None of these

(SBI Associate Banks PO Exam. 07.08.201 1)

9. AT-shlrtmarkedat400Issold for 360. The rate of discount is :

(1) 12%   (2) 10%   (3) 15%   (4) 17%

(NICL (GIC) AO (Finance) Exam. 08.09.2013 (Paper-I)

ANSWER KEY									
1.	**(4)**	**2.**	**(4)**	**3.**	**(5)**	**4.**	**(4)**	**5.**	**(1)**
6.	**(1)**	**7.**	**(2)**	**8.**	**(5)**	**9.**	**(1)**		

SIMPLE INTEREST

1. The difference between a discount of 40% on Rs.500 and two successive discounts of 36%, and 4% on the same amount is

(1) Rs.0   (2) Rs.2   (3) Rs.1.93   (4) Rs.7.20

(IBPS PO clerk Prelims 2015,NICL (GIC) AO Exam. 08.09.2013 (Paper-I)

2. A sum of money at simple interest amounts to Rs.14,160 in 3 years. If the rate of Interest is increased to 25%, the same sum amounts to Rs.14,700 in the same time. The rate of interest is

(1) 5%   (2) $5\frac{1}{2}$ %   (3) 6%   (4) 7%

(SBI PO Prelims 2015,New India Insurance AAO Exam. 22.05.2011)

3. A sum was invested at a certain rate of simple interest for two years. If the sum were invested at 3% more rate of interest, it would have fetched Rs.72 more. What Is the sum?

(1) Rs.1000   (2) Rs.1200   (3) Rs.1150   (4) Rs.1250

(5) None of these

(SBI clerk Prelims 2014,IDBI Officer Grade Exam. 22.08.2014)

4. Sharnita took a loan at simple interest rate of 6 p.c.p.a. in the first year and It increased by 1.5 p.c.p.a. every year. If she pays Z 8,190 as interest at the end of 3 years, what was her loan amount?

(1) 36000   (2) 35400   (3) 36800

(4) Cannot be determined   (5) None of these

(Indian Bank Rural Marketing Officer Exam. 03.01.2010)

5. Arun invested a sum of money at a certain rate of simple interest for a period of four years. Had he invested the same sum for a period of six years the total Interest earned by him would have been fifty percent more than the earlier interest amount. What was the rate of interest per cent per annum?

(1) 4%   (2) 8%   (3) 5%

(4) Cannot be determined   (5) None of these

(Allahabad Bank PO Exam. 21.02.2010)

6. The simple Interest accrued on a sum of certain principal is Rs.1,200 in four years at the rate of 8 p.c.p.a. What would be the simple interest accrued on thrice of that principal at the rate of 6 p.c.p.a. in 3 years?
   (1) Rs.2,025   (2) Rs.3,025   (3) Rs.2,250   (4) Rs.2,150
   (5) None of these

7. What total amount would Mithilesh get at the end of three years if he invests an amount of 11.200 in a scheme which offers simple interest at the rate of 8.5 p. c. p. a. for three years?
   (1) Rs.14,056   (2) Rs.14,348   (3) Rs.13,852   (4) Rs.15,064
   (5) None of these

8. Ravi borrowed some money at the rate of 4 p.c.p.a. for the first three years, at the rate of 8 p.c.p.a. for the next two years and at the rate of 9 p.c.p.a. for the period beyond 5 years. 11 he pays a total simple Interest of Rs.19,550 at the end of 7 years. How much money did he borrow?
   (1) 39,500   (2) 42,500   (3) 41,900   (4) 43,000
   (5) None of these

9. A sum of 3200 becomes 3456 in two years at a certain rate of simple interest. What is the rate of interest per annum?
   (1) 5.5%   (2) 6%   (3) 4%   (4) 4.5%
   (5) None of these

10. A sum of 2200 is invested at two different rate of interest. The difference between the interest got after 4 years is 202.40. What is the difference between the rate of interest?
    (1) 3.3%   (2) 2.3%   (3) 3.5%   (4) 2.5%
    (5) None of these

11. What will be the difference between the Interest accrued on a sum of 4500 at 12% per annum for 2 years and that on a sum of 5600 at 9% per annum for 2 years?
    (1) Rs.75   (2) Rs.72   (3) Rs.69   (4) Rs.76
    (5) None of these

12. The sum Invested in scheme B is twice the sum invested in scheme A. Investment In scheme A is made for 3 years at 8% p.a. simple interest and in Scheme B for 2 years at 9% p.a. simple Interest. The total interest earned from both the schemes is Rs. 1800. How much was Invested in Scheme A?
    (1) Rs. 4000   (2) Rs. 3500   (3) Rs. 3000   (4) Rs. 2500
    (5) Rs. 4500

13. The Interest earned when Rs. F is invested for four years in a scheme offering 9% p.a. simple interest Is more than the interest earned when the same sum (Rs. P) Is invested for two years In another scheme offering 12% p.a. simple interest, by Rs. 360. What is the value of P?
    (1) 2000   (2) 3500   (3) 2500   (4) 4000
    (5) 3000

14. Equal amounts are invested in two schemes A and B for 6 years and 8 years respectively. Scheme A offers Interest at the rate of 12% per annum and scheme B offers interest at the rate of 8% per annum. The difference between the interests earned is Rs. 1280, What is the amount invested In each scheme?
    (1) Rs. 16000   (2) Rs. 16500   (3) Rs. 17000   (4) Rs. 18000
    (5) None of these

15. Rs. 16,000 was invested for three years, partly in Scheme A at the rate of 5% Simple Interest per annum and partly in scheme B at the rate of 8% Simple Interest per annum. Total interest received at the end was Rn. 3480. How much sum of money Invested in Scheme A?
    (1) Rs. 6,000   (2) Rs. 6,500   (3) Rs. 4,500   (4) Rs. 4,000
    (5) Rs. 8,000

16. A took a certain sum as loan from bank at a rate of 8% simple Interest per annum. A lends the same amount to B at 12% simple interest per annum. If at the end of five years, A made profit of Rs. 800 from the deal, how much was the original sum?
    (1) Rs. 6,500   (2) Rs. 4,000   (3) Rs. 6,200   (4) Rs. 6,000
    (5) Rs. 4,500

(SBI PO Phase-I (Preliminary) Online Exam. 27.06.2016)

ANSWER KEY									
1.	**(4)**	**2.**	**(3)**	**3.**	**(2)**	**4.**	**(5)**	**5.**	**(4)**
6.	**(1)**	**7.**	**(1)**	**8.**	**(2)**	**9.**	**(3)**	**10.**	**(2)**
11.	**(2)**	**12.**	**(3)**	**13.**	**(5)**	**14.**	**(1)**	**15.**	**(4)**
16.	**(2)**								

COMPOUND INTEREST

1. The simple Interest accrued on a sum of certain principal is Rs.7.200 in six years at the rate of 12 p.c.p.a. What would be the compound interest accrued on that principal at the rate of 5 p.c.p.a. In 2 years?

   (1) Rs.1,020   (2) Rs.1,055   (3) Rs.1,050   (4) Rs.1,025
   (5) None of these

(IBPS PO Prelims 2015,Bank Of Baroda PO Exam. 13.03.2011)

2. The compound interest accrued on an amount of 22,000 at the end of two years is 5,596.8. What would be the simple interest accrued on the same amount at the same rate in the same period?

   (1) Rs.5,420   (2) Rs.5,360   (3) Rs.5,280   (4) Rs.5,140
   (5) None of these

(SBI PO Prelims 2014,United India Insurance AO Exam. 26.05.2013)

3. The simple interest accrued on a sum of certain principal is - 6500 In eight years at the rate of 13 per cent per year. What would be the compound Interest accrued on that principal at the rate of 8 per cent per year in 2 years?

   (1) Rs.1040   (2) Rs.1020   (3) Rs.1060   (4) Rs.1200
   (5) None of these

(SBI clerk Prelims 2015,UCO Bank PO Exam. 30.01.2011)

4. A man gets a simple interest of Rs.1,000 on a certain principal at the rate of 5 p.c.p.a. In 4 years. What compound interest will the man get on twice the principal in two years at the same rate?

   (1) Rs.1,050   (2) Rs.1,005   (3) Rs.11,025   (4) Rs.10,125
   (5) None of these

(IBPS clerk prelims 2015,Punjab & Sind Bank PO Exam. 16.05.20 10)

5. What would be the compound interest accrued on an amount of Rs.45,400 at the end of two years at the rate of 15 p.c.p.a.?

   (1) Rs.16411.5   (2) Rs.14461.5   (3) Rs.16461.5   (4) Rs.14641.5
   (5) None of these

(SBI clerk Prelims 2014,Bank Of India Banking Officer Exam. 2401.2010)

6. What would be the compound interest accrued on an amount of 7,400 at the rate of 13.5 p.c.p.a. at the end of two years? (rounded off to two digits after decimal)

(1) Rs.2,136.87   (2) Rs.2,306.81   (3) Rs.2,032.18   (4) Rs.2,132.87

(5) None of these

(Indian Bank PG Exam. 17.10.2010)

7. Sonika Invested an amount of Rs.5,800 for 2 years. At what rate of compound interest will she get an amount of Rs.594.5 at the end of two years?

(1) 5 p.c.p.a.   (2) 4 p.c.p.a.   (3) 6 p.c.p.a.   (4) 8 p.c.p.a.

(5) None of these

(Corporation Bank PO Exam. 09.05.2010)

8. What will be the approximate difference In the simple and compound interest accrued on an amount of 2600 at the rate of 15 p.c. p.a. at the end of three years?

(1) Rs.167   (2) Rs.194   (3) Rs.202   (4) Rs.172

(5) Rs.184

(United Bank Of India PO Exam. 14.11.2010)

9. Pamela Invested an amount of Rs.35,000 for two years at the rate of 5 p.c.p.a. What amount of compound Interest would she receive at the end of two years?

(1) Rs.3587.50   (2) Rs.3500   (3) Rs.3580.50   (4) Rs.3565.50

(5) None of these

(PNB Management Trainee Exam. 28.11.2010)

10. The simple Interest accrued on a sum of certain principal Is 2,000 in five years at the rate of 4 p.c.p.a. What would be the compound Interest accrued on same principal at same rate in two years?

(1) 716   (2) 724   (3) 824   (4) 816

(5) None of these

(Corporation Bank PO Exam. 16.01.2011)

11. The difference between the amount of compound Interest and simple interest accured on an amount of? 26000 at the end of 3 years Is? 2994.134 What Is the rate of interest p.c.p.a.?

(1) 22%   (2) 17%   (3) 19%

(4) Cannot be determined   (5) None of these

(Punjab & Sind Bank PO Exam. 23.01.2011)

12. The simple Interest accrued on an amount of Rs.22,500 at the end of four years Is Rs.10,800. What would be the compound interest accrued on the same amount at the same rate at the end of two years?

(1) Rs.14.908   (2) Rs.5,724   (3) Rs.26,234   (4) Rs.8,568

(5) None of these

(IBPS Bank PO/MT CWE 18.09.2011)

ANSWER KEY									
1.	(4)	**2.**	(3)	**3.**	(1)	**4.**	(5)	**5.**	(4)
6.	(4)	**7.**	(1)	**8.**	(5)	**9.**	(1)	**10.**	(1)
11.	(3)	**12.**	(2)						

1. Two pipes A and B can fill an empty tank In 18 minutes and 27 minutes respectively. There Is a leakage In the bottom of the tank, due to which 14.4 minutes more time Is taken by both the pipes in filling the tank. What time will the leak take in emptying the completely full tank?
   (1) 16.9 minutes   (2) 20 minutes   (3) 17.9 minutes   (4) 18.9 minutes
   (5) None of these

   (SBI PO Prelims 2015,IDBI Bank Officer Exam. 09.09.2014)

2. 6 women and 6 men together can complete a piece of work in 6 days. In how many days can 15 men alone complete the piece of work if 9 women alone can complete the work in 10 days?
   (1) 6 days   (2) 5 days   (3) 7.2 days
   (4) Cannot be determined   (5) None of these

   (IBPS PO Prelims 2014,Punjab & Sind Bank PO Exam. 23.01.201 1)

3. Two men alone or three women alone can complete a piece of work m 4 days. In how many days can 1 woman and one man together complete the same piece of work?
   (1) 6 days   (2) $\frac{24}{5}$days   (3) $\frac{12}{1.75}$ days
   (4) Cannot be determined   (5) None of these

   (SBI clerk Prelims 2015,Corporation Bank PO Exam. 16.01.2011)

4. Ayesha can complete a piece of work in 16 days. Amita can complete the same piece of work in 8 days. If both of them work together in how many days can they complete the same piece of work?
   (1) 6 days   (2) 4 days   (3) $5\frac{1}{3}$ days   (4) 12 days
   (5) None of these

   (IBPS clerk Prelims 2015,Indian Bank Rural Marketing Officer Exam. 03.01.2010)

5. In a tank there are three Inlet pipes P. Q and R and one outlet pipe S. Pipe R fills the tank two times faster than pipe P and three times faster than pipe Q. Outlet S takes 10 minutes to empty the full tank. Time taken by Inlet R to fill the empty tank is $\frac{2}{5}$th of the time taken by S to empty the full tank. In what time will the inlets P and Q together fill the empty tank?
   (1) $4\frac{4}{5}$ minutes   (2) $4\frac{2}{5}$ minutes   (3) $3\frac{4}{5}$ minutes   (4) $3\frac{4}{5}$ minutes
   (5) None of these

   (SBI PO Prelims 2014,IDBI Officer Grade Exam. 22.08.2014)

6. Four examiners can examine a certain number of answer papers in 10 days by working for 5 hours a day. For how many hours in a day would 2 examiners have to work in order to examine twice the number of answer papers In 20 days?
   (1) 8 hours   (2) $7\frac{1}{2}$ hours   (3) 10 hours   (4) $8\frac{1}{2}$ hours
   (5) None of these

   (SBI clerk Prelims 2015,Punjab & Sind Bank PO Exam. 23.01.2011)

7. 6 men can complete a piece of work in 12 days. 8 women can complete the same piece of work In 18 days whereas 18 children can complete the piece of work in 10 days. 4 men, 12 women and 20 children work together for 2 days. If only men were to complete the remaining work in 1 day how many men would be required totally?
   (1) 36   (2) 24   (3) 18
   (4) Cannot be determined   (5) None of these

   (Bank of India Banking Officer Exam. 24.01.2010)

8. 3 men can complete a piece of work in 6 days. 5 women can complete the same work In 18 days. In how many days will 4 men and 10 women together complete the same work?
   (1) 3 days   (2) 5 days   (3) 2 days   (4) 4 days
   (5) None of these

   (Bank of Baroda PO Exam. 30.05.2010)

9. 8 men can complete a piece of work In 20 days. 8 women can complete the same work In 32 days. In how many days will 5 men and 8 women together complete the same work?
   (1) 16 days   (2) 12 days   (3) 14 days   (4) 10 days
   (5) None of these

   (Central Bank of India PO Exam. 25.07.2010)

10. 2 men can complete a piece of work in 6 days. 2 women can complete the same piece of work In 9 days, whereas 3 children can complete the same piece of work in 8 days. 3 women and 4 children worked together for 1 day. If only men were to finish the remaining work In 1 day, how many total men would be required?

   (1) 4   (2) 8   (3) 6
   (4) Cannot be determined   (5) None of these

   (United Bank Of India PO Exam. 14.11.2010)

11. Vikas gets 350 for every day that he works. If he earns 9,800 In a month of 31 days, for how many days did he work?

   (1) 25 days   (2) 30 days   (3) 24 days   (4) 28 days
   (5) None of these

   (PNB Management Trainee Exam. 28.11.2010)

12. A water tank has three taps A,B and C. Tap A, when opened. can fill the water tank alone in 4 hours. Tap B, when opened, can fill the water tank alone In 6 hours and tap C, when opened, can empty the water tank alone In 3 hours. If taps A. B and C are opened simultaneously how long will It take to fill the tank completely?

   (1) 10 hours   (2) 8 hours   (3) 18 hours   (4) 12 hours
   (5) None of these

   (Indian Bank PO Exam. 02.01.2011)

13. 4 girls can do a piece of work In 8 days, 3 boys can do the same piece of work in 9 days, 7 men do the same piece of work in 2 days and 5 women can do the same piece of work in 4 days. Who is least efficient?

   (1) Boys   (2) Girls   (3) Women   (4) Men
   (5) Boys and Men both

   (Union Bank Of India PO Exam. 09.01.2001)

14. A and B together can complete a task In 20 days. B and C together can complete the same task in 30 days. A and C together cart complete the same task in 40 days. What is the respective ratio of the number of days taken by A when completing the same task alone to the number of days taken by C when completing the same task alone?

   (1) 2:5   (2) 2:7   (3) 3:7   (4) 1:5
   (5) 3:5

   (IBPS Bank PO/MT CWE 17.06.2012)

15. 3 men can do a work in 12 days, 5 women can do the same work in 8 days and 20 children in 3 days. If all the men, women and children work together, In how many days will the work be completed?

   (1) $\frac{25}{13}$ (2) $\frac{24}{13}$ (3) 8   (4) 8
   (5) None of these

   (Bank of Baroda PO Exam. 14.08.2014)

16. The part of work done by 9 boys and 3 men together in one day is four times the work done by a boy and a man together. What is the respective ratio of work done by a boy and a man?

   (1) 5:1   (2) 1:5   (3) 4:1   (4) 1:4
   (5) None of these

17. 24 workers working 13 hours daily make a wall of dimensions 224 m x 16 m x 52 m In 32 days. In how many days will 36 workers working 18 hours daily make a wall of dimensions 432 m x 21 m x 64 m?

   (1) 58 days   (2) 42 days   (3) 48 days   (4) 60 days
   (5) None of these

18. Sixteen men and twelve women can complete a work in 8 days. ff20 men can complete the same work in 16 days, in how many days 16 women can complete the same piece of work?

   (1) 12   (2) 8   (3) 10   (4) 15
   (5) 20

   (IBPS RRBs Officer Scale-I CWE, 06.09.2014)

19. If 36 persons are engaged on a piece of work, the work can be completed In 40 days. After 32 days, only $\frac{3}{4}$th of the work was completed. How many more persons are required to complete the work on time?

   (1) 10   (2) 8   (3) 9   (4) 12
   (5) None of these

20. 12 men can finish a project in 20 days. 18 women can finish the same project In 16 days and 24 children can finish it In 18 days. 8 women and 16 children worked for 9 days and then left. In how many days will 10 men complete the remaining project?

(1) $10\frac{1}{2}$ (2) 10   (3) 9   (4) $11\frac{1}{2}$

(5) $9\frac{1}{2}$

ANSWER KEY									
1.	**(4)**	**2.**	**(5)**	**3.**	**(2)**	**4.**	**(3)**	**5.**	**(1)**
6.	**(2)**	**7.**	**(1)**	**8.**	**(1)**	**9.**	**(1)**	**10.**	**(2)**
11.	**(4)**	**12.**	**(4)**	**13.**	**(2)**	**14.**	**(4)**	**15.**	**(2)**
16.	**(2)**	**17.**	**(2)**	**18.**	**(3)**	**19.**	**(3)**	**20.**	**(2)**

TIME AND DISTANCE

1. A 180-metre long train crosses another 270-metre long train running In the opposite direction In 10.8 seconds. If the speed of the first train Is 60 kmph. What is the speed of the second train in kmph?

(1) 80   (2) 90   (3) 150

(4) Cannot be determined   (5) None of these

2. A 300 metre long train moving with an average speed of 126 km/hr. crosses a platform In 24 seconds. A man crosses the same platform in 5 minutes What is the speed of man metre/second?

(1) 1.8 metre/second   (2) 1.2 metre/second   (3) 1.5 metre/second

(4) Cannot be determined   (5) None of these

3. The ratio between the speed of a train and a car is 16: 15 respectively. Also, a bus covered a distance of 480 kms. in 8 hours. The speed of the bus is three-fourth the speed of the train. How much distance will the car cover In 6 hours?

(1) 450km   (2) 480km   (3) 360 km

(4) Cannot be determined   (5) None of these

4. The respective ratio between the speed of a car, a jeep and tractor Is 3 : 5 : 2. The speed of the jeep Is 250 percent of the speed of the tractor which covers 360 km in 12 hours. What is the average speed of car and jeep together?

(1) 60 km/hr.   (2) 75 km/hr.

(3) 40 km/hr.   (4) Cannot be determined

(5) None of these

5. The average speed of a car is $1\frac{4}{5}$ times the average speed ofa bus. A tractor covers 575km in 23 hours. How much distance will the car cover In 4 hours If the speed of the bus is twice the speed of the tractor?

(1) 340km   (2) 480km   (3) 360 km   (4) 450 km

(5) None of these

6. A car covers the first 39 km. of it's journey in 45 minutes and covers the remaining 25 km. in 35 minutes. What is the average speed of the car?

(1) 40 kmph   (2) 64 kmph   (3) 49 kmph   (4) 48 kmph

(5) None of these

7. Train —A crosses a stationary train -B in 50 seconds and a pole In 20 seconds with the same speed. The length of the train - A is 240 metres. What is the length of the stationary Train B?

(1) 360 metres   (2) 260 metres   (3) 300 metres

(4) Cannot be determined   (5) None of these

8.   A 320 metre long train crosses a platform thrice Its length In 40 seconds. What Is the speed of the train In km/hour?
     (1)   120.6   (2)   115.2   (3)   108.4
     (4)   Cannot be determined   (5)   None of these

9.   A man crosses a stationary bus In 18 seconds. The same bus crosses a pole In 4 seconds. What Is the respective ratio between the speed of the bus and the speed of the man?
     (1)   9:2   (2)   9:4   (3)   18:5
     (4) Cannot be determined   (5)   None of these

10. The speed of a car Is 1.5 times the speed of a bus. If the car travels at the speed of 60 km/ hr., what will be the difference In the time taken by the bus and the time taken by the car to cover 720 km?
     (1)   5 hours   (2)   6 hours   (3)   4 hours   (4) 8 hours
     (5)   None of these

11. A bus covered a certain distance from village A to village B at the speed of 60 km/hr. However on Its return journey It got stuck in traffic and covered the same distance at the speed of 40 km/ hr. and took 2 hours more to reach Its destination. What is the distance covered between village A and B?
     (1)   240 km.   (2)   260 km.   (3)   200 km.
     (4)   Cannot be determined   (5)   None of these

12. A train speeds past a pole In 20 seconds and speeds past a platform 100 metres in length in 30 seconds. What Is the length of the train?
     (1)   100 metre   (2)   150 metre   (3)   180 metre   (4) 200 metre
     (5)   None of these

13. A 320 metre long train takes 80 seconds more to cross a platform twice its length than It takes to cross a pole at the same speed. What is the speed of the train in metre/second?
     (1)   16   (2)   10   (3)   6
     (4)   Cannot be determined (5)   None of these

14. The respective ratio between the speed of a car, a train and a bus Is 5 : 9 : 4. The average speed of the car, the bus and the train Is 72 kmph together. What Is the average speed of the car and the train together?
     (1)   82 kmph   (2)   78 kmph   (3)   84 kmph
     (4)   Cannot be determined   (5)   None of these

15. A man crosses a stationary train In 12 minutes. The same train crosses a man In 54 seconds. What Is the respective ratio between the speed of the train and the man?
     (1)   40:7   (2)   400:3   (3)   40 : 3
     (4)   Cannot be determined   (5)   None of these

16. A bike covers a certain distance at the speed of 64 km/hr. In 8 hours. If the bike was to cover the same distance In approximately 6 hours, at what approximate speed should the bike travel?
     (1)   80 kmph   (2)   85kmph   (3)   90 kmph   (4) 75 kmph
     (5)   70 kmph

17. The ratio between the speed of a train and a car is 18:13 respectively. Also, a bus covered a distance of 480 kms. in 12 hours. The speed of the bus is five-ninth the speed of the train. How much distance will the car cover In 5 hours?
     (1)   250 kms.   (2)   280 kms.   (3)   260 kms.
     (4)   Cannot be determined   (5)   None of these

18. Train A crosses a stationary train B in 35 seconds and a pole in 14 seconds with the same speed. The length of the train-A is 280 metres. What is the length of the stationary train-B?
(1) 360 metres (2) 480 metres (3) 400 metres
(4) Cannot be determined (5) None of these

(Bank Of Maharashtra Exam. 9.12.2010

19. A car covers a distance of 540 km In 9 hours. Speed of a train Is double the speed of the car. Two-third of the speed of the train is equal of a bike. How much distance will the bike cover In 5 hours?
(1) 450km (2) 360km (3) 400 km (4) 500 km
(5) None of these

(Oriental Bank Of Commerce PO Exam. 26.12.2010 (lit Sitting))

20. Train-A crosses a pole in 25 seconds and another Train-B crosses a pole in 1 minute and 15 seconds. Length of train-A is half length of train-B. What is the respective ratio between the speed of Train-A and Train-B?
(1) 3:2 (2) 3:4 (3) 4:3
(4) Cannot be determined (5) None of these

(Union Bank Of India PO Exam. 09.01.2001)

ANSWER KEY									
1.	**(2)**	**2.**	**(1)**	**3.**	**(1)**	**4.**	**(1)**	**5.**	**(3)**
6.	**(4)**	**7.**	**(1)**	**8.**	**(2)**	**9.**	**(1)**	**10.**	**(2)**
11.	**(1)**	**12.**	**(4)**	**13.**	**(5)**	**14.**	**(3)**	**15.**	**(3)**
16.	**(2)**	**17.**	**(3)**	**18.**	**(5)**	**19.**	**(3)**	**20.**	**(1)**

APPROXIMATE VALUE

DIRECTIONS: What approximate value should come in the place of the question mark (?) In the following questions? (You are not expected to calculate the exact value.)

(SBI PO Prelims 2015, Indian Bank Rural Marketing Officer Exam. 03.01.2010)

1. 15.5% of 323 - 20.8% of 198=?
(1) 12 (2) 5 (3) 15 (4) 3
(5) 9

2. $30 + 27 \times 3 =$?
(1) 360 (2) 348 (3) 340 (4) 330
(5) 321

3. $(358)^2 \times (1.75)^2 =$?
(1) 25 (2) 40 (3) 30 (4) 35
(5) 50

4. $\sqrt{5138} + \sqrt{36}=$?
(1) 21 (2) 6 (3) 12 (4) 18
(5) 26

5. $37.5 \times 34.9 + 2.75 =$?
(1) 476 (2) 491 (3) 464 (4) 453
(5) 486

DIRECTIONS: What approximate value should come In place of the question mark (?)In each of the following questions? (You are not expected to find out the exact value.)

(IBPS PO Prelims 2014,Allahabad Bank PO Exam. 21.02.2010)

6. $1548.45 + 3065.15 + 15.058=$?
(1) 1700 (2) 1650 (3) 1840 (4) 1750
(5) 1950

7. $6\frac{2}{5}$ of 248.65 = ?of 2398.59
(1) $\frac{2}{5}$ (2) $\frac{1}{4}$ (3) $\frac{1}{2}$ (4) $\frac{1}{3}$
(5) $\frac{2}{3}$

8. 39% of 695= 10% of?
   (1) 2800   (2) 2400   (3) 3200   (4) 31000
   (5) 2500

9. $6\sqrt{2} + 14.275 = ?$ of 196.35
   (1) $\frac{1}{3}$ (2) $\frac{1}{4}$ (3) $\frac{1}{8}$ (4) $\frac{1}{5}$
   (5) $\frac{1}{2}$

10. $1524.79 \times 19.92 + 495.26 =?$
    (1) 30870   (2) 30450   (3) 30670   (D) 3100

DIRECTIONS: What approximate value should come In place of the question mark (?) in the follow- trig questions? (You are not expected to calculate the exact value.)

(SBI clerk Prelims 2014,Indian Bank PO Exam. 17.10.2010)

11. 18% of 609 + 27.5% of 450 =?
    (1) 220   (2) 233   (3) 267   (4) 248
    (5) 274

12. $3942 \div 64 \div 3 =?$
    (1) 29   (2) 32   (3) 21   (4) 17
    (5) 11

13. $2\frac{3}{10} \times 2\frac{6}{7} \times \frac{1}{2} = ?$
    (1) 68   (2) 72   (3) 93   (4) 84
    (5) 101

14. $12.564 \times 22.009 \times 17.932 = 7$
    (1) 4901   (2) 4895   (3) 4800   (4) 4959
    (5) 4350

15. $16.978 + 27.007 + 36.984 - 12.969 - 9.003 =?$
    (1) 72   (2) 42   (3) 60   (4) 51
    (5) 65

ANSWER KEY									
1.	**(5)**	**2.**	**(3)**	**3.**	**(2)**	**4.**	**(3)**	**5.**	**(1)**
6.	**(4)**	**7.**	**(5)**	**8.**	**(1)**	**9.**	**(3)**	**10.**	**(1)**
11.	**(2)**	**12.**	**(3)**	**13.**	**(4)**	**14.**	**(4)**	**15.**	**(3)**

PERMUTATION AND COMBINATION

DIRECTIONS: Study the given Information carefully to answer the questions that follow.

A committee of 6 teachers is to be formed out of 4 science teachers, 5 art teachers and 3 commerce teachers. In how many different ways can the committee be formed if

(IBPS PO Prelims 2014,Indian Bank PO Exam. 02.01.2011)

1. two teachers from each stream are to be included?
   (1) 210   (2) 180   (3) 145   (4) 96
   (5) None of these

2. no teacher from the commerce stream is to be Included?
   (1) 81   (2) 62   (3) 46   (4) 84
   (5) None of these

3. any teacher can be Included in the committee?
   (1) 626   (2) 718   (3) 924   (4) 844
   (5) None of these

4. In how many different ways can the letters of the word RUMOUR be arranged?
   (1) 180   (2) 720   (3) 30   (4) 90
   (5) None of these

(IBPS clerk Prelims 2015,Corporation Bank Specialist Officer (Marketing) Exam. 22.02.2014)

DIRECTIONS: Study the following Information carefully to answer the questions that follow

A committee of five members is to be formed out of 4 students, 3 teachers and 2 sports coaches. In how many ways can the committee be formed If -

(SBI PO Prelims 2014,United Bank Of India PO Exam. 14.11.2010)

5. The Committee should consist of 2 students, 2 teachers and 1 ' sports coach?
    (1) 25   (2) 64   (3) 9   (4) 36
    (5) None of these

6. Any five people can be selected?
    (1) 126   (2) 45   (3) 120   (4) 24
    (5) None of these

7. In how many different ways can the letters of the word 'CYCLE' be arranged?
    (1) 120   (2) 240   (3) 30   (4) 80
    (5) None of these

(IBPS clerk Prelims 2015,PNB Management Trainee Exam. 28.11.2010)

8. In how many different ways can the letters of the word ATTEND be arranged?
    (1) 60   (2) 120   (3) 240   (4) 80
    (5) None of these

(SBI clerk Prelims 2014,Allahabad Bank PQ Exam. 21.02.2010)

9. In how many different ways can the letters of the word BANKING' be arranged?
    (1) 5040   (2) 2540   (3) 5080   (4) 2520
    (5) None of these

(IBPS clerk Prelims 2014,Corporation Bank PO Exam. 09.05.2010)

10. In how many different ways can the letters of the word PEANUT be arranged?
    (1) 720   (2) 360   (3) 650   (4) 700
    (5) None of these

(SBI clerk Prelims 2015,Punjab National Bank Specialist Officer Exam. 24.10.2010)

11. In how many different ways can the letters of the word 'AWARE' be arranged?
    (1) 150   (2) 120   (3) 40   (4) 60
    (5) None of these

(Indian Bank Rural Marketing Officer Exam. 03.01.2010)

12. In how many different ways can the letters of the word 'OFFICES' be arranged?
    (1) 2520   (2) 5040   (3) 1850   (4) 1680
    (5) None of these

(Indian Bank PO Exam. 17.10.2010)

13. In how many different ways can the letters of the word 'TRUST' be arranged?
    (1) 60   (2) 240   (3) 120   (4) 25
    (5) None of these

(Bank Of India Banking Officer Exam. 24.01.2010)

14. In how many different ways can the letters of the word LEASE be arranged?
    (1) 240   (2) 120   (3) 25   (4) 60
    (5) None of these

(United Bank Of India PO Exam. 14.11.2010)

15. In how many ways the letters of the word VISITING can be rearranged?
    (1) 6720   (2) 5720   (3) 720   (4) 7620
    (5) None of these

(IBPS Specialist Officer CWE 17.03.2013)

16. In how many different ways can the letters of the word REPLACE be arranged?
    (1) 2630   (2) 5040   (3) 1680   (4) 2580
    (5) None of these

(IBPS RRB's Office Assistant CWE Exam. 09.09.2012)

17. In how many ways the letters of the word SACRED can be arranged so that vowels come together?
    (1) 240   (2) 120   (3) 320   (4) 720

(5)   None of these

ANSWER KEY									
1.	(2)	**2.**	(4)	**3.**	(3)	**4.**	(1)	**5.**	(4)
6.	(1)	**7.**	(5)	**8.**	(5)	**9.**	(4)	**10.**	(1)
11.	(4)	**12.**	(1)	**13.**	(1)	**14.**	(4)	**15.**	(1)
16.	(5)	**17.**	(5)						

PROBABILITY

DIRECTIONS: Study the given information carefully to answer the questions that follow.

An urn contains 4 green, S blue, 2 red and 3 yellow marbles.

1.   If two marbles are drawn at random. what is the probability that both are red or at least one is red?
(1) $\frac{26}{93}$ (2) $\frac{2}{7}$ (3) $\frac{199}{366}$ (4) $\frac{135}{193}$
(5)   None of these

2.   If three marbles are drawn at random, what Is the probability that at least one Is yellow?
(1) $\frac{1}{5}$ (2) $\frac{199}{364}$ (3) $\frac{135}{324}$ (4) $\frac{5}{9}$
(5)   None of these

3.   If eight marbles are drawn at random, what Is the probability that there are equal number of marbles of each colour?
(1) $\frac{3}{8}$ (2) $\frac{351}{738}$ (3) $\frac{60}{1001}$ (4) $\frac{1}{1011}$
(5)   None of these

4.   If three marbles are drawn at random, what is the probability that none is green?
(1) $\frac{3}{8}$ (2) $\frac{273}{748}$ (3) $\frac{30}{91}$ (4) $\frac{41}{91}$
(5)   None of these

5.   If four marbles are drawn at random, what is the probability that two are blue and two are red?
(1) $\frac{10}{1001}$ (2) $\frac{7}{17}$ (3) $\frac{15}{384}$ (4) $\frac{3}{5}$
(5)   None of these

DIRECTIONS: Read the following Information to answer these questions.

There are 9 red, 7 white and 4 black balls in an urn.

6.   Two balls are drawn at random from the urn. What will be the probability that both the balls are red?
(1) $\frac{18}{95}$ (2) $\frac{9}{95}$ (3) $\frac{9}{10}$ (4) $\frac{8}{95}$
(5) $\frac{5}{19}$

7.   If two balls are selected at random what is the probability that one ball is white and the other ball is red?
(1) $\frac{91}{95}$ (2) $\frac{63}{190}$ (3) $\frac{5}{19}$ (4) $\frac{4}{95}$
(5) $\frac{71}{190}$

DIRECTIONS: Study the given information carefully and answer the questions that follow:

A basket contains 4 red, 5 blue and 3 green marbles.

8.   If three marbles are picked at random, what is the probability that either all are green or all are red?
(1) $\frac{7}{44}$ (2) $\frac{7}{12}$ (3) $\frac{5}{12}$ (4) $\frac{1}{44}$
(5)   None of these

9. If two marbles are picked at random, what is the probability that both are red?
   (1) $\frac{3}{7}$ (2) $\frac{1}{2}$ (3) $\frac{2}{11}$ (4) $\frac{1}{6}$
   (5) None of these

10. If three marbles are picked at random, what Is the probability that at least one Is blue?
    (1) $\frac{7}{12}$ (2) $\frac{37}{44}$ (3) $\frac{5}{12}$ (4) $\frac{7}{44}$
    (5) None of these

11. A basket contains three blue and four red balls. If three balls are drawn at random from the basket, what is the probability that all the three are either blue or red?
    (1) 1   (2) $\frac{1}{7}$ (3) $\frac{3}{14}$ (4) $\frac{3}{28}$
    (5) None of these

    (Bank Of India Banking Officer Exam. 24.01.2010)

12. A bag contains 13 white and 7 black balls. Two balls are drawn at random. What Is the probability that they are of the same colour?
    (1) $\frac{41}{190}$ (2) $\frac{21}{190}$ (3) $\frac{59}{190}$ (4) $\frac{99}{190}$
    (5) $\frac{77}{190}$

    (IBPS Bank PO/MT CWE 17.06.2012)

13. From a well-shuffled pack of 52 playing cards, one card is drawn at random. What is the probability that the card drawn will be a black king?
    (1) $\frac{1}{26}$ (2) $\frac{7}{13}$ (3) $\frac{3}{13}$ (4) $\frac{9}{13}$
    (5) $\frac{1}{13}$

    (IBPS Specialist Officer OWE 17.03.2013)

14. A bag contains 3 red balls, 5 yellow balls and 7 pink balls. If one ball is drawn at random from the bag, what is the probability that it is either pink or red?
    (1) $\frac{1}{3}$ (2) $\frac{2}{3}$ (3) $\frac{1}{4}$ (4) $\frac{2}{5}$
    (5) None of these

    (IBPS Bank PO/MT OWE-V (Preliminary) 03.10.2015)

15. A bag contains 5 red balls, 7 yellow balls and 3 pink balls. If two balls are drawn at random from the bag, one after another, what is the probability that the first bail is red and the second ball Is yellow?
    (1) $\frac{5}{12}$ (2) $\frac{3}{8}$ (3) $\frac{1}{4}$ (4) $\frac{1}{8}$
    (5) $\frac{1}{13}$

    (IBPS Bank PO/MT OWE-V (Preliminary) 04.10.2015)

16. There are 6 red balls, 5 yellow and 3 pink balls In an urn. Two balls are drawn at random. What is the probability that none of the drawn balls is of red colour?
    (1) $\frac{8}{13}$ (2) $\frac{7}{13}$ (3) $\frac{6}{13}$ (4) $\frac{5}{13}$
    (5) $\frac{4}{13}$

    (IBPS Bank PO/MT OWE-V (Preliminary) 10.10.2015 1st Sitting)

17. A bag contains 4 red, 5 yellow and 6 pink balls. Two balls are drawn at random. What is the probability that none of the balls drawn are yellow in colour?
    (1) $\frac{1}{7}$ (2) $\frac{3}{7}$ (3) $\frac{2}{7}$ (4) $\frac{5}{14}$
    (5) $\frac{9}{14}$

    (IBPS Bank PO/MT OWE-V (Preliminary) 10.10.2015)

18. A bag contains 6 black and 8 white bails. One ball is drawn at random. What is the probability that the ball drawn is white?
    (1) $\frac{3}{4}$ (2) $\frac{4}{7}$ (3) $\frac{1}{8}$ (4) $\frac{3}{7}$
    (5) $\frac{1}{4}$

    (IBPS Bank PO/MT OWE-V Main Exam. 31.10.2015)

19. What is the probability that a number selected from numbers 1, 2, 3 ……30, is prime number, when each of the given numbers is equally likely to be selected?

    (1) $\frac{9}{30}$ (2) $\frac{8}{30}$ (3) $\frac{10}{30}$ (4) $\frac{11}{30}$

    (5) $\frac{21}{30}$

20. Out of 5 girls and 3 boys, 4 children are to be randomly selected for a quiz contest. What is the probability that all are girls?

    (1) $\frac{1}{14}$ (2) $\frac{1}{7}$ (3) $\frac{5}{17}$ (4) $\frac{2}{17}$

    (5) None of these

DIRECTIONS: Study the given information carefully and answer the questions that follow:

An urn contains 6 red, 4 blue, 2 green and 3 yellow marbles.

21. If four marbles are picked at random, what Is the probability that at least one is blue?

    (1) $\frac{4}{15}$ (2) $\frac{69}{91}$ (3) $\frac{11}{15}$ (4) $\frac{22}{91}$

    (5) None of these

22. If two marbles are picked at random, what is the probability that both are red?

    (1) $\frac{1}{6}$ (2) $\frac{1}{3}$ (3) $\frac{2}{15}$ (4) $\frac{2}{5}$

    (5) None of these

ANSWER KEY									
1.	**(5)**	**2.**	**(2)**	**3.**	**(3)**	**4.**	**(3)**	**5.**	**(1)**
6.	**(1)**	**7.**	**(2)**	**8.**	**(4)**	**9.**	**(5)**	**10.**	**(2)**
11.	**(2)**	**12.**	**(4)**	**13.**	**(1)**	**14.**	**(2)**	**15.**	**(5)**
16.	**(5)**	**17.**	**(2)**	**18.**	**(2)**	**19.**	**(3)**	**20.**	**(1)**
21.	**(2)**	**22.**	**(5)**						

EQUATIONS AND INEQUATIONS

DIRECTIONS: In the following questions two equations numbered I and II are given. You have to solve both the equations and

(1) If x> y   (2) If x ≥ y   (3) If x < y   (4) if x ≤ y
(5) If x = y or the relationship cannot be established.

1.
    I. $2x^2 + 11x + 14 = 0$
    II. $4y^2 + 12y + 9 = 0$

2.   I. $x^2 - 4 = 0$
    II. $y^2 + 6y + 9 = 0$

3.   I. $x^2 - 7x + 12 = 0$
    II. $y^2 \div y - 12 = 0$

4.   I. $x^2 = 729$
    II. $y = \sqrt{729}$

5.   I. $x^4 - 227 = 398$
    II. $y^2 + 321 = 346$

DIRECTIONS: In the following questions two equations numbered I and II are given. You have to solve both the equations and

(1) If x> y   (2) if x ≥ y   (3) If x< y   (4) If x ≤ y
(5) If x = y or the relationship cannot be established.

6.   I. $x^2 - x - 12 = 0$
    II. $y^2 - 5y + 6 = 0$

7.   I. $x^2 - 8x + 15 = 0$
       II. $y^2 - 3y + 2 = 0$

8.   I. $x^2 - 32 = 112$
       II. $y - \sqrt{169} = 0$

9.   I. $x - \sqrt{121} = 0$
       II. $y^2 - 16 = 0$

10.   I. $x^2 - 16 = 0$
       II. $y^2 - 9y + 20 = 0$

ANSWER KEY									
1.	**(3)**	**2.**	**(1)**	**3.**	**(2)**	**4.**	**(4)**	**5.**	**(5)**
6.	**(2)**	**7.**	**(1)**	**8.**	**(3)**	**9.**	**(2)**	**10.**	**(4)**

MENSURATIONS

1. The circumference of two circles is 88 metres and 220 metres respectively. What is the difference between the area of the larger circle and the smaller circle?
(1) 3422 sq. metre   (2) 3242 sq. metre   (3) 3244 sq. metre
(4) 3424 sq. metre   (5) None of these
(IBPS PO Prelims 2015, Corporation Bank PO Exam. 18.01.2011)

2. The circumference of two circles is 132 metres and 176 metres respectively. What is the difference between the area of the larger circle and the smaller circle?
(1) 1048 sq. metres   (2) 1076 sq. metres   (3) 1078 sq. metres
(4) 1090 sq. metres   (5) None of these
(SBI PO Prelims 2014, Indian Bank PO Exam. 17.10.2010)

3. There are two circles of different radii. The area of a square Is 196 sq.cm. whose side is half the radius of the larger circle. The radius of the smaller circle is three-seventh that of the larger circle. What is the circumference of the smaller circle?
(1) 12 π cm   (2) 16 π cm   (3) 24 π cm   (4) 32 π cm
(5) None of these
(SBI PO Prelims 2015, Syndicate Bank PO Exam. 29.08.2010)

4. There are two circles of different radii. The area of a square Is 196 sq.cm. whose side is half the radius of the larger circle. The radius of the smaller circle is three-seventh that of the larger circle. What is the circumference of the smaller circle?
(1) 12 π cm   (2) 16 π cm   (3) 24 π cm   (4) 32 π cm
(5) None of these
(IBPS clerk Prelims 2015, Syndicate Bank PO Exam. 29.08.2010)

5. What is the area of a circle whose radius is equal to the side of a square whose perimeter is 112 metres?
(1) 176 sq. m.   (2) 2504 sq. m.   (3) 284 sq. m.   (4) 1956 sq. m.
(5) None of these
(IBPS PO Prelims 2014, Punjab & Sind Bank PO Exam. 23.01.2011)

6. The circumference of a semicircle of area 1925 sq. cm is equal to the breadth of a rectangle. If the length of the rectangle is equal to the perimeter of a square of side 48 cm. What is the perimeter of the rectangle?
(1) 734 cm   (2) 754 cm   (3) 745 cm
(4) Cannot be determined   (5) None of these
(SBI PO Prelims 2014, UCO Bank PO Exam. 30.01.2011)

7. The perimeter of a square is equal to twice the perimeter of a rectangle of length 8 cms. and breadth 7 cms. What Is the circumference of a semicircle whose diameter is equal to the side of the square? (Rounded off to the two decimal places)
(1) 38.57 cms.   (2) 23.57 cms.   (3) 42.46 cms.   (4) 47.47 cms.
(5) None of these
(SBI clerk Prelims 2015, Punjab & Bind Bank PO Exam. 18.05.2010)

8. What would be the cost of building a fence around a circular field with area equal to 32378.5 sq. metres, if the price per metre for building the fence was 154?
   (1) Rs. 84,683   (2) Rs.86,495   (3) Rs.79,326   (4) Rs.98,252
   (5) None of these

   (Bank Of India Banking Officer Exam. 24.06.2010)

9. The perimeter of a square is double the perimeter of a rectangle. The area of the rectangle is 240 sq. cm. What is the area of the square?
   (1) 100 sq. cm.   (2) 36 sq. cm.   (3) 81 sq. cm.
   (4) Cannot be determined   (5) None of these

   (Punjab & Bind Bank PO Exam. 18.05.2010)

10. The total area of a circle and a square is equal to 5450 sq.cm. The diameter of the circle is 70 cm. What is the sum of the circumference of the circle and the perimeter of the square?
    (1) 360cm   (2) 380 cm   (3) 270 cm
    (4) Cannot be determined   (5) None of these

    (Bank Of Baroda PO Exam. 30.05.2010)

11. The area of a square is 1024 sq. cm. What is the respective ratio between the length and the breadth of a rectangle whose length Is twice the side of the square and breadth is 12 cm. less than the side of the square?
    (1) 5:18   (2) 16:7   (3) 14:5   (4) 32:5
    (5) None of these

    (Central Bank Of India PO Exam. 25.07.20 10)

12. The cost of building a fence around a circular field is 7,700 at the rate of 14 per foot. What Is the area of the circular field?
    (1) 24062.5 sq.ft.   (2) 23864.4 sq.ft.   (3) 24644.5 sq.ft.
    (4) Cannot be determined   (5) None of these

    (United Bank Of India PO Exam. 14.11.2010)

13. What would be the cost of building a fence around a square plot with area 462.25 sq. ft. at the rate of ' 34 per foot?
    (1) 2,924   (2) 2,682   (3) 2.846
    (4) Cannot be determined   (5) None of these

    (Indian Bank PO Exam. 02.01.2011)

14. The length of a rectangle Is twice the diameter of a circle. The circumference of the circle is equal'. to the area of a square of side 22, cm. What is the breadth of the rectangle If its perimeter is 668 cm?
    (1) 24cm   (2) 26cm   (3) 52cm
    (4) Cannot be determined   (5) None of these

    (Union Bank Of India PO Exam. 09.01.2001)

ANSWER KEY									
1.	(5)	2.	(3)	3.	(3)	4.	(3)	5.	(5)
6.	(5)	7.	(1)	8.	(4)	9.	(4)	10.	(2)
11.	(5)	12.	(1)	13.	(1)	14.	(2)		

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