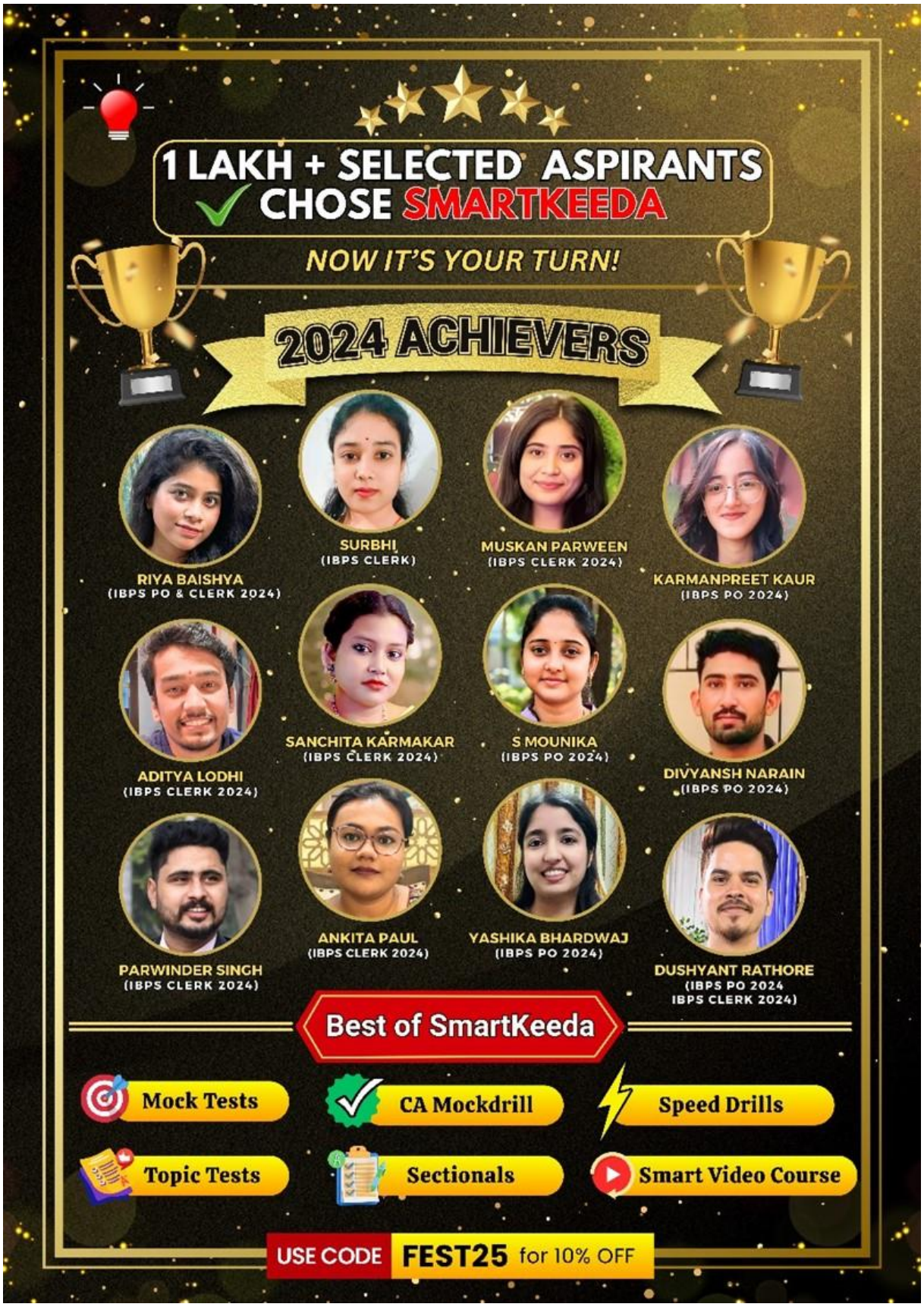
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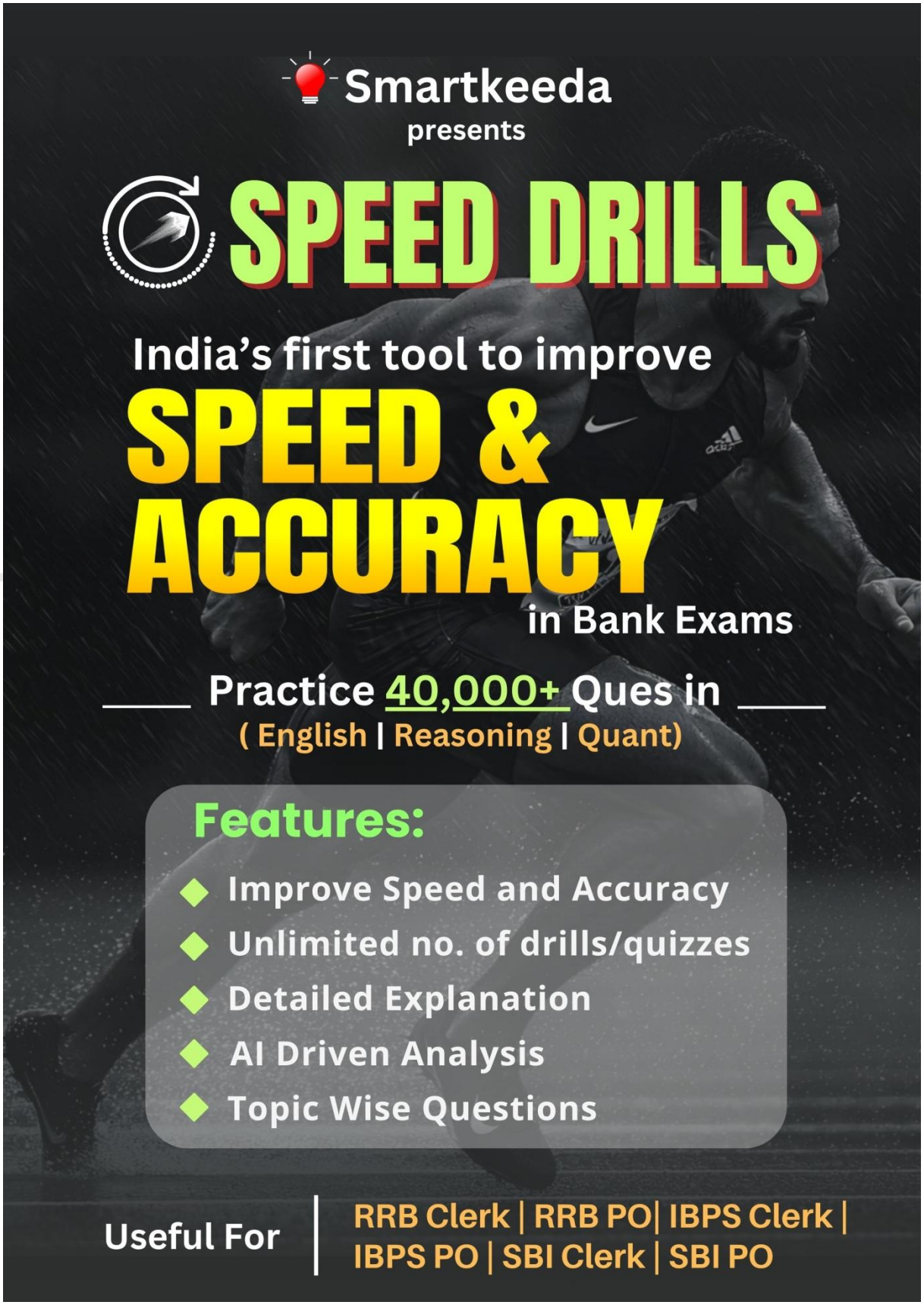
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Compound Interest Questions for IBPS RRB SCALE I Mains and IBPS PO Mains Exams.

Compound Interest Quiz 12

Directions: Directions: Kindly study the following Questions carefully and choose the right answer:

1. A person has Rs. 80000, 30% of which he invests at 15% p.a. CI for three years and rest he at 20% p.a. CI for two years. What is the difference (in Rs.) between the interest obtained from the two investments?

A. 12124 B. 11884 C. 12424 D. 11346 E. 12139

2. Kiran invested a certain amount of money in a scheme offering 30% p.a. compound interest for two years. Vikash invested Rs. 2000 more amount than amount invested by Kiran in another scheme offering 35% p.a. simple interest for two years. Find the amount invested by Kiran if the difference in the interest earned by Kiran and Vikash is Rs. 1645.

A. Rs. 24200 B. Rs. 23800 C. Rs. 20600 D. Rs. 24500 E. Rs. 22400

3. Atul deposited Rs. x in bank A at 25% p.a. simple interest for 3 years and deposited Rs. y in bank B at 20% p.a. compound interest for 2 years. The interest earned by Atul from bank A is Rs. 780 less than the interest earned by Atul from bank B and ratio of amount deposited by Atul in bank A to amount deposited by him in bank B is 1 : 2. Find the difference between x and y.

A. 6600 B. 6000 C. 4500 D. 5000 E. 5400

4. If the difference between the simple interest and the compound interest on Rs. 60,183 at a rate of 'x'% after 2 years is Rs. 743, what is the value of 'x'?

A. 8.33 B. 9.09 C. 10 D. 11.11 E. 12.50

5. A man borrowed some money and returned it in three equal quarterly installments of Rs. 4,104 each. If the rate of interest was 80% p.a. compounded quarterly, how much interest did he pay?

A. Rs. 3,667 B. Rs. 4,113 C. Rs. 4,114 D. Rs. 4,262 E. None of these

6. A sum of Rs. X is invested at 15% p.a. compound interest and the interest received after two years is Rs. 5805. If a sum of Rs. (X + 6000) is invested at 18% simple interest, what will be the interest obtained (in Rs.) after three years?

A. 12,960 B. 14,400 C. 15,600 D. 11,720 E. 10,480

7. Dinesh lent a certain sum at 20% per annum compounded annually and received an amount of Rs. 31,968 at the end of three years. Had he invested the same amount for four years at the same rate of simple interest, what would be his interest?

A. Rs. 10,550 B. Rs. 12,260 C. Rs. 14,800 D. Rs. 15,600 E. None of these

8. The difference between the simple interest and compound interest on a sum of Rs. X for two years at the rate of 12.5% p.a. is Rs. 435. What is the value of X?

A. 27,840 B. 36,420 C. 24,350 D. 33,250 E. 21,450

9. Mishra invests a certain amount for 3 years at 10% annual rate of compound interest. If by mistake, the rate of interest and time of investment are interchanged and the compound interest becomes the simple interest, Mishra will receive Rs. 465 less. What amount does Mishra invest?

A. Rs. 10,000 B. Rs. 12,500 C. Rs. 15,000 D. Rs. 20,000 E. None of these

10. A person has Rs. X with him, from which he invests Rs. 36,000 at 16.67% p.a. compound interest for 2 years and the remaining amount at 5% p.a. simple interest for 3 years. If the total interest obtained is Rs. 19,600, what is the value of X?

A. 80,000 B. 75,000 C. 86,000 D. 96,000 E. 72,000

Correct Answers:

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

Explanation:

1. Amount invested at 15% CI = 30% (80000) = 24000

Amount invested at 20% CI = 80000 – 24000 = 56000

CI from first investment

$= 24000 \left(1 + \frac{15}{100}\right)^3 - 24000 = 12501$

CI from second investment

$= 56000 \left(1 + \frac{20}{100}\right)^2 - 56000 = 24640$

Required Difference = 24640 – 12501 = Rs. 12139

Hence, option E is correct.

2. Let the amount invested by Kiran and Vikash are Rs. x and Rs. (x + 2000) respectively

Interest earned by Kiran

$= x \times \{(1 + \frac{30}{100})^2 - 1\} = \text{Rs. } 0.69x$

Interest earned by Vikash

$= \frac{\{(x + 2000) \times 35 \times 2\}}{100} = \text{Rs. } (0.7x + 1400)$

According to question:

0.7x + 1400 – 0.69x = 1645

$0.01x = 245$

$x = 24500$

Amount invested by Kiran = Rs. 24500

Hence, option D is correct.

3.

Interest earned from bank A = $\frac{x \times 25 \times 3}{100}$ = Rs. $0.75x$

Interest earned from bank B = $y \times \{(1.2)^2 - 1\}$ = Rs. $0.44y$

So, $0.44y - 0.75x = 780$ ---------(i)

And, $\frac{x}{y} = \frac{1}{2}$

$2x = y$

Put this value in equation (i)

$0.44 \times 2x - 0.75x = 780$

$0.13x = 780$

$x = 6000$

$y = 12000$

Difference = $12000 - 6000 = 6000$

Hence, option B is correct.

4. 60,183 : 743 = 81 : 1

Principal = 81

Interest = 1

Interest on interest = 1

x% of x% of 81 = 1

$$\left(\frac{x}{100}\right)^2 = \frac{1}{81}$$

$$\frac{x}{100} = \frac{1}{9}$$

$$x = \frac{100}{9} = 11.11$$

Hence, Option D is correct.

5.

$$\text{Quarterly rate} = \frac{80\%}{4} = 20\% = \frac{1}{5} = \frac{6}{5}$$

5 × 5 × 5 ———> 5 × 5 × 6 ———> 5 × 6 × 6 ———> 6 × 6 × 6

125 ——> 150 ———> 180 ———> 216

Amount borrowed = (125 + 150 + 180) = 455 units

Amount paid = 216 × 3 = 648 units

Interest paid = (648 – 455) = 193 units

So the answer = $\frac{4,104 \times 193}{216}$ = Rs. 3,667

Hence, Option A is correct.

6. Let the principal amount X = 400p

CI = $400p \times (1 + \frac{15}{100})^2 - 400p = 129p$

CI = 129p

129p = 5805

p = 45

X = Rs. 18,000

X + 6000 = Rs. 24,000

SI = $\frac{24,000 \times 18}{100} \times 3$ = Rs. 12,960

Hence, Option A is correct.

7.

Principal = $31,968 \times \frac{100}{120} \times \frac{100}{120} \times \frac{100}{120} = 18,500$

Interest = $\frac{18,500 \times 20 \times 4}{100}$ = Rs. 14,800

Hence, Option C is correct.

8. Difference between Si & CI

$= X \left(\frac{1}{8}\right)^2 = 435$

$X = 435 \times 64 = Rs.\ 27,840$

Hence, Option A is correct.

9. Let the amount = x

Interest at 10% = $\left(\frac{110}{100}\right)^3 \times 100 - 100 = 33.10\%$ of x

If rate = 3% and time = 10 years

Simple interest = $3 \times 10 = 30\%$ of x

(33.10% of x – 30% of x) = Rs. 465

x = Rs. 15,000

So the answer = Rs. 15,000

Hence, Option C is correct.

10.

$CI = 36,000 \left(1 + \frac{1}{6}\right)^2 - 36,000 = 13,000$

SI = 19,600 – 13,000 = 6,600

$SI = (X - 36,000) \left(3 \times \frac{5}{100}\right) = 6,600$

X = Rs. 44,000

So, X = 44,000 + 36,000 = Rs. 80,000

Hence, Option A is correct.