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RESERVE BANK OF INDIA GRADE 'B' OFFICERS EXAM 2011- QUANTITATIVE APTITUDE QUESTION PAPER

Directions (Qs. 1 to 5) : What should come in place of question mark (?) in the following questions?

1. $[? - 45] = 40$
(1) 85 or –85
(2) 85 or 5
(3) 5 or – 5
(4) 40 or 5
(5) None of these

2. $\left[\left((3)^2\right)^6\right]^4 = 9^?$
(1) 28   (2) 16
(3) 12   (4) 24
(5) None of these

3. $\sqrt{289} = ?$
(1) $\left(\sqrt{17}\right)^2$ (2) (–8 –9)
(3) –17   (4) $\pm\left(\frac{153}{9}\right)$
(5) None of these

4. ?% of $(4)^2 = 51.2$
(1) 15   (2) 8
(3) 5   (4) 10
(5) None of these

5. $\sqrt[4]{1296} = ?$
(1) 8   (2) 36
(3) 12   (4) 6
(5) None of these

Directions (Qs. 6 to 10) : In the following number series only one number is wrong. Find out the wrong number.

6. 4 3 4.5 8.5 20 53 162.5
(1) 3
(2) 4.5
(3) 8.5
(4) 20
(5) 53

7. 12000 2395 472 89.8 12.96 –2.408 –5.4816
(1) –5.4816
(2) 472
(3) 12.96
(4) –2.408
(5) 2395

8. 1 8 28 99 412 2075 12460
(1) 28   (2) 99
(3) 412   (4) 2075
(5) 12460

9. 144 215 540 1890 8505 46777.5 304053.75
(1) 215   (2) 540
(3) 1890   (4) 8505
(5) 46777.5

10. 2222 1879 1663 1538 1474 1447 1440
(1) 1879   (2) 1538
(3) 1474   (4) 1447
(5) 1440

11. In a college, the ratio of boys to girls is 31 : 23 respectively. When 75 more girls join the college, this ratio becomes 124 : 107. How many more girls should join the college to make the number of boys and girls equal?
(1) 75
(2) 90
(3) 60
(4) 85
(5) None of these

12. The compound interest accrued on an amount at the end of two years @ 12 p.c.p.a is Rs. 2,862. What is the amount?
(1) Rs. 11,250
(2) Rs. 12,200
(3) Rs. 13,500
(4) Rs. 10,000
(5) None of these

13. A 280 metres long train, travelling at a uniform speed, crosses a platform in 60 seconds and a man standing on the platform in 20 seconds. What is the length of the platform?
(1) 640 metres
(2) 420 metres
(3) 280 metres
(4) Cannot be determined
(5) None of these

14. A triangle has two of its angles in the ratio of 1 : 2. If the measure of one of its angles is 30 degrees, what is the measure of the largest angle of the triangle in degrees ?
(1) 100   91
(2) 90
(3) 135   123
(4) Cannot be determined
(5) None of these

15. In how many different ways can the numbers '256974' be arranged, using each digit only once in each arrangement, such that the digits 6 and 5 are at the extreme ends in each arrangement ?
(1) 48
(2) 720
(3) 36
(4) 360
(5) None of these

Directions (Qs. 16 to 20) : Study the given information carefully and answer the questions that follow:

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

16. If two marbles are picked at random, what is the probability that both are green ?
(1) $\frac{2}{15}$ (2) $\frac{1}{15}$
(3) $\frac{2}{7}$ (4) 1
(5) None of these

17. If three marbles are picked at random, what is the probability that two are blue and one is yellow ?
(1) $\frac{2}{15}$ (2) $\frac{6}{91}$
(3) $\frac{12}{91}$ (4) $\frac{3}{15}$
(5) None of these

18. If four marbles are picked at random, what is the probability that at least one is yellow ?
(1)   (2) $\frac{69}{91}$
(3) $\frac{125}{143}$ (4) $\frac{1}{4}$
(5) None of these

19. If two marbles are picked at random, what is the probability that either both are red or both are green ?
(1) $\frac{3}{5}$ (2) $\frac{4}{105}$
(3) $\frac{2}{7}$ (4) $\frac{5}{91}$
(5) None of these

20. If four marbles are picked at random, what is the probability that one is green, two are blue and one is red ?
(1) $\frac{4}{15}$ (2) $\frac{17}{280}$
(3) $\frac{6}{91}$ (4) $\frac{11}{15}$
(5) None of these

Directions (Qs. 21 to 25) : Each of the questions given 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 is sufficient to answer the question. Read both the statements and give answer—

(1) if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
(2) if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
(3) if the data in statement I alone or in statement II alone is sufficient to answer the question.
(4) if the data in both the statements I and II is not sufficient to answer the question.
(5) if the data in both the statements I and II together is necessary to answer the question.

21. What is the two digit positive number?
I. Sum of the two digits of the number is 8.
II. Sum of the two digits is 3 more than the higher digit.

22. The symbol ∞ represents one of the following operations: addition, subtraction, multiplication or division. What is the value of 6 ∞ 4 ?
I 0 ∞ 5 = 5
II 5 ∞ 0 = 5

23. At what time did Poonam finish the job ?
I Poonam started working without a break on the job at exactly 9 a.m. and by noon she had utilised exactly half the time that it took her to finish the job.
II Poonam took exactly 6 hours to finish the job.

24. Last year an employee received an annual salary of Rs. 6,18,000, which was paid in equal pay cheques throughout the year. What was the salary received in each of the paycheques ?
I The employee received a total of 24 paycheques during the year.
II The employee received a paycheque twice a month each month during the year.

25. Is the sum of integers x and y greater than 85 ?
I The product of x and y is greater than 85.
II One of the variables is greater than 83.

Directions (Qs. 26 to 30) : Study the following pie charts carefully to answer the questions.
Degree-wise breakup of employees working in various departments of an organisation and the ratio of Men to Women
Total Number of Employees = 3250
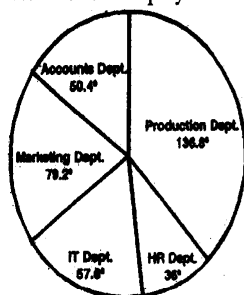
Respective Ratio of Men to Women in Each Department

Department	Men	Women
Production	4	1
HR	12	13
IT	7	3
Marketing	3	2
Accounts	6	7

26. What is the number of Men working in the Marketing department ?
(1) 462
(2) 454
(3) 418
(4) 424
(5) None of these

27. What is the respective ratio of the number of Women working in the HR department and the number of Men working in the IT department?
(1) 11 : 12
(2) 17 : 29
(3) 13 : 28
(4) 12 : 35
(5) None of these

28. The number of Men working in the Production department of the organisation forms what percent of the total number of employees working in that department ?
(1) 88
(2) 90
(3) 75
(4) 65
(5) None of these

29. The number of Women working in the IT department of the Organisation forms what percent of the total number of employees in the Organisation from all departments together ?
(1) 3.2
(2) 4.8
(3) 6.3
(4) 5.6
(5) None of these

30. What is the total number of Men working in the organisation ?
(1) 2198
(2) 2147
(3) 2073
(4) 2236
(5) None of these

Directions (Qs. 31 to 35) : In the following questions two equations numbered I and II are given. You have to solve both the equations and –
Give answer   If
(1)   x > y
(2)   x ≥ y
(3)   x < y
(4)   x ≤ y
(5)   x = y or the relationship cannot be established

31. I $x^2 + 5x + 6 = 0$
II $y^2 + 3y + 2 = 0$

32. I $x^2 - 10x + 24 = 0$
II $y^2 - 9y + 20 = 0$

33. I $(x)^2 = 961$
II $y = \sqrt{961}$

34. I $x^2 - 72 = x$
II $y^2 = 64$

35. I $x^2 - 463 = 321$
II $y^2 - 421 = 308$

Directions (Qs. 36 to 40) : Study the following tables carefully and answer the questions given below:

Number of people taking fresh loans from different Banks over the years and the percentage of defaulters amongst them each year

Number of people taking fresh loans from different banks over the years
NUMBER

Year	P	Q	R	S	T
2004	27361	26345	25467	28246	30164
2005	32081	27456	32461	29435	35128
2006	25361	28637	32652	29565	32444
2007	23654	29045	32561	28314	36152
2008	36125	30467	25495	23764	35463
2009	35465	31963	27649	24356	33214
2010	34135	31974	28283	26555	31264

Approximate Percentage of defaulters amongst them each year
PERCENTAGE

P	Q	R	S	T
12	9	15	13	19
24	9	17	20	23
22	13	16	21	25
18	11	18	22	19
12	10	13	23	18
11	20	11	22	21
9	21	12	21	23

36. Approximately how many people taking a loan from Bank S in the year 2006 were defaulters ?
(1) 6490
(2) 6210
(3) 5020
(4) 6550
(5) 5580

37. Approximately what was the difference between the number of defaulters of Bank Q in the year 2004 and 2005 ?
(1) 175
(2) 125
(3) 190
(4) 205
(5) 140

38. In which of the following years was the number of defaulters of Bank R, the maximum among the given years ?
(1) 2005
(2) 2006
(3) 2007
(4) 2010
(5) None of these

39. In which of the following years was the difference in number of people taking loan from Bank P from the previous year the highest ?

(1) 2008
(2) 2006
(3) 2007
(4) 2005
(5) None of these

40. Approximately what was the total number of defaulters of Bank T in the years 2007 and 2008 together ?

(1) 14110
(2) 13620
(3) 13250
(4) 14670
(5) 15330