



**Bipin Nambiar**  
(SBI PO 2018)



**Shiraz Khan**  
(SBI Clerk 2018)



**Kuldeep Yadav**  
(SBI PO 2018)



**Rajat Saxena**  
(IBPS Clerk 2018)



**Anupam Tyagi**  
(IBPS PO 2018)

FRIENDS!  
WE USED **TESTZONE**  
AND CRACKED BANK EXAMS

बैंक परीक्षाओ के लिए निश्चित  
रूप से सर्वश्रेष्ठ मॉक  
टेस्ट सीरीज

IT'S YOUR TURN NOW  
TAKE A **FREE** MOCK TEST



**Smartkeeda**

The Question Bank

# Mixed Maths Questions for RBI Assistant Exams.

## RBI Assistant Quiz 5

Directions : Study the following questions carefully and choose the right answer.

- 1. A cartoonist has a target of making 50 cartoons in 3 days. He takes two hours to finish one cartoon. He took help of a person who takes 3 hours to finish one cartoon. If both started the work on 15 April at 12 pm then at what time the target gets completed?**

A. 17 April 12 am                      B. 18 April 12 pm                      C. 19 April 2 am  
D. 18 April 12 am                      E. 17 April 12 pm
- 2. In the schools A, B, C and D, 48%, 34%, 56% and 58% is the percentage of students who passed in the respective schools. What is the total number of students who did not pass the exams in schools B and C, if 1100 students wrote the exams in each of the schools B and C?**

A. 1205                      B. 1210                      C. 1130  
D. 1115                      E. None of these
- 3. Three taps  $T^1$ ,  $T^2$  and  $T^3$  can fill one tank in 12, 20 and 24 hours respectively. If in the first hour  $T^1$  is opened, then in the next hour  $T^2$  and  $T^3$  are opened and same pattern continues then in how much time the tank will get full?**

A. 12 hours                      B. 11 hours 48 mins.                      C. 13 hours  
D. 11 hours 27.27 mins.                      E. 12 hours 48 mins.
- 4. Sweeta is 10 years younger than her sister Seema who was 14 years old when her mother was 34 years old. The ratio of the ages of the mother and Sweeta after 6 years will be 2 : 1. After how many years the average of their ages will be 39.33 years?**

A. 3 years                      B. 2 years                      C. 4 years  
D. 1 years                      E. 5 years
- 5. Sachin started a business with Sumit with an investment  $\frac{1}{3}^{\text{rd}}$  times the investment of Sumit. After  $\frac{1}{4}^{\text{th}}$  of the time in business, Sumit left. If the business was for 2 years and Sachin received a profit of Rs. 13440. How much was the total profit?**

A. Rs. 24520                      B. Rs. 25440                      C. Rs. 23520  
D. Rs. 32420                      E. Rs. 22520

6. The ratio of savings of Rocky and Monty is 3 : 5. Rocky lent his sum at 20% p.a simple interest for two years and Monty lent his sum at 10% p.a compound interest for two years. After 2 years, what will be the ratio of the amount received by them?

- A. 84/217                      B. 21/221                      C. 84/121  
D. 63/121                      E. 221/21

7. The average age of a group of 30 friends is 34 years. The average age of the first 10 friends is 31 years and the average age of the last 18 friends is 33 years. What will be the average age of the 11th and 12th friend?

- A. 52 years                      B. 54 years                      C. 56 years  
D. 50 years                      E. 58 years

8. A man purchased 5 T-shirts from a garment shop at Rs. 450 each. When he reached home, he found that two T-shirts were defective. One of the T-shirt is having a small hole and other have colour misprint. He goes for the return of the 2 pieces, but the shopkeeper gives him discount of 5% and 10% on those T-shirts and the man agrees with the same. How much money is refunded by the shopkeeper?

- A. Rs. 70                      B. Rs. 67.5                      C. Rs. 75  
D. Rs. 76.5                      E. Rs. 78

9. When the trains run in opposite direction, the relative speed is double the relative speed when the trains run in the same direction. The length of the trains is 300 m and 320 m respectively. Find the time taken by the trains to cross each other when in opposite direction, if they take 20 seconds to cross when in the same direction?

- A. 8 sec                      B. 6 sec                      C. 7 sec  
D. 9 sec                      E. 10 sec

10. The escalator moves at a constant speed. Rani and Sonia walk up the escalator(moving stairway). Rani takes 4 steps for every 9 steps of Sonia. Rani gets to the top after taking 20 steps while Soina, because of her faster pace, ends up taking 30 steps to reach the top.

If the escalator were turned off, how many steps would they have to take to walk up?

- A. 70                      B. 60                      C. 80  
D. 90                      E. 50



**RBI Assistant 2019-20**

**FREE MOCK TEST**

**Attempt Now**

- ✓ EXCELLENT CONTENT
- ✓ BRILLIANT TEST ANALYSIS
- ✓ UNMATCHED EXPLANATION

**Correct Answers:**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
D	B	D	B	C	C	E	B	E	E



**RBI Assistant 2019-20**

**FREE MOCK TEST**

**Attempt Now**

- ✓ EXCELLENT CONTENT
- ✓ BRILLIANT TEST ANALYSIS
- ✓ UNMATCHED EXPLANATION

**For more PDFs join  
us on Telegram**

**CLICK HERE**



**SBI | RBI | IBPS | RRB | SSC | NIACL | EPFO | UGC NET | LIC | RAILWAY | CLAT | RJS**

## Explanations:

1.

### **Smart Approach:-**

Take LCM{2, 3} = 6

In 6 hours, cartoonist can make =  $\frac{6}{2} = 3$  cartoons

In 6 hours, helper can make =  $\frac{6}{3} = 2$  cartoons

In 6 hours, both can make = 5 cartoons

For making 50 cartoons they need 10 such periods.

So, total time taken by both to make 50 cartoons =  $10 \times 6 = 60$  hours.

The target gets completed by 18 April 12 am.

Hence, option D is correct.

### **Traditional Method:-**

The cartoonist takes 2 hours/cartoon and the helper takes 3 hours/cartoon.

Cartoons made by Cartoonist in 1 day =  $\frac{24}{2} = 12$  cartoons

Cartoons made by helper in 1 day =  $\frac{24}{3} = 8$  cartoons

Cartoons made by Cartoonist in 2 days = 24 cartoons

Cartoons made by helper in 2 days = 16 cartoons

Total cartoons made in 2 days =  $24 + 16 = 40$  cartoons

Remaining cartoons =  $50 - 40 = 10$

In the next 12 hours, Cartoonist makes

=  $\frac{12}{2} = 6$  cartoons and helper makes =  $\frac{12}{3} = 4$  cartoons

So the target is completed in =  $48 + 12 = 60$  hours

The target gets completed by 18 April 12 am.

2.

Number of students who did not pass in school B

$$= \frac{1100 \times 66}{100} = 726$$

Number of students who did not pass in school C

$$= \frac{1100 \times 44}{100} = 484$$

Total number of students who did not pass in schools B and C =  $726 + 484 = 1210$

Hence, option B is correct.

3.

Capacity of one tank is =  $\text{LCM}\{12, 20, 24\} = 120$  units

In 1 hour, capacity of water that  $T_1$  can fill

$$= \frac{120}{12} = 10 \text{ units}$$

In 1 hour, capacity of water that  $T_2$  can fill

$$= \frac{120}{20} = 6 \text{ units}$$

In 1 hour, capacity of water that  $T_3$  can fill

$$= \frac{120}{24} = 5 \text{ units}$$

In the first hour  $T_1$  is open, in the second hour,  $T_2$  and  $T_3$  are opened.

So, in the set of two hours =  $T_1 + (T_2 + T_3)$

$$\rightarrow 10 + (6 + 5) = 21 \text{ units}$$

In 10 hours, capacity that gets filled =  $21 \times 5 = 105$  units

Remaining capacity =  $120 - 105 = 15$  units

In the next hour, it's  $T_1$ 's turn, it fills 10 units/hr. So,

$$\rightarrow 15 - 10 = 5 \text{ units}$$

Now, it's  $T_2 + T_3$  turn, it fills 11 units/hr. So, 5 units will be filled in

$$= \frac{5 \times 60}{11} = 27.27 \text{ mins}$$

Total time to fill the tank =  $10 + 1 + 27.27$  mins = 11 hours 27.27 mins

Hence, option D is correct.

4.

Let the present age of Seema be  $x$  years

Sweeta's present age =  $x - 10$

When Seema was 14 years, mother was 34 years. So, when Seema is  $x$  years, mother will be =  $34 - 14 + x$

Mother's present age =  $20 + x$

According to the question,

$$\frac{x + 20 + 6}{x - 10 + 6} = \frac{2}{1}$$

$$\frac{x + 26}{x - 4} = \frac{2}{1}$$

$x = 34$  years

Seema's age = 34 years

Sweeta's age = 24 years

Mother's present age = 54 years

$$\text{Average} = \frac{34 + 24 + 54}{3} = 37.33 \text{ years}$$

After 2 years, Seema's age = 36 years, Sweeta's age = 26 years, Mother's age = 56 years

Average after 2 years,

$$\text{Avg} = \frac{36 + 26 + 56}{3} = 39.33 \text{ years}$$

Hence, option B is correct.

5.

Let the investment of Sumit = Rs.  $x$

Investment of Sachin = Rs.  $\frac{x}{3}$

Time for which Sumit invested =  $\frac{2}{4} = \frac{1}{2}$  year

Time for which Sachin invested = 2 years

Profit ratio, Sachin : Sumit =  $(\frac{x}{3})(2) : (x)(\frac{1}{2})$

Profit ratio = 4 : 3

Share of Sachin = total profit  $\times \frac{4}{7}$

Let total Profit be P

$$\frac{7 \times 13440}{4} = P$$

$$P = \text{Rs. } 23520$$

Hence, option C is correct.

6.

Let the saving of Rocky and Monty be  $3x$  and  $5x$  respectively.

Amount received by Rocky =  $\frac{3x \times 140}{100} = \frac{21x}{5}$

Amount received by Monty

$$= 5x \left(1 + \frac{10}{100}\right)^2 = 5x \left(\frac{121}{100}\right)$$

Ratio of the amount received by Rocky and Monty

$$= \frac{21x/5}{5x(121/100)}$$

$$\text{Reqd. ratio} = \frac{\frac{21}{5}}{\frac{5 \times 121}{100}} = \frac{84}{121}$$

Hence, option C is correct.

7.

The average age of 30 friends = 34 years

Sum of the ages of 30 friends =  $34 \times 30 = 1020$  years

The average age of the first 10 friends = 31 years

Sum of the ages of the first 10 friends =  $31 \times 10 = 310$  years

The average age of the last 18 friends = 33 years

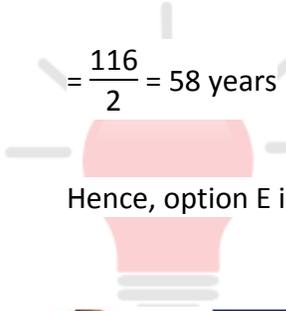
Sum of the ages of the last 18 friends =  $33 \times 18 = 594$  years

Now the sum of the ages of the 11<sup>th</sup> and 12<sup>th</sup> friend =  $(1020 - 310 - 594) = 116$

Average of the age of 11<sup>th</sup> and 12<sup>th</sup> friend

$$= \frac{116}{2} = 58 \text{ years}$$

Hence, option E is correct.



Smartkeeda  
The Question Bank



**RBI Assistant 2019-20**

**FREE MOCK TEST**

**Attempt Now**

- ✓ EXCELLENT CONTENT
- ✓ BRILLIANT TEST ANALYSIS
- ✓ UNMATCHED EXPLANATION

**For more PDFs join  
us on Telegram**

**CLICK HERE**



SBI | RBI | IBPS | RRB | SSC | NIACL | EPFO | UGC NET | LIC | RAILWAY | CLAT | RJS

8.

**Smart Approach:-**

He got discount of 5% and 10% on the same amount of Rs. 450 .

So total discount = 15% of 450 = Rs. 67.5

Hence, option B is correct

**Traditional Method:**

Total price of the 2 T-shirts =  $2 \times 450 = \text{Rs. } 900$

Price of the first T-shirt after 5% discount

$$= 450 - 5 \times \frac{450}{100} = 450 - 22.5 = \text{Rs. } 427.5$$

Price of the second T-shirt after 10% discount

$$= 450 - 10 \times \frac{450}{100} = 450 - 45 = \text{Rs. } 405$$

Amount refunded by the shopkeeper = Rs.  $(22.5 + 45) = \text{Rs. } 67.5$

Hence, option B is correct.

9.

**Smart Approach:-**

When the trains run in opposite direction, the relative speed is double the relative speed when the trains run in the same direction.

They take 20 seconds to cross when in the same direction , so the time taken to cross when in opposite direction will be half of the time taken when in the same direction which will be equal to  $20/2 = 10$  secs

Hence option E is correct.

**Traditional Method:**

Let the speeds of the trains be  $p$  and  $q$  m/sec. The relative speed when trains are in the opposite direction be  $x$  m/sec.

Total distance covered =  $300 + 320 = 620\text{m}$

When they run in the same direction, relative speed ( $p - q$ ) is given by

$$p - q = \frac{620}{20} = 31 \dots\dots(i)$$

When they run in the opposite direction, relative speed ( $p + q$ ) is given by

$$p + q = \frac{620}{x} \dots\dots(ii)$$

Given that,

$$p + q = 2 \times 31 = 62 \text{ m/sec}$$

by putting values in (2), we get

$$x = \frac{620}{62} = 10 \text{ sec}$$

Time taken by the trains to cross each other when in opposite direction is 10 seconds.

Hence, option E is correct.

**10.**

The ratio of speed of Rani and that of Sonia is  $4 : 9$

When the escalator is turned off, let the number of steps visible be  $x$ .

Given that, Rani takes 20 steps to reach the top and Sonia takes 30 steps to reach the top. The ratio of speed of Rani to that of escalator

$$= \frac{20}{x - 20} \dots\dots(i)$$

The ratio of speed of Sonia to that of escalator

$$= \frac{30}{x - 30} \dots\dots(ii)$$

(i)/(ii)

The ratio of speed of Rani to that of Sonia

$$\rightarrow \frac{\frac{20}{x-20}}{\frac{30}{x-30}} = \frac{4}{9}$$

$$\rightarrow \frac{20(x-30)}{30(x-20)} = \frac{4}{9}$$

$$\rightarrow 3x - 90 = 2x - 40$$

$$\rightarrow x = 50$$

Hence, option E is correct.



**RBI Assistant 2019-20**

**FREE MOCK TEST** [Attempt Now](#)

- ✓ EXCELLENT CONTENT
- ✓ BRILLIANT TEST ANALYSIS
- ✓ UNMATCHED EXPLANATION

**For more PDFs join us on Telegram**

[CLICK HERE](#)



SBI | RBI | IBPS | RRB | SSC | NIACL | EPFO | UGC NET | LIC | RAILWAY | CLAT | RJS



# SmartKeeda

The Question Bank

Presents

# TestZone

India's least priced Test Series platform



## ALL BANK EXAMS

2019-20 Test Series

@ Just

# ₹ 499/-

300+ Full Length Tests

- Brilliant Test Analysis
- Excellent Content
- Unmatched Explanations

JOIN NOW