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SBI PO PRELIMS MODEL TEST-91

QUANTITATIVE APTITUDE

Direction (41-45): In the following questions, two equations I and II are given. You have to solve both the equations and give Answer as,

- | | | |
|------------------------------|---------------------------|---|
| 41. I: $x^2 - 3x - 40 = 0$ | II: $y^2 - 11y + 30 = 0$ | |
| 1) $x > y$ | 2) $x < y$ | 3) $x \geq y$ 4) $x \leq y$ 5) $x = y$ or no relation |
| 42. I: $x^2 + 15x + 56 = 0$ | II: $2y^2 + 26y + 84 = 0$ | |
| 1) $x > y$ | 2) $x < y$ | 3) $x \geq y$ 4) $x \leq y$ 5) $x = y$ or no relation |
| 43. I: $x^2 - 13x + 42 = 0$ | II: $y^2 - 17y + 72 = 0$ | |
| 1) $x > y$ | 2) $x < y$ | 3) $x \geq y$ 4) $x \leq y$ 5) $x = y$ or no relation |
| 44. I: $2x^2 + 11x + 12 = 0$ | II: $5y^2 + 27y + 10 = 0$ | |
| 1) $x > y$ | 2) $x < y$ | 3) $x \geq y$ 4) $x \leq y$ 5) $x = y$ or no relation |
| 45. I: $6x^2 + 13x + 5 = 0$ | II: $9y^2 + 22y + 8 = 0$ | |
| 1) $x > y$ | 2) $x < y$ | 3) $x \geq y$ 4) $x \leq y$ 5) $x = y$ or no relation |

Direction (46-48): Read the information carefully to answer the question.

A Survey of 87 students is conducted in the metro city of Delhi. Three food and beverage outlets are taken into consideration. They are X, Y and Z.

The ratio of students who visited only X to that of only Y is 4:5. Students who visited Z is 35 and the number of students who visited all three is 6. The number of students who visited both X and Z is 14 while the number of students who visited both Y and Z is 10. The number of students who visited more than one is 25.

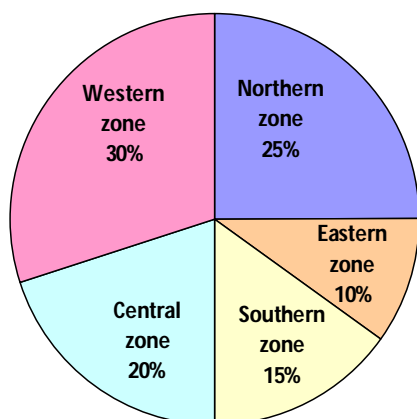
46. What is the ratio of the number of students who visited only X and only Y together to the number of students who visited more than one?
 1) 4:5 2) 9:5 3) 7:5 4) 3:5 5) 11:5
47. The number of students who visited all three is what percent of the total number of students who visited only X?
 1) 10 2) 20 3) 30 4) 40 5) 50
48. The number of students who visited Y is what percent of the total number of students who visited Z?
 1) 120 2) 130 3) 140 4) 150 5) 160
49. Jaya & Shivani invested Rs. 5000 & Rs. 6000 respectively in a business. After six-month Riya join the business with a capital of Rs. 3000 and Jaya left the business. If at the end of one year the difference between profit shares of Jaya & Riya is Rs. 200, then find the profit share (in Rs.) of Shivani?
 1) 3000 2) 2400 3) 4200 4) 3600 5) 1200
50. If the ratio of radius to height of a cylinder is 7 : 6 and the curved surface area of the cylinder is 1056 cm^2 , then find the total surface area of cylinder?
 1) 2218 cm^2 2) 2228 cm^2 3) 2248 cm^2 4) 2288 5) 2268 cm^2
51. Ram spend 20% of his monthly income on rent, from the remaining income he spends 10% on food, 30% on travel and $\frac{2}{5}$ th amount he gives to his mother. If the difference between amount he spends on travel & amount he gives to his mother is Rs. 11200, then find the monthly income of Ram?
 1) 120000 2) 140000 3) 150000 4) 180000 5) 130000
52. Speed of a bike is 10% less than speed of a car and bike takes two hours less than car to cover 180 km distance, while car covers 300 km. Find the speed (in km/hr) of bike?
 1) 50 2) 45 3) 36 4) 54 5) 27

53. The ratio of present age of Aman to that of David is 2 : 5 and after ten years the sum of their age will be 69 years. Find the difference between present ages of Aman & David?
 1) 14 years 2) 21 years 3) 17 years 4) 19 years 5) 7 years
54. A vessel contains a total 95 liter mixture of milk & water in the ratio of 15 : 4 respectively. X liter mixture of mixture taken out from the vessel and 18 liters water added in the remaining mixture, then the new ratio of milk to water becomes 3 : 2, find the value of X?
 1) 9.5 2) 57 3) 27.5 4) 19 5) 38
55. The ratio of speed of a boat downstream to upstream is 5 : 3 and total time taken by boat to cover 30 km distance in upstream is 5 hours. Find the time taken by boat to cover 40 km downstream.
 1) 4 hours 2) 6 hours 3) 8 hours 4) 2 hours 5) 3 hours
56. A man invested Rs. 8000 in each schemes A & B. Scheme A offers simple interest at the rate of 9% p.a. for three years, while scheme B offers simple interest at the rate of 8% p.a. for four years. Find the total interest (in Rs.) get by the man from both schemes?
 1) 4700 2) 4760 3) 4780 4) 4520 5) 4720
57. A can do 25% of a work in 7 days, while B can do $\frac{2}{7}$ th of the same work in 12 days. A and B start working together and after 12 days both replace by C, who complete the remaining work in three days. Find in how many days C can complete the same work alone?
 1) 6.5 days 2) 7.5 days 3) 8.5 days 4) 10.5 days 5) 12.5 days
58. A shopkeeper sold a table at 20% profit and a chair at a profit of 25%. If the cost price of the chair is equal to the selling price of the table and the shopkeeper earned an overall profit of Rs. 400, then find the sum of the selling price of both the articles together?
 1) 2160 2) 1760 3) 1960 4) 2260 5) 2460

Directions (59-63): Study the charts given below carefully and answer the following questions.

Pie chart shows the percentage distribution of total students (Science + Commerce) in 12th class of five different Zones and table shows the number of students in same class in science of same zones.

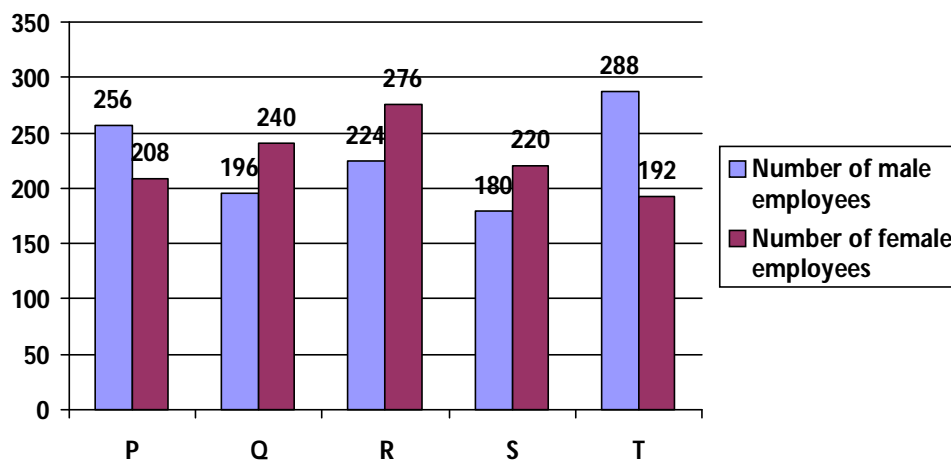
Total students 4000



Zone name	Students in Science
Northern	400
Eastern	310
Southern	430
Central	600
Western	750

59. Number of students of commerce stream in Northern Zone is what Percent more or less than the number of total students in Southern Zone?
 1) 20% 2) 15% 3) 5% 4) 0% 5) 12.5%
60. Number of Commerce students in a Western zone is how much less than Science students in Northern zone, Eastern zone and Southern zone together?
 1) 660 2) 770 3) 630 4) 730 5) 690
61. If the monthly library fee per student in Central zone for commerce students is Rs.60 which is Rs.20 less than that for science students, then find the total monthly fee of a library in Central zone?
 1) Rs.60000 2) Rs.45000 3) Rs.42000 4) Rs.54000 5) Rs.63000
62. If the Western zone also has Arts students and the ratio of sum of students of science and commerce in western zone and Arts students in western zone is 5 : 7, then find Arts students in western zone are how much more than commerce students in Southern zone?
 1) 1590 2) 1430 3) 1510 4) 1620 5) 1690
63. Find the ratio of science students in Western Zone to Commerce students in the eastern zone?
 1) 7 : 1 2) 22 : 9 3) 21 : 8 4) 17 : 5 5) 25 : 3

Direction (64-68): The Bar graph given below shows the data regarding number of male and female employees in different companies.



Note:

Number of unmarried employees = $(p+q)/r$

Where p = number of male employees in each company

q = number of female employees in each company

r = one-fourth of the number of team leaders in each company

Some information is also given, the number of team leaders in company P is equal to the difference between the number of female employees in company P and Q. The respective ratio of the number of team leaders in company R and S is 2:1 and the sum of the number of team leader in company P and S is 52. The number of team leaders in company T is 80% of the number of team leaders in company R.

Number of team leaders in company Q is $\frac{1}{15}$ th of the number of female employees in the same company.

64. The number of male employees who married from company T is 25% more than the number of male employees who married from college R. Find the number of female employees who are unmarried from company T, if the number of team leaders in company T are $33\frac{1}{3}\%$ more than the number of male employees who are unmarried from company R?
 1) 12 2) 16 3) 18 4) 20 5) 22
65. The respective ratio of the number of males to female employees in company S who are married is 3:5 and the difference between the number of male employees from company Q and S who are unmarried is _____. If the total 411 female employees from companies Q and S who married, then which of the following value is possible for the given blank?
 1) 18 2) 25 3) 20 4) 35 5) 12
66. In company R and S, the number of employees who married, if only 74% and 65% of respective employees have a passport, then what is the difference between the number of employees who do not have passports among employees who married from company R and S together and number of employees in company Q who are unmarried?
 1) 120 2) 140 3) 100 4) 80 5) 150
67. In company U, if the number of female employees is equal to the average number of female employees in company P and R together, the number of male employees is equal to the average number of male employees in company Q and T together and the number of team leaders are 50% of the number of team leaders in company P, then how many employees from company U who are married?
 1) 321 2) 363 3) 245 4) 126 5) 222
68. Find the average number of employees who are married from all companies together except company Q?
 1) 399 2) 321 3) 278 4) 225 5) 176
69. The base of the triangle is equal to the breadth of the rectangle and the height of the triangle is 3m less than the length of the rectangle. The area of the triangle and that of the rectangle is 36m^2 and 96m^2 respectively. then find the perimeter of the rectangle?
 1) 40 2) 35 3) 42 4) 36 5) 54
70. Two pipes A and B can fill together a tank in 16 minutes, 14 minutes respectively. If both pipes are opened together and after 4 minutes pipe A is closed, find the total time in which tank will be filled?
 1) $10\frac{1}{2}$ 2) $11\frac{3}{4}$ 3) $12\frac{3}{4}$ 4) 14 5) $14\frac{1}{2}$

KEY

41.5	42.4	43.2	44.5	45.5	46.2	47.3	48.1	49.5	50.4
51.2	52.2	53.2	54.5	55.1	56.5	57.4	58.1	59.4	60.5
61.1	62.3	63.5	64.5	65.3	66.1	67.2	68.1	69.1	70.1