DI DS DC Workshop

Type of ques	Ques	Your Score	Time
Pie Chart			
Caselet/FIB			
Chart with ratios			
Data Sufficiency			
BODMAS			
Series			
Data Comparison			

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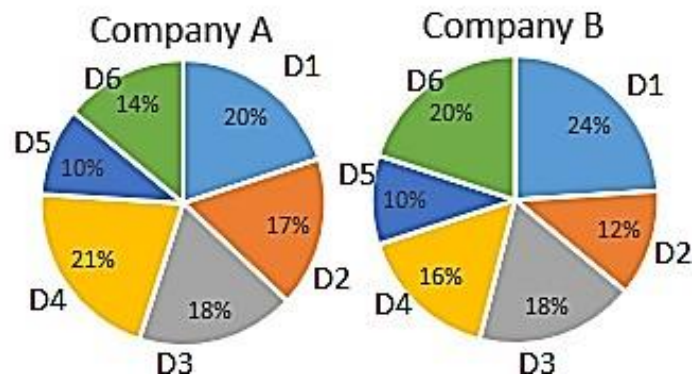09167917984,
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25 questions 20 minutes

The following pie-charts show the percentage distribution of the total employees of two Companies A and B in different departments, and the table shows the ratio of Male to Female employees in all the departments of Company A and B. The total number of employees working in Company A and B are 8000 and 7500 respectively.

	Company A Male : Female	Company B Male : Female
D1	5 : 3	13 : 7
D2	9 : 7	11 : 14
D3	5 : 7	7 : 8
D4	8 : 7	17 : 13
D5	3 : 2	23 : 27
D6	9 : 5	7 : 3

Company A: D1 20%, D2 17%, D3 18%, D4 21%, D5 10%, D6 14%

Company B: D1 24%, D2 12%, D3 18%, D4 16%, D5 10%, D6 20%

1. What is the total number of Female employees in D5 of Company A and B together?
(a) 705 (b) 710 (c) 715 (d) 720 (e) 725

2. The total number of Female employees in D1 of Company B is approximately how much per cent more than the number of Female employees in D1 of Company A?
(a) 5% (b) 7.5% (c) 15% (d) 22.5% (e) 30%

3. What is the difference between the total Male employees of Company A and the total Female employees of Company B?
(a) 1230 (b) 1232 (c) 1234 (d) 1236 (e) 1238

4. The average number of Male employees in D1 and D2 of Company B is approximately what percentage of the average number of Female employees in D5 and D6 of Company A? (a) 177.5% (b) 197.5% (c) 212.5% (d) 217.5% (e) 227.5%

5. The total number of Females working in Company A is approximately what percentage of total employees of Company A?
(a) 42.12% (b) 43.48% (c) 44.24% (d) 45.64% (e) 46.86%

Study the following information carefully and answer the questions given below:

In an institute there are 5600 students, the ratio of the number of girls to the number of boys is 3 : 4 respectively. All the students are enrolled in different programmes viz. SSC, Banking, CLAT and F–CAT. 20% of the total number of boys are enrolled in CLAT programme. The number of girls enrolled in Banking is five–fourths of the number of boys taking the same.

One fourth of the total number of girls enrolled in F–CAT programme. The total number of students enrolled in F–CAT programme is 1400. Two–fifths of the boys enrolled in SSC programme and the remaining boys are enrolled in Banking programme. The girls enrolled in SSC are three fourth of the number of boys enrolled in the same. The remaining girls are enrolled in CLAT programme.

6.   What is the respective ratio of the number of boys enrolled in CLAT to the number of boys enrolled in SSC?
1) 1 : 2 2) 1 : 3 3) 2 : 3 4) 4 : 5 5) 3 : 4

7.   What is the number of girls enrolled in CLAT? 1) 210 2) 260 3) 280 4) 180 5) 240

8.   What is the total number of students enrolled in Banking? 1) 1060 2) None of these 3) 1080 4) 1040 5) 1020

9.   The number of girls enrolled in F–CAT is approximately what percent of the total number of students enrolled in SSC? 1) 24.8% 2) 26.8% 3) 36.8% 4) 32.9% 5) 29.4%

10.   The number of boys enrolled in CLAT and SSC together is approximately what percent more or less than the number of girls enrolled in SSC?
1) 100% more 2) 100% less 3) 125% more 4) Other than given options 5) 75% less

Directions Q11 to Q15- there are five travelling companies. And the following table gives the percentage distribution of all customers according to their mode of transportation.

Travelling Companies	Percentage of Traveller by Bus	Percentage of Traveller by Air	Percentage of Traveller by Ship	Percentage of Traveller by Car	Percentage of Traveller by Train
Royal Cruiser	38	10	9	20	-
Iana Travels	47	13	0	-	-
Kali Travels	30	20	-	-	-
Nainital Travels	-	44	12	-	4
Kingfisher Travels	-	25	-	30	-

Q11. The total number of passenger travels through kali travels is 300, and the passenger travels by bus and air for royal cruiser is equal to the passenger travel by all the modes other than Air from kali travels. Find the ratio of traveler by Train from Royal cruiser to Bus traveler of kali travels.
(a)138/225 (b)128/225 (c)124/123 (d)152/152 (e)None

Q12. If the total number of passenger is 500 from the royal cruise and same for Iana travels. Find the difference of people travelling by Bus from these two travel agencies.
(a)44 (b)54 (c)45 (d)36 (e)None of the above

Q13. From the Kingfisher travels passenger travelling by train and ship is equal to the passenger travelling by car. Then how much percentage of passenger is travelling by Bus?
(a)15 (b)16 (c)17 (d)18 (e) None of the above

Q14. Kingfisher passengers are 60% more than the Royal cruiser total passenger. Then the passenger travelling by bus from kingfisher travels is how much percent more/less than that of royal travel travelling through same mode of transport. (a)35 (b)37.37 (c)36.84 (d)47 (e)48.26

Q15. How many passengers are travelling by Nainital travels if car and bus traveler of Nanital travels is equal to the Air traveler of Kingfisher travels.
(a) 500 (b) 550 (c) 560 (d) 450 (e) None of the above

Q16. To find out the share of Y out of Rs 1820, which of the following statements is/are sufficient/necessary?
A.   The share of X is 1.8 times the combined share of Y and Z.
B.   The share of Y is 3/11 of the combined share of X and Z.
C.   The share of Z is 1/6of the combined share of X and Y.
(a)   Statements A and B together are sufficient
(b)   Statement A and C together are sufficient
(c)   Statements B and C together are sufficient
(d)   Either statement B alone or statements A and C together are sufficient
(e)   None of these

Q17. A sum of money Rs 2550 is to be distributed among Knahiya, Varun and Rajneesh. What will be the share of Varun?
A.   Knhiya's share is 1.5 times Varun's share.
B.   Rajneesh's share is half the share of Knahiya and Varun together.
C.   The share of Knahiya is Rs 340 more than Varun.
(a)   Either A and B or A and C together are sufficient
(b)   Only A and B (c) Only A and C (d) All are required
(e) Even all together are not sufficient

Q18. To find the temperature on Monday which of the following information is sufficient?
A. The average temperature for Monday, Tuesday and Wednesday was 38° C.
B. The average temperature for Tuesday, Wednesday and Thursday was 43° C.
C. The temperature on Tuesday and Thursday was 45° C each.
(a) Only A and B are sufficient (b) Only B and C
(c) A and either B or C (d) C and either A or B
(e) All the three together are sufficient

Find the odd number in the following number series?

Q19. 550, 550, 549, 544, 515, 330
(a) 549 (b) 544 (c) 515 (d) 330 (e) 550

Q20. 450, 900, 500, 800, 640, 760
(a) 900 (b) 600 (c) 800 (d) 640 (e) 760

What will come in place of question mark (?) in the following series?
Q21. 23   25   30   40   57   ?
(a) 63 (b) 72 (c) 83 (d) 93 (e) 102

Q22. 13   24   92   546   4360   ?
(a) 47582 (b) 43590 (c) 54280 (d) 32590 (e) 63200

Directions: What will come in place of question mark(?) in the following questions?
Q23. (180 × 15 − 12 × 20) / (140 × 8 + 2 × 55) = ?
1) 1 2) 2 3) 3 4) 4 5) 5

Q24. (3/8) of 168 × 15 ÷ 5 + ? = 549 ÷ 9 + 235
1) 105 2) 160 3) 107 4) 180 5) 140

Compare Quantity x and Quantity y, using additional information centered above the two quantities if such information is given, and select one of the following four answer choices:
A if $x > y$
B if $x \leq y$
C if $x \geq y$
D if $x < y$
E if $x = y$ or relationship between x and y can't be established

Q25. I. $11x + 64/x = 54$
II. $12y^2 + 40y + 17 = 0$

Q26. I. $84x^2 + 115x + 26 = 0$
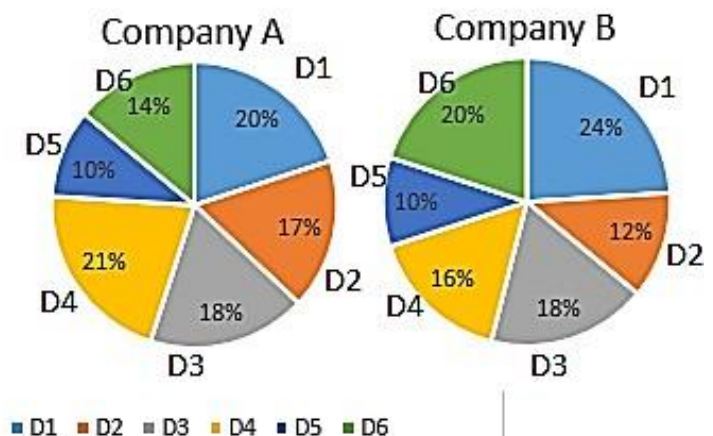II. $27y^2 + 36y − 15 = 0$

Q27. I. $24x^2 + 25x − 11 = 0$
II. $45y^2 + 36y + 7 = 0$

The following pie-charts show the percentage distribution of the total employees of two Companies A and B in different departments, and the table shows the ratio of Male to Female employees in all

	Company A	Company B
	Male : Female	Male : Female
D1	5 : 3	13 : 7
D2	9 : 7	11 : 14
D3	5 : 7	7 : 8
D4	8 : 7	17 : 13
D5	3 : 2	23 : 27
D6	9 : 5	7 : 3

the departments of Company A and B. The total number of employees working in Company A and B are 8000 and 7500 respectively.

6. What is the total number of Female employees in D5 of Company A and B together?
(a) 705 (b) 710 (c) 715 (d) 720 (e) 725

6. (e)
Number of Female employees of Company A in department D5
$$= 8000 * \frac{10}{100} * \frac{2}{5} = 320$$
Number of Female employees of Company B in department D5
$$= 7500 * \frac{10}{100} * \frac{27}{50} = 405$$
Total = 320 + 405 = 725

8. (b)
Total Male employees of Company A
= 1000 + 765 + 600 + 896 + 480 + 720
= 4461
Total Female employees of Company B
= 630 + 504 + 720 + 520 + 405 + 450
= 3229
Difference = 4461 − 3229 = 1232

7. The total number of Female employees in D1 of Company B is approximately how much per cent more than the number of Female employees in D1 of Company A?
(a) 5% (b) 7.5% (c) 15% (d) 22.5% (e) 30%

7. (a)
Number of Female employees in department D1 of Company B
$$= 7500 * \frac{24}{100} * \frac{7}{20} = 630$$
Number of Female employees in department D1 of Company A
$$= 8000 * \frac{20}{100} * \frac{3}{8} = 600$$
Required % $= \frac{630-600}{600} * 100 = 5\%$

8. What is the difference between the total Male employees of Company A and the total Female employees of Company B?
(a) 1230 (b) 1232 (c) 1234 (d) 1236 (e) 1238

9. The average number of Male employees in D1 and D2 of Company B is approximately what percentage of the average number of Female employees in D5 and D6 of Company A?
(a) 177.5% (b) 197.5% (c) 212.5% (d) 217.5% (e) 227.5%

9. (d)
Average number of male employees in D1and D2 of Company B
$$= \frac{1170 + 396}{2} = \frac{1566}{2} = 783$$
Average of female employee in D5 and D6 of Company A
$$= \frac{320 + 400}{2} = \frac{720}{2} = 360$$
Required % $= \frac{783}{360} * 100 = 217.5\%$

10. The total number of Females working in Company A is approximately what percentage of total employees of Company A?
(a) 42.12% (b) 43.48% (c) 44.24% (d) 45.64% (e) 46.86%

10. (c)
   Total number of Female employees of
   Company A
   = 600 + 595 + 840 + 784 + 320 + 400 =
   3539
   Total employees of company A = 8000
   Required % = $\frac{3539}{8000} * 100 = 44.24\%$

Study the following information carefully and answer the questions given below:

In an institute there are 5600 students, the ratio of the number of girls to the number of boys is 3 : 4 respectively. All the students are enrolled in different programmes viz. SSC, Banking, CLAT and F–CAT. 20% of the total number of boys are enrolled in CLAT programme. The number of girls enrolled in Banking is five–fourths of the number of boys taking the same.

One fourth of the total number of girls enrolled in F–CAT programme. The total number of students enrolled in F–CAT rogramme is 1400. Two–fifths of the boys enrolled in SSC programme and the remaining boys are enrolled in Banking programme. The girls enrolled in SSC are three fourth of the number of boys enrolled in the same. The remaining girls are enrolled in CLAT programme.

6. What is the respective ratio of the number of boys enrolled in CLAT to the number of boys enrolled in SSC?
1) 1 : 2 2) 1 : 3 3) 2 : 3 4) 4 : 5 5) 3 : 4

7. What is the number of girls enrolled in CLAT? 1) 210 2) 260 3) 280 4) 180 5) 240

8. What is the total number of students enrolled in Banking?
1) 1060 2) None of these 3) 1080 4) 1040 5) 1020

9. The number of girls enrolled in F–CAT is approximately what percent of the total number of students enrolled in SSC?
1) 24.8% 2) 26.8% 3) 36.8% 4) 32.9% 5) 29.4%

10. The number of boys enrolled in CLAT and SSC together is approximately what percent more or less than the number of girls enrolled in SSC?
1) 100% more 2) 100% less 3) 125% more
4) Other than given options 5) 75% less

6. 1

	Girls	**Boys**
SSC	$\frac{3}{4} \times 1280 = 960$	$\frac{2}{5} \times 3200 = 1280$
Banking	600	480
CLAT	240	$\frac{20}{100} \times 3200 = 640$
F–CAT	$\frac{1}{4} \times 2400 = 600$	$1400 - 600 = 800$

Required ratio = 640 : 1280 = 1 : 2

7.5

Required answer = 240 8. 3
Required answer = 600 + 480 = 1080

9. 2

Required percentage = 600/(1280+960)*100 = 600/2240
* 100 = 26.8%

10. 1
Required percentage more = {(1280+640)-960}/960 *
100 = 100% more

Directions Q1 to Q5- there are five travelling companies. And the following table gives the percentage distribution of all customers according to their mode of transportation

Travelling Companies	Percentage of Traveller by Bus	Percentage of Traveller by Air	Percentage of Traveller by Ship	Percentage of Traveller by Car	Percentage of Traveller by Train
Royal Cruiser	38	10	9	20	-
Iana Travels	47	13	0	-	-
Kali Travels	30	20	-	-	-
Nainital Travels	-	44	12	-	4
Kingfisher Travels	-	25	-	30	-

Q1. The total number of passenger travels through kali travels is 300, and the passenger travels by bus and air for royal cruiser is equal to the passenger travel by all the modes other than Air from kali travels. Find the ratio of traveler by Train from Royal cruiser to Bus traveler of kali travels.
(a)138/225 (b)128/225 (c)124/123 (d)152/152 (e)None

.ANS(A) Passenger travels by bus & Air for

Royal cruiser = $\frac{80}{100}$ of 300 = 240

$\frac{48}{100}$ of passenger = 240

Passenger travel by train = $\frac{240 \times 23}{100}$

Passenger travel by bus (Kali travels) = $300 \times \frac{30}{100} = 90$

Ratio = $\frac{240 \times 23}{100 \times 90} = \frac{138}{225}$

Q2. If the total number of passenger is 500 from the royal cruise and same for Iana travels. Find the difference of people travelling by Bus from these two travel agencies. (a)44 (b)54 (c)45 (d)36 (e)None of the above

ANS(C)

Royal cruiser passenger of Bus $= \frac{500 \times 38}{100} = 190$

Iana travels passenger $= 47 \times 5 = 235$

Difference $= 45$

Q13. From the Kingfisher travels passenger travelling by train and ship is equal to the passenger travelling by car. Then how much percentage of passenger is travelling by Bus?
(a)15 (b)16 (c)17 (d)18 (e) None of the above

(a) Passenger travels by Bus
$= 100 - 30 - 30 - 25$
$= 15\%$

Q14. Kingfisher passengers are 60% more than the Royal cruiser total passenger. Then the passenger travelling by bus from kingfisher travels is how much percent more/less than that of royal travel travelling through same mode of transport.
(a)35 (b)37.37 (c)36.84 (d)47 (e)48.26

(c) Kingfisher passengers $= 160 \times \frac{500}{100} = 800$

Bus passenger $= \frac{15}{100} \times 800 = 120$

Royal cruiser bus passenger $= \frac{38}{100} \times 500 = 190$

Required percentage $= \frac{(190 - 120)}{190} \times 100$

$= \frac{70}{190} \times 100 \simeq 36.84$

Q15. How many passengers are travelling by Nainital travels if car and bus traveler of Nanital travels is equal to the Air traveler of Kingfisher travels.
(a)500
(b) 550
(c) 560
(d) 450
(e) None of the above

S10. Ans.(a)

Sol.

Required average = $\frac{18(25+20+15+12+18+10)}{6}$

= 300

16. To find out the share of Y out of Rs 1820, which of the following statements is/are sufficient/necessary?
A. The share of X is 1.8 times the combined share of Y and Z.
B. The share of Y is3/11 of the combined share of X and Z.
C. The share of Z is 1/6of the combined share of X and Y.
(a) Statements A and B together are sufficient
(b) Statement A and C together are sufficient
(c) Statements B and C together are sufficient
(d) Either statement B alone or statements A and C together are sufficient
(e) None of these

S1. Ans.(e)

Sol.

Only statement B is sufficient

Y : (X + Z) = 3 : 11

$\therefore Y = \frac{3}{(3+11=)14} \times 1820 = 3 \times 130 = Rs. 390$

17. A sum of money Rs 2550 is to be distributed among Knahiya, Varun and Rajneesh. What will be the share of Varun?
A. Knhiya's share is 1.5 times Varun's share.
B. Rajneesh's share is half the share of Knahiya and Varun together.
C. The share of Knahiya is Rs 340 more than Varun.
(a) Either A and B or A and C together are sufficient
(b) Only A and B (c) Only A and C (d) All are required
(e) Even all together are not sufficient

S2. Ans.(a)

Sol.

A → K : V = 3 : 2

B → K : V : R = 3 : 2 : $\frac{5}{2}$ = 6 : 4 : 5 (from A)

C → K – V = 340

By combining either A and B together or A and

C together, the share of Vijay can be calculated.

18. To find the temperature on Monday which of the following information is sufficient?
A. The average temperature for Monday, Tuesday and Wednesday was 38° C.
B. The average temperature for Tuesday, Wednesday and Thursday was 43° C.
C. The temperature on Tuesday and Thursday was 45° C each.
(a) Only A and B are sufficient (b) Only B and C
(c) A and either B or C (d) C and either A or B
(e) All the three together are sufficient

S3. Ans.(e)

Sol.

$A \Rightarrow M + T + W = 114$

$B \Rightarrow T + W + Th = 129$

$C \Rightarrow T = Th = 45$
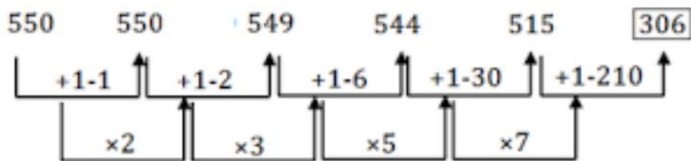
From A, B and C, we will get $M = 30^0$

19 20.

550, 550, 549, 544, 515, 306
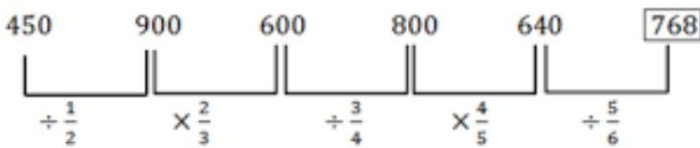(a) 549 (b) 544 (c) 515 (d) 306 (e) 550

S11. Ans.(d)
Sol.

450, 900, 600, 800, 640, 768
(a) 900 (b) 600 (c) 800 (d) 640 (e) 768

S12. Ans.(e)
Sol.

21. Series Pattern   Given Series
23   23
$23 + (12 + 1) = 25$ 25
$25 + (22 + 1) = 30$ 30
$30 + (32 + 1) = 40$ 40
$40 + (42 + 1) = 57$ 57
$57 + (52 + 1) = 83$ 83

22. Series Pattern   Given Series
     13   13
  $13 \times 2 - 2 = 24$ 24
  $24 \times 4 - 4 = 92$ 92
  $92 \times 6 - 6 = 546$ 546
$546 \times 8 - 8 = 4360$ 4360

$4360 \times 10 - 10 = 43590$ **43590**

23 Correct Option: B
By the applying BODMAS rule, we get
Given expression = (2700 – 240) / (1120 + 110) ⇒ (2460 / 1230) ⇒ 2

24. Correct Option: C
Let (3/8) of $168 \times 15 \div 5 + A = 549 \div 9 + 235$
Then, $63 \times 15 \div 5 + A = 549 \div 9 + 235$
⇒ $63 \times 3 + A = 61 + 235$
⇒ $189 + A = 296$,   A = 107.

25

Correct Option: A

I. $11x + 64/x = 54$

$\Rightarrow 11x^2 - 54x + 64 = 0$

$11x^2 - 22x - 32x + 64 = 0$

$11x(x - 2) - 32(x - 2) = 0$

$x = 2$ or $x = \dfrac{32}{11}$

II. $12y^2 + 40y + 17 = 0$

$12y^2 + 6y + 34y + 17 = 0$

$6y(2y + 1) + 17(2y + 1) = 0$

$y = -\dfrac{1}{2}$ or $y = -\dfrac{17}{6}$

$\therefore x > y$

Hence, option A is correct.

26.

Correct Option: E

I. $84x^2 + 115x + 26 = 0$

$84x^2 + 91x + 24x + 26 = 0$

$7x(12x + 13) + 2(12x + 13) = 0$

$\Rightarrow x = -\dfrac{2}{7}$, or $-\dfrac{13}{12}$

II. $27y^2 + 36y - 15 = 0$

$27y^2 + 45y - 9y - 15 = 0$

$9y(3y + 5) - 3(3y + 5) = 0$

$y = \dfrac{1}{3}, -\dfrac{5}{3}$

$\therefore$ There is no relationship between x and y.

Hence, option E is correct.

27.

Correct Option: E

I. $24x^2 + 25x - 11 = 0$

$24x^2 - 8x + 33x - 11 = 0$

$8x(3x - 1) + 11(3x - 1) = 0$

$\Rightarrow x = \dfrac{1}{3}, -\dfrac{11}{8}$

II. $45y^2 + 36y + 7 = 0$

$45y^2 + 15y + 21y + 7 = 0$

$15y(3y + 1) + 7(3y + 1) = 0$

$y = -\dfrac{1}{3}, -\dfrac{7}{15}$

∴ There is no relationship between x and y.

Hence, option E is correct.