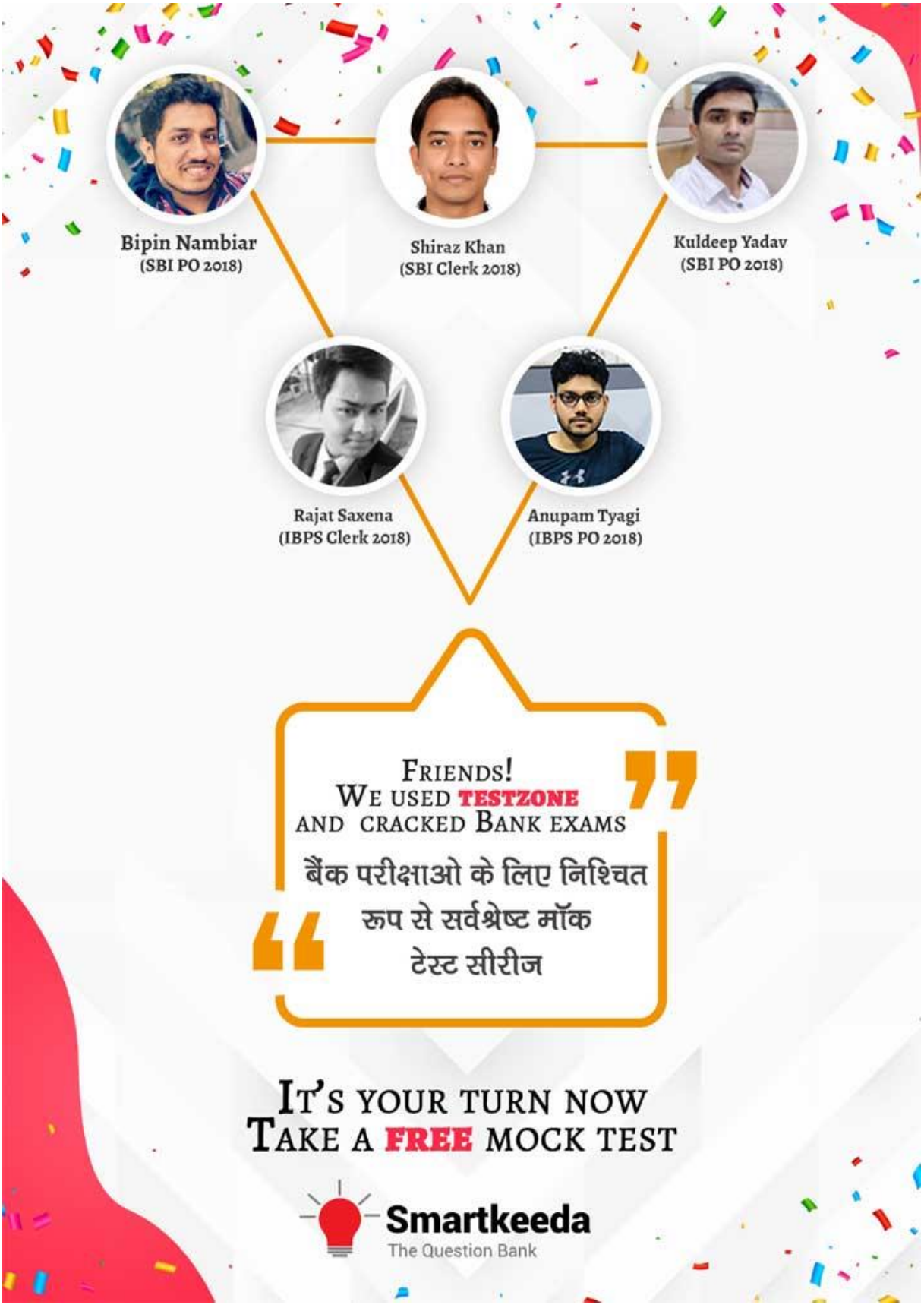
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The Question Bank

Average Questions for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains, IBPS Clerk Mains & LIC AAO Exams.

Average Quiz 13

Direction: Read the following questions carefully and choose the right answer.

1. The average height of the first six students is 170 cm, the average height of the last eight students is 175 cm. The average height of the total 16 students is 180 cm. Find the average height of the rest two students.

A. 210 cm B. 250 cm C. 240 cm D. 230 cm E. 260 cm

2. The average salary of each trainee in an startup is Rs. 90. The average salary of 16 trainees is Rs.708.75 and the average salary of the rest is Rs. 75. How many trainees does the startup have?

A. 670 B. 676 C. 682 D. 840 E. None of these

3. In a hostel, food is available for 200 students for 50 days. After 10 days, 50 more students join the hostel. For how many more days will the food last?

A. 42 days B. 32 days C. 30 days D. 40 days E. None of these

4. The average weight of five friends P, Q, R, S, and T is (x + 6) kg while the average weight of R and T is (x – 6) kg. If the weight of another person U is also added, then average weight of all of them is reduced by 5 kg. Find the value of 'x' if average weight of P, Q, S and U is 94.5 kg.

A. 74 B. 80 C. 84 D. 90 E. 94

5. A, B, C, D and E are five persons. The weight of A, B and C is 90%, 112% and 94% respectively of the average weight of all five. The ratio of weight of D and E is 6 : 11. The difference between the weight of D and E is 75kg. What is the average weight of al the five persons?

A. 84 kg B. 90 kg C. 76 kg D. 69 kg E. None of these

6. Average marks obtained in English by 17 girls of a class is 35. The marks obtained by them is arranged in ascending order form and in Arithmetic progression. If the marks obtained by the 2nd ,6th ,9th ,12th and 16th position are removed from the table, then find the new average of marks obtained by the remaining girls in English.

A. 33 B. 35 C. 37 D. Can't be determined E. None of these

7. **Average marks of group of students is 48. Out of these, 3 students with marks 43, 68 and 51 are removed and a new student with a score of 84 is added to the list. If the number of students in the group was 8, then find the percentage increase in the average marks with respect to the initial average?**

A. 6.25% B. 5.75% C. 8.25% D. 6.75% E. None of these

8. **'N' is the number employees in a Bengaluru based IT company. The average age of employees working in the company is 35 years. What will be the average age of these employees in next two years when 10 employees will retire. Given that, retirement age is 60 years and N = 40.**

A. $\frac{87}{13}$ B. $\frac{83}{7}$ C. $\frac{86}{13}$ D. $\frac{86}{3}$ E. None of these

9. **Rajiv decided to go for a dinner with his 12 friends. He paid Rs. 145 and each of his friends paid some equal amount. They later found out that the average amount that should be paid by all of them was 5 more than what was actually paid by each of his friends. How much money did each of his friend pay?**

A. Rs. 80 B. Rs. 90 C. Rs. 150 D. Rs. 100 E. None of these

10. **A family has 5 members, Father, mother and their three children. The average age of family immediately after the birth of first, second and third child was 16, 15.75 and 14.2 years respectively. What is the age of elder child, if the present age of entire family is 15.2 years?**

A. 6 yeears B. 7 years C. 8 years D. 5 years E. 4 years

CORRECT ANSWERS:

1	2	3	4	5	6	7	8	9	10
D	B	B	D	E	B	A	E	A	C

Explanations:

1. Sum of the heights of the first six students = 170 × 6 = 1020 cm

Sum of the heights of the last eight students = 175 × 8 = 1400 cm

Sum of the heights of the total 16 students = 180 × 16 = 2880

Sum of the height of the left 2 students = 2880 – 1020 – 1400 = 460

Average height of the left 2 students = $\frac{460}{2}$ = 230 cm

Hence, optiono D is correct.

2. Total salary of trainees = 16 × 708.75 = Rs. 11,340

Let there be x trainees.

∴ Total salary = Rs. (90x) and salary of remaining trainees = Rs. [75(x − 16)]

∴ 90x = 11340 + 75x − 1200

∴ 15x = 10140 i.e. x = 676

Hence, option B is correct.

3. Man days for which food is available = 200 × 50 = 10000

Available food is enough for 1 student for 10000 days

Food used by 200 students in 10 days = 200 × 10 man days of food = 2000

Man days of food left = 10000 – 2000 = 8000 man days of food

Total number of students now = 200 + 50 = 250

Remaining food can be used for 250 students for

= $\frac{8000}{250}$ days = 32 days

Hence, option B is correct.

4. Total weight of friends P, Q, R, S and T = (x + 6) x 5 = 5 (x + 6) kg

So, total weight of P, Q and S = 5 (x + 6) – 2 (x – 6) = (3x + 42) = 3 (x + 14)

Weight of U = (x + 6 – 5) × 6 – 5 (x + 6) = 6 (x + 1) – 5 (x + 6) = (x – 24) kg

According to the question,

[3 (x + 14) + (x – 24)] = 94.5 × 4

4x + 18 = 378

4x = 360; x = 90

Hence, option D is correct.

5. Let the average weight of all five = 100k

So, weight of A = 90k, B = 112k and C = 94k
Let the weight of D = d and that of E = e

$$\frac{90k + 112k + 94k + d + e}{5} = 100k$$

d + e = 204k

$$d : e = 6 : 11 \rightarrow d = \frac{6}{17} \times 204 = 72k \rightarrow e = 132k$$

Difference = 132k – 72k = 60k

60k = 75

So, $k = \frac{75}{60} = 1.25$

Average weight of all the five persons = 100 × 1.25 = 125kg
Hence ,option E is correct.

6. Total marks obtained by 17 girls = 35 × 17 = 595

Let the marks obtained by 17 girls be(in ascending order) be:

(a – 8d) , (a – 7d) , (a – 6d) , (a – 5d) , (a – 4d) , (a – 3d) , (a – 2d) , (a – d), (a) (a + d) , (a + 2d) , (a + 3d) , (a + 4d) , (a + 5d) , (a + 6d) , (a + 7d) , (a + 8d)

A = 35

Sum of 2^{nd}, 6^{th}, 9^{th}, 12^{th} and 16^{th} term = 5a =175

New average = $\frac{595 - 175}{12} = \frac{420}{12} = 35$

Hence, option B is correct.

7. Let the sum of the marks of the unchanged 5 students from initial tally be equal to 'x', such that,

$\frac{x + 43 + 68 + 51}{8} = 48$ (Given)

Then,

x = 384 – (43 + 68 + 51) = 384 – 162 = 222

With adding of a new student marks,
Sum of marks of 6 students becomes = x + 84 = 222 + 84 = 306

New Average = $\frac{306}{6} = 51$

Percentage increase in average = $\frac{51 - 48}{48} \times 100$

$= \frac{300}{48} = \frac{100}{16} = 6.25\%$

Hence, option A is correct.

8. Total employees in the company = 40

Average age of employees = 35

Total age of employees = (40 × 35) = 1400

In next two years,

Total remaining employees = 40 – 10 = 30

Retirement age = 60 years

Total age of 30 employees after 2 years = 1400 + (40 × 2) – (60 × 10)

= 1400 + 80 – 600 = 880

∴ Average age after two years = $\frac{880}{30} = \frac{88}{3}$ years

Hence, option E is correct.

9. Let the amount paid by each of Rajiv's friend be Rs x

Total amount paid by them in all = Rs. (145 + 12x)

Average amount that should have been paid by Rajiv's friends = 5 + x

$\frac{145 + 12x}{13} = (x + 5)$

x = 80

Hence, option A is correct.

10. Let the present age of father, mother and three children's be F, M, C1, C2 and C3.

When the first child was born, the age of the first child was 0.

Average = 16 sum of their age = 16x3 =48

After n1 years, second child was born, the age of first child will be n1 years and age of second child be 0.

Average = 15.75, sum of their age = 15.75 × 4 = 63

Difference between the sum of their age after n1 years = 63 – 48 = 15

3n1 = 15

n1 = 5

After n_2 years, third child was born, the age of first child get increased by n2 years, age of second child will be n2 years, age of third child is 0.

Average = 14.2, sum of their age = 14.2 x 5 = 71

Difference between the sum of their age after n2 years = 71 – 63 = 8

$4n_2 = 8$

$n_2 = 2$

After n3 years, average is 15.2 years, sum of their age = 15.2 × 5 = 76
Difference between the sum of their age after n3 years = 76 – 71 = 5

$5n_3 = 5$
$n_3 = 1$

First child was born 1 + 2 + 5 = 8 years ago.
So the age of the first child is 8 years.

Hence, option C is correct.