

QUANTITATIVE APTITUDE

Directions (1-8) : 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) | $x \leq y$ |
| (5) | the relationship between x and y cannot be established |

1. I. $x^2 + 7x + 12 = 0$
II. $3y^2 + 11y + 10 = 0$
2. I. $3x^2 - 25x + 77 = 0$
II. $3y^2 - 22y + 35 = 0$
3. I. $3x^2 + 9x + 7 = 0$
II. $3y^2 + 9y + 10 = 0$
4. I. $9x^2 - 33x + 30 = 0$
II. $6y^2 - 25y + 25 = 0$
5. I. $9x^2 - 36x + 35 = 0$
II. $3y^2 - 15y + 27 = 0$

Directions (9-10) : 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 sufficient to answer the question. Read both the statements and

Give answer (1) 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.

Give answer (2) 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.

Give answer (4) if the data in both the statements I and II together are necessary to answer the question.

Give answer (5) if the data in statement I alone or in statement II alone are sufficient to answer the question.

Give answer (3) if the data in both the statements I and II are not sufficient to answer the question.

6. How much time will train A take to completely cross train B running in opposite direction (towards each other) ?

1. The total length of train A and train B together is 777metre.
- II. Train B can cross an electric pole in 8 seconds. The respective ratio of the speed of train A and train B is 7 : 8.

7. What is the volume of the cylinder ? (in cubic metre)

- I. The radius of the cylinder is 21 metre.
- II. The sum of height and radius of the cylinder is 39 metre. The curved surface area of the cylinder is 1050 sq. metre.

8. What was the percentage of discount given while selling table ?

1. The cost price of the table is Rs. 8,000. 12% profit was earned by selling the table.
- II. If there were no discount, the earned profit would have been 18%.

9. In how many days 14 men can complete a piece of work ?

- I. 18 women can complete the same piece of work in 24 days.
- II. 28 children can complete the same piece of work in 30 days.

10. What is the number ?

1. 20% of that number is one-fourth of that number.
- II. $\frac{2}{3}$ of that number is less by 200 than that number.

Directions (11-13) : Read the following information carefully and answer the questions given below it.

There are 5 red balls, 6 green balls and 7 blue balls in a box.

11. If three balls are drawn randomly, what is the probability that one of them is red and the remaining two are blue?

(1) $\frac{5}{24}$	(2) $\frac{35}{138}$
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(3) $\frac{35}{272}$	(4) $\frac{45}{272}$
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(5) $\frac{15}{135}$

12. If one ball is drawn randomly, what is the probability that it is either red or blue?

(1) $\frac{5}{9}$	(2) $\frac{5}{9}$
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(3) $\frac{3}{4}$	(4) $\frac{2}{3}$
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(5) $\frac{1}{3}$

13. If two balls are drawn randomly, what is the probability that at least one of them is green ?

(1) $\frac{31}{51}$	(2) $\frac{29}{51}$
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(3) $\frac{35}{51}$	(4) $\frac{23}{51}$
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(5) $\frac{26}{51}$

14. The population of a village in the year 2013 was 55777. If the rate of increase was 8% and 15% respectively from the previous two years before 2013, what was the population of the village in the year 2011?

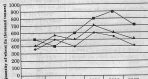
- (1) 52650 (2) 49500
(3) 70500 (4) 44500
(5) 65200

15. If the cost of 5 articles is same as the selling price of 3 articles, then the loss will be

- (1) 20%
(2) 32.9%
(3) 16.47%
(4) 18.75%
(5) 75%

Directions (16-20) : Study the following graph carefully to answer the questions given below it.

Quantity of wheat (in thousand tonnes) exported by three companies over the years



16. What is the per cent increase in exports of company C from 2003 to 2005?
- (1) 50% (2) 30.30%
(3) 150% (4) 133.33%
(5) 90.90%

17. Total exports of company A for all the years are approximately what per cent of the total exports of company B for all the years?
- (1) 75 (2) 135
(3) 130 (4) 65
(5) 72

18. Per cent rise in exports from the previous year was the maxi-

mum during which year for company B?

- (1) 2002 (2) 2004
(3) 2007 (4) 2006
(5) 2003

19. What are the average exports of company B for all the years? (in thousand tonnes)

- (1) 766.67 (2) 667.14
(3) 687.14 (4) 734.57
(5) 660

20. What is the ratio between the total exports of the three companies in 2003 and 2005 respectively?

- (1) 41 : 29 (2) 51 : 29
(3) 29 : 31 (4) 29 : 41
(5) 54 : 41

Directions (21-25) : Read the following information carefully to answer the questions given below it.

Out of the 10000 candidates eligible for an Officer's post in a Public Sector Bank, 450 candidates have prior experience of working in Public Sector Banks in rural areas only, 25% of the total number of candidates have prior experience of working in Public Sector Banks in urban areas only, 12% of the total number of candidates have prior experience of working in Private Sector Banks in urban areas only, 2% of the total number of candidates have prior experience of working in Private Sector Banks in rural areas only, 3,600 candidates have worked in Public sector Banks in both urban and rural areas, 18% of the total number of candidates have worked in both Public and Private Sector Banks in urban areas only, 600 candidates have worked in both Public and Private Sector Banks in rural areas only. The remaining candidates have no prior experience of working in the Banking industry.

21. How many candidates have prior experience of working in rural areas (both Public and Private Sector Banks together)?
- (1) 4500 (2) 4350
(3) 4800 (4) 4900
(5) 4650
22. How many total candidates have prior experience of working in Public Sector Banks (Urban and Rural areas together)?
- (1) 12450 (2) 9450
(3) 10650 (4) 10550
(5) 11500
23. What is the respective ratio of the candidates who have a prior experience of working in Public Sector Banks in rural areas only to the candidates who have a prior experience of working in Private Sector Banks in rural areas only?
- (1) 4 : 3 (2) 3 : 2
(3) 3 : 3 (4) 3 : 4
(5) 1 : 2

24. What is the total number of candidates who have worked in Private Sector Banks in urban areas ?

- (1) 1800 (2) 2250
(3) 4050 (4) 3600
(5) 3200

25. The candidates who have no prior experience of working in the banking industry are what per cent of the candidates who have worked in Public Sector Banks in both urban and rural areas together ?

- (1) 60.5 (2) 64.5
(3) 62 (4) 64
(5) 61

26. A and B contributed capitals of Rs. 90,000 and Rs. 65,000 respectively and agreed to share profit and loss in the ratio of 3 : 2. What will be the balance of A's capital after revaluation if machinery worth Rs. 12,000 valued at Rs. 9,000 and creditors worth Rs. 45,000 revalued at Rs. 35,000 ?

- (1) Rs. 1,02,000
(2) Rs. 97,000
(3) Rs. 78,000
(4) Rs. 73,000
(5) Rs. 63,000

Directions (27-32) : Study the following pie charts carefully to answer these questions.

Percentage wise distribution of players who play five different sports.

Total players are 4200 out of which female players are equal to 2000. Total players = 4200.

Percentage of male players who play different sports



- A : Cricket
B : Hockey
C : Lawn Tennis
D : Football
E : Rugby

Percentage of female players who play different sports



- A : Cricket
B : Hockey
C : Lawn Tennis
D : Football
E : Rugby

27. What is the average number of players (both male and female) who play football and rugby together ?

- (1) 620 (2) 357
(3) 300 (4) 400
(5) 740

28. What is the difference between the number of female players who play lawn tennis and the number of male players who play rugby ?

- (1) 94 (2) 64
(3) 290 (4) 300
(5) 255

29. What is the respective ratio of the number of female players who play cricket and number of male players who play hockey ?

- (1) 50 : 7 (2) 104 : 121
(3) 30 : 5 (4) 100 : 121
(5) 31 : 30

30. What is the total number of male players who play football, cricket and lawn tennis together ?

- (1) 724 (2) 1474
(3) 3824 (4) 1964
(5) 3694

31. Number of male players who play rugby is approximately what percentage of the total number of players. (male + female) who play lawn tennis ?

- (1) 31 (2) 39
(3) 35 (4) 31
(5) 43

32. The total number of female players who play Lawn Tennis is what per cent of the total number of male players who play Cricket ? (approximated up to two decimal digit)

- (1) 54.19 (2) 57.16
(3) 55.16 (4) 56.65
(5) 60.91

33. A sum of Rs. 6,240 is paid off in 30 instalments in such a way that each instalment is Rs. 10 more than the preceding instalment. What is the value of the first instalment ?

- (1) Rs. 30 (2) Rs. 45
(3) Rs. 60 (4) Rs. 75
(5) Rs. 57

34. The average age of the family of five members is 24 years. If the present age of youngest member is 6 years then what was the average age of the family at the time of the birth of the youngest member ?

- (1) 30 years (2) 18 years
(3) 12 years (4) 16 years
(5) 21 years

Directions (35-39) : What approximate value will come in place of the question mark (?) in the given questions ? (You are not expected to calculate exact value)

35. $57^2 + 73^2 = 173^2 - 388^2 - 6300$

(1) 96 (2) 80
(3) 83 (4) 61
(5) 98

36. $\frac{3333^2}{44} = 18$

(1) 624.25 (2) 624
(3) 684.5 (4) 673.75
(5) 634.45

37. $\sqrt{10^2 \times 14 - 8 \times 7 + (4)^2} = 18$

- (1) 1 (2) 3
(3) 4 (4) 5
(5) 2

38. $\left[\frac{166^2 \times 13}{70} \right] = 37^2$

- (1) 13 (2) 98
(3) 121 (4) 31
(5) 231

39. $(4.72\% \text{ of } 240) - (0.88\% \text{ of } 200) = 7$

- (1) 8.374 (2) 6.458
(3) 11.348 (4) 13.892
(5) 13.432

40. A boat running downstream covers 24 km in 4 hrs, while for covering the same distance upstream it takes 6 hrs. What is the speed of the boat in still water?

- (1) 3.5 km/hr (2) 5 km/hr
(3) 6 km/hr (4) 4 km/hr
(5) 7 km/hr

41. A and B can complete a piece of work in 18 days, B and C in 24 days and A and C in 36 days. In how many days, will all of them together complete the same piece of work?

- (1) 16 (2) 18
(3) 19 (4) 10
(5) 17

42. What will be the difference in simple interest and compound interest at the rate of 12% per annum on the sum of Rs. 900 after 2 years?

- (1) Rs. 15.824 (2) Rs. 24.64
(3) Rs. 30.224 (4) Rs. 21.60
(5) Rs. 38.87

47. What is the respective ratio of quantity of sugar and coffee consumed by hotel D to hotel F over the month?

- (1) 9 : 11 (2) 9 : 13
(3) 11 : 9 (4) 13 : 17
(5) 11 : 17

48. What is the difference between the total quantity of food items consumed by hotel D and the total quantity of food items consumed by hotel E?

- (1) 600 (2) 440
(3) 507 (4) 600
(5) 900

49. There is a square field whose side is 44m. A square flowerbed is prepared in its centre, leaving a gravel path of uniform width all around the flowerbed. The total cost of laying the flowerbed and graveling the path at Rs. 2 and Rs. 1 per square metre respectively is Rs. 3336. Find the width of the gravelled path.

- (1) 1 metre (2) 1.5 metre
(3) 2 metre (4) 2.5 metre
(5) 3 metre

50. The average age of boys in the class is twice the number of girls in the class. The ratio of boys and girls in the class of 50 is 4 : 1. What is the total of the ages (in years) of the boys in the class?

- (1) 2000 (2) 2000
(3) 800 (4) 800
(5) 500

Directions (43–48) : Study the following table carefully to answer the questions :

Consumption of various food items per month by 6 Hotels (in kg)

Food Items	Hotels					
	A	B	C	D	E	F
Oil	480	524	490	387	266	342
Vegetables	434	387	625	402	375	287
Sugar	435	512	453	475	449	523
Tea	150	100	78	94	108	114
Coffee	68	54	78	38	65	83
Rice	800	1058	890	960	764	688
Wheat	755	882	735	907	868	593

43. The total quantity of food items consumed by hotel C is approximately what per cent of the total quantity of food items consumed by hotel E?

- (1) 128 (2) 100
(3) 93 (4) 136
(5) 117

44. The quantity of rice consumed by hotel A is approximately what per cent of the quantity of rice consumed by all the hotels together?

- (1) 13 (2) 19
(3) 18 (4) 28
(5) 27

45. Which hotel consumed the highest quantity of total food items over the month?

- (1) A (2) B
(3) C (4) D
(5) F

46. What is the respective ratio of the average quantity of the wheat consumed by all the hotels together to the average quantity of vegetables consumed by all the hotels together over the month?

- (1) 318 : 107 (2) 23 : 38
(3) 547 : 326 (4) 326 : 149
(5) 2 : 3