

**ORIENTAL BANK OF COMMERCE PROBATIONARY OFFICERS EXAM., 2010**

**(Held on 26-12-2010)**

**Quantitative Aptitude**

**Directions—(Q. 1-5)** What will come in place of question-mark (?) in the following questions ?

1.  $126 \div 14 \times (9)^2 - 53 = (?)^2$   
 (A) -26 (B)  $\sqrt{26}$   
 (C) -729 (D) 27  
 (E)  $\sqrt{27}$
2.  $\sqrt{529} \div 46 \times 7.4 + (8)^3 - 251 = ?$   
 (A) 265.1 (B) 246.1  
 (C) 256.4 (D) 285.4  
 (E) None of these
3.  $(\sqrt{5} - 3)^2 = ? - \sqrt{80} - \sqrt{20}$   
 (A)  $14 - 2\sqrt{5}$  (B) 14  
 (C)  $4 - 5\sqrt{5}$  (D) 15  
 (E) None of these
4.  $(16 \times 4)^3 \div (4)^5 \times (2 \times 8)^2 = (4)^?$   
 (A) 5 (B) 6  
 (C) 3 (D) 8  
 (E) None of these
5.  $534.58 - 386.89 + 221.45 - 195.42 = ?$   
 (A) 162.65 (B) 109.65  
 (C) 173.72 (D) 164.32  
 (E) None of these

**Directions—(Q. 6-10)** What approximate value will come in place of question-mark (?) in the following questions ?

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

6.  $20.06\%$  of 599 +  $10.01\%$  of 901 = ?  
 (A) 150 (B) 210  
 (C) 250 (D) 280  
 (E) 300
7.  $\frac{249}{15} \times \frac{299}{19} \div \frac{14}{99} = ?$   
 (A) 1850 (B) 1700  
 (C) 1750 (D) 1900  
 (E) 2000
8.  $(11.99)^2 - (8.01)^2 + (5.99)^3 = ?$   
 (A) 250 (B) 450  
 (C) 300 (D) 400  
 (E) 350

9.  $1201 \div 14.99 \times 19.91 + 400.01 = ?$

- (A) 1700 (B) 1850  
 (C) 1800 (D) 1950  
 (E) 2000

10.  $251.01 - 429.99 + 549.99 = ?$

- (A) 370 (B) 420  
 (C) 340 (D) 410  
 (E) 320

**Directions—(Q. 11-15)** What will come in place of question-mark (?) in the following number series ?

11. 9, 15, 27, 51, 99, ?  
 (A) 165 (B) 195  
 (C) 180 (D) 190  
 (E) None of these
12. 13, 21, 36, 58, 87, ?  
 (A) 122 (B) 128  
 (C) 133 (D) 123  
 (E) None of these
13. 7, 9, 19, 45, 95, ?  
 (A) 150 (B) 160  
 (C) 145 (D) 177  
 (E) None of these
14. 14, 15, 23, 32, 96, ?  
 (A) 121 (B) 124  
 (C) 152 (D) 111  
 (E) None of these
15. 20, 24, 36, 56, 84, ?  
 (A) 116 (B) 124  
 (C) 120 (D) 128  
 (E) None of these

**Directions—(Q. 16-20)** In the following questions two equations numbered I and II are given. You have to solve both the equations and give answers—

- (A) If  $x > y$   
 (B) If  $x \geq y$   
 (C) If  $x < y$   
 (D) If  $x \leq y$   
 (E) If  $x = y$  or the relationship cannot be established

16. I.  $\sqrt{x+18} = \sqrt{144} - \sqrt{49}$

II.  $y^2 + 409 = 473$

17. I.  $x^2 - 7x + 12 = 0$

II.  $y^2 - 9y + 20 = 0$

18. I.  $y^2 - x^2 = 32$

II.  $y - x = 2$

19. I.  $\sqrt{x} - \frac{\sqrt{5}}{\sqrt{x}} = 0$

II.  $y^3 - 5^{(3/2)} = 0$

20. I.  $3x + 5y = 28$

II.  $8x - 3y = 42$

**Directions—(Q. 21-25)** Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and give answers—

- (A) If the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.  
 (B) If the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.  
 (C) If the data in Statement I alone or in Statement II alone are sufficient to answer the question.  
 (D) If the data in both the Statements I and II are not sufficient to answer the question.  
 (E) If the data in both the Statements I and II together are necessary to answer the question.

21. What is the area of the circle ?

- I. The breadth of a rectangle is three-fourth the radius of the circle.

- II. The radius of the circle is equal to the side of a square of area 144 sq cm.
22. What is the cost of three tables and two chairs ?
- I. Cost of four chairs is twice cost of three tables.
- II. Cost of two tables is equal to cost of one cot, i.e. ₹ 500 ?
23. What is Jyoti's annual income ?
- I. Jyoti's monthly income is ₹ 8,500 more than Amit's monthly income.
- II. Rohit's monthly income is ₹ 3.5 thousand which is half Amit's monthly income.
24. What will be Suraj's age after eight years ?
- I. The ratio between Kamya's and Suraj's present age is 4 : 7 respectively.
- II. Kamya is 15 years younger than Suraj.
25. What is the minimum passing percentage in a test ?
- I. Raju scored 162 marks in a test and failed by 104 marks.
- II. The maximum marks of the test are 538 more marks obtained by Raju.
- Directions—(Q. 26-30) Study the following information carefully and answer the questions that follow—
- A company produces four different products, viz., Mobile phones, Televisions, Refrigerators and Computers. Each of the products has two categories, viz., Category-A and Category-B. The total number of all the products is 900. 25 per cent of the total number of products is Computers and one-third of the total number of products is Televisions. 32 per cent of the total products are Refrigerators. 50 per cent each of the total number of Television as well as the total number of refrigerators is of category-A. 40 per cent of the total number of Computers is of category-B. One-third of the total number of mobile phones is of category-B.
26. What is the total number of Televisions of Category-A, Refrigerators of Category-B and Mobile phones of Category-B together ?
- (A) 225 (B) 323  
(C) 325 (D) 223  
(E) None of these
27. Number of Computers of Category-B is **approximately** what per cent of the total number of refrigerators ?
- (A) 29 (B) 31  
(C) 37 (D) 43  
(E) 47
28. What is the average number of products of Category-A together ?
- (A) 110-25 (B) 115-5  
(C) 121-75 (D) 102  
(E) 106
29. What is the respective ratio between the number of televisions of Category B and the number of computers of Category A ?
- (A) 3 : 5 (B) 5 : 3  
(C) 10 : 9 (D) 5 : 6  
(E) None of these
30. What is the difference between the number of mobile phones of Category-B and the total number of Computers ?
- (A) 146 (B) 176  
(C) 167 (D) 156  
(E) None of these
31. A car covers a distance of 540 km in 9 hours. Speed of a train is **double** the speed of the car. Two-third the speed of the train is equal to the speed of a bike. How much distance will the bike cover in 5 hours ?
- (A) 450 km (B) 360 km  
(C) 400 km (D) 500 km  
(E) None of these
32. The ratio between the angles of a quadrilateral is 3 : 4 : 6 : 5. **Two-third** 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 ?
- (A) 120° (B) 110°  
(C) 100° (D) 130°  
(E) None of these
33. What profit/loss per cent did Ravi earn if he purchased an item of ₹ 5,600 and sold it at three-fourth of its cost price ?
- (A) Loss of 20 per cent  
(B) Gain of 25 per cent  
(C) Neither gain nor loss  
(D) Loss of 15 per cent  
(E) None of these

34. The simple interest accrued on a sum of certain principal is ₹ 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 ?
- (A) ₹ 2,025 (B) ₹ 3,025  
(C) ₹ 2,250 (D) ₹ 2,150  
(E) None of these
35. The area of a square is 196 sq cms whose side is **half** the radius of a circle. The circumference of the circle is equal to breadth of a rectangle. If perimeter of the rectangle is 712 cm. What is the length of the rectangle ?
- (A) 196 cm (B) 186 cm  
(C) 180 cm (D) 190 cm  
(E) None of these

Directions—(Q. 36-40) Study the following table carefully to answer the questions that follow—

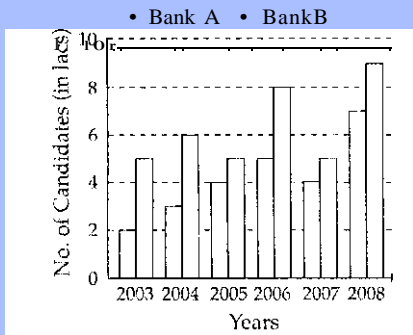
Number of Soldiers (in thousands) Retired During Six Different Years					
Years	Academies				
	Air Force	Army	Navy	Coast Guard	BSF
2004	2.5	5.2	1.6	0.6	4.2
2005	3.7	6.1	1.9	1.8	5.1
2006	2.9	6.9	2.4	1.2	3.7
2007	5.4	7.2	2.8	2.7	5.2
2008	4.2	6.4	1.5	5.4	4.4
2009	5.6	8.4	3.5	3.6	6.3

36. What is the difference between the total number of Soldiers retired from Airforce in the year 2006, 2007 and 2008 and the number of Soldiers retired from Army in the year 2009 ?
- (A) 4,700 (B) 4,100  
(C) 3,600 (D) 36,000  
(E) None of these
37. Total number of Soldiers retired from BSF in the years 2005 and 2006 together was **approximately** what per cent of the total number of Soldiers retired from Navy over all the years together ?
- (A) 70 (B) 54  
(C) 64 (D) 75  
(E) 80

38. What was the average number of Soldiers retired together in the year 2007 ?  
 (A) 4,660 (B) 46,600  
 (C) 23,300 (D) 2,330  
 (E) None of these
39. In which force the number of the soldiers retired continuously increased from the year 2004 to 2009?  
 (A) Air Force  
 (B) Army and BSF only  
 (C) Coast Guard  
 (D) Navy only  
 (E) None of these
40. What was the respective ratio between the number of soldiers retired from Army in the year 2004 and number of soldiers retired from Coast guard in the year 2006 ?  
 (A) 13 : 4 (B) 13 : 6  
 (C) 3 : 26 (D) 26 : 3  
 (E) None of these

Directions—(Q. 41-45) Study the following graph and answer the questions that follow.

**Number of applicants (in lacs) who applied for two different banks during past six years**



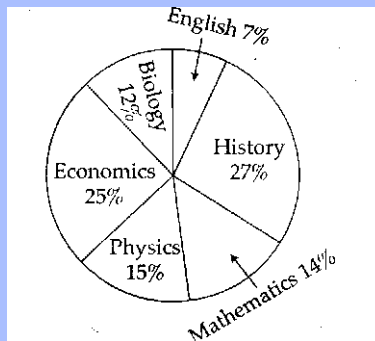
41. What was the **approximate** average number of candidates who applied for Bank-A over all the years together ?  
 (A) 4-1 lacs (B) 5 lacs  
 (C) 3-1 lacs (D) 4-5 lacs  
 (E) 3-8 lacs
42. Total number of candidates who applied for Bank-A over all the years together was **approximately** what percentage of the total number of candidates who applied for Bank-B over all the years together ?

- (A) 79 (B) 66  
 (C) 70 (D) 75  
 (E) 60
43. In which years the total number of candidates who applied for both the banks together is exactly equal ?  
 (A) 2004, 2005 and 2008  
 (B) 2004, 2006 and 2007  
 (C) 2004, 2005 and 2007  
 (D) 2004, 2006 and 2008  
 (E) 2006, 2007 and 2009
44. If 20 per cent of candidates who applied for Bank-B qualified in the year 2008, then what was the number of candidates who have been disqualified in the same year ?  
 (A) 7-2 lacs (B) 72,000  
 (C) 6-4 lacs (D) 64,000  
 (E) None of these
45. What was the respective ratio between the total number of candidates who applied for Bank-A in the year 2006 and 2008 and the total number of candidates who applied for Bank-B in the year 2005 and 2008 together ?  
 (A) 6 : 7 (B) 4 : 9  
 (C) 5 : 12 (D) 12 : 5  
 (E) None of these

Directions—(Q. 46-50) Study the following Pie-chart carefully to answer these questions.

**Percentage wise Distribution of teachers who teach six different subjects**

Total number of Teachers = 2000  
 Percentage of Teachers



46. If five-seventh of the teachers who teach Mathematics are female, then number of male Mathematics teachers is **approximately** what percentage of the

total number of teachers who teach English ?

- (A) 57 (B) 42  
 (C) 63 (D) 69  
 (E) 51
47. What is the difference between the total number of teachers who teach English and History together and the total number of teachers who teach Mathematics and Biology together ?  
 (A) 146 (B) 156  
 (C) 180 (D) 160  
 (E) None of these
48. If the percentage of Biology teachers is increased by 40 per cent and percentage of History teachers decreased by 20 per cent then what will be the total number of Biology and History teachers together ?  
 (A) 634 (B) 654  
 (C) 658 (D) 778  
 (E) None of these
49. What is the **approximate** average number of teachers teaching Economics, History and Biology together ?  
 (A) 400 (B) 420  
 (C) 450 (D) 480  
 (E) 470
50. What is the **respective** ratio of the number of teachers who teach Biology and the number of teachers who teach Physics ?  
 (A) 6 : 7 (B) 4 : 7  
 (C) 3 : 5 (D) 4 : 5  
 (E) None of these