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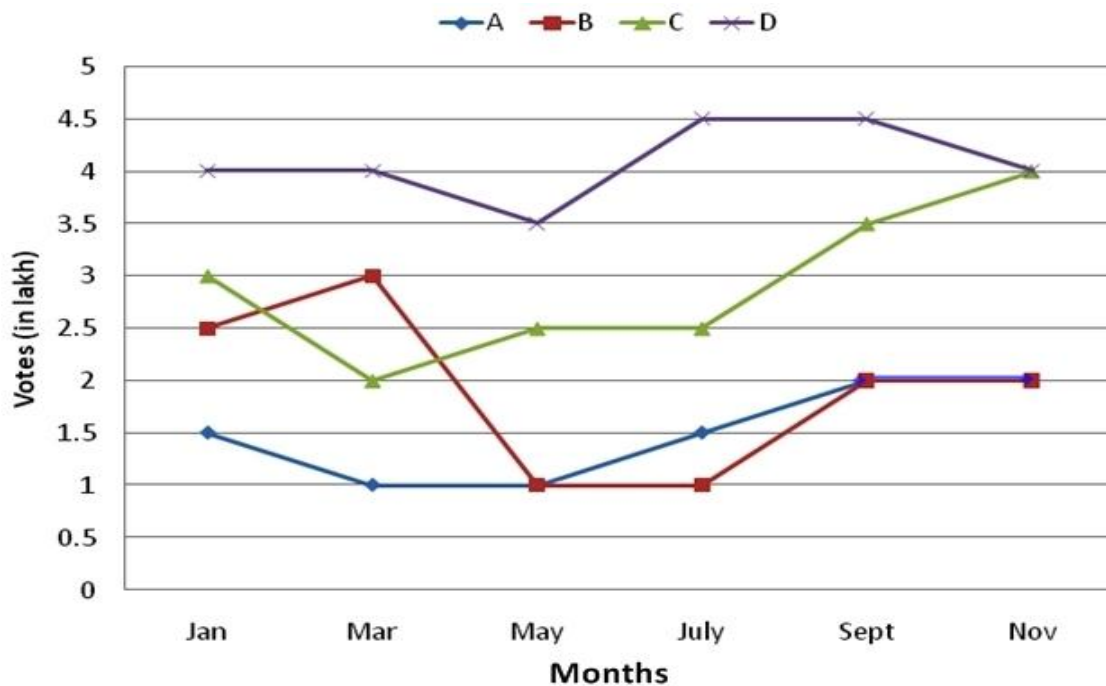- ☑ **Unmatched Explanations**

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Date Interpretation Line Chart Questions for SSC Exams.

DI Line Chart Quiz 3

Direction : Study the following line graph carefully to answer the questions that follow.

Opinion polls were conduct about the popularity of four IT companies A, B, C and D, in alternate months. All the people who participated in the opinion poll each month have definitely cast their vote in favour of any one of the four companies. The results are shown by the following line graph.

1. By what percent is the number of votes in favour of A and C, taken together in January, May and September more/less than the total number of votes in favour of B and D, taken together in the remaining months?

A. 27% less   B. 37% less   C. 18% more   D. None of the above

2. What is the ratio of percentage decline in votes of B from January to May, to the percentage decline in votes of C from January to March?

A. 193 : 100   B. 20 : 11   C. 11 : 20   D. 39 : 25

3. In the month of July the votes of D and C are in the ratio 9 : 5. By the what percent should the votes of C increase so as to make the ratio 5 : 9, the votes of D remaining same?

A. 80%   B. 44.44%   C. 144%   D. 224%

4. How many votes are needed by A and B together to get 7% more than D in September?

A. 281500   B. 81500   C. 200000   D. 14000

5. What percent more votes are required by A to equal the total votes acquired by D, in the six months combined?

A. 150%   B. 133.33%   C. 172%   D. 188%

Correct Answers:

1	2	3	4	5
B	B	D	B	C

Explanations:

1.   Sum of votes in favour of A and C in January, May and September =   [(3 + 1.5) + (1 + 2.5) + (2 + 3.5)]
= [4.5 + 3.5 + 5.5] = 13.5 lakh

Sum of votes in favour of B and D in March, July and November =   [(3 + 4) + (1 + 4.5) + (2 + 4)]
= [7 + 5.5 + 6] = 18.5 lakh

Reqd. % = $\dfrac{18.5 - 13.5}{13.5} \times 100$

= $\dfrac{5}{13.5} \times 100 = 37.03\%$

So, it's less by around 37%.
Hence, option B is correct.

2.

Percent declines in votes of B from January to May = $\dfrac{2.5 - 1}{2.5} \times 100\% = 60\%$.

Percent decline in votes of C from January to March = $\dfrac{3 - 1}{3} \times 100\% = 33.33\%$

∴ Required ratio = $\dfrac{60}{33.33} \approx \dfrac{20}{11}$

=   20 : 11.
Hence, option B is correct.

3.

Percentage of votes in July $= \dfrac{9}{5} = \dfrac{4.5}{2.5}$

Now, votes of C are increased, let they are increased by x.

Then, $\dfrac{4.5}{2.5 + x} = \dfrac{5}{9}$

⟹ $\dfrac{4.5 \times 9}{5} = 2.5 + x$

⟹ 8.1 = 2.5 + x
⟹   x = 8.1 − 2.5 = 5.6

∴ Reqd. % = $\dfrac{5.6}{2.5} \times 100\% = 224\%$.

Hence, option D is correct.

4.   Sum of votes of D in September = 4.5 lakh

Sum of votes of A and B together in September (2 + 2) = 4 lakh

Now, 107% of 4.5 = $\dfrac{107 \times 4.5}{100}$ = 4.815 lakh

∴ Number of votes required = (4.815 − 4) lakh = (0.815) lakh = 81500.

Hence, option B is correct.

5.   Votes acquired by D in all months = 4 + 4 + 3.5 + 4.5 + 4.5 + 4 = 24.5 lakh

Also, votes acquired by A in all months = 1.5 + 1 + 1 + 1.5 + 2 + 2 = 9 lakh

Reqd. % = $\dfrac{24.5 - 9}{9}$ × 100% = 172.2% ≈ 172%

Hence, option C is correct.

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