



Practice Questions for SSC CGL - Important Questions from Quant Sir

Welcome to Dhronas, your trusted partner in SSC CGL exam preparation. We recognize the importance of a well-structured study plan, which is why we're excited to present the 'Practice Questions for SSC CGL'. For aspiring CGL candidates, practicing a variety of questions is essential, and that's exactly what this resource offers. These practice questions are a treasure trove of insights into the exam pattern, question types, and overall difficulty level. With our comprehensive answer key, you can assess your performance and fine-tune your preparation.

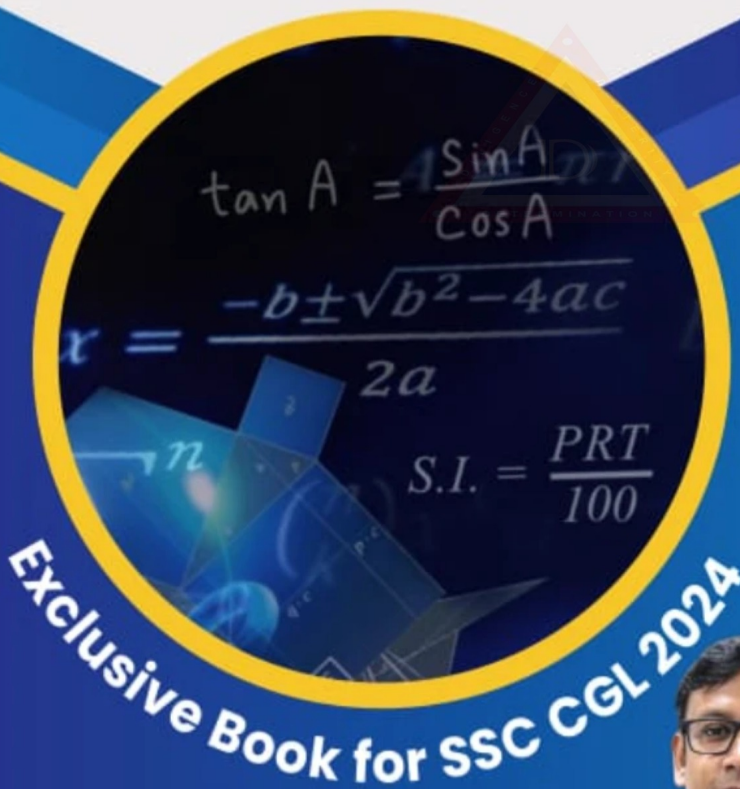
By working through these questions, you'll gain valuable exposure to the types of questions that appear in the actual SSC CGL exam and deepen your understanding of its nuances. At Dhronas, we believe that building a strong foundation with these previous year question papers is crucial to your success. Whether you're a first-time CGL aspirant or aiming to improve your score, this resource is an invaluable addition to your study toolkit. Use it to practice, monitor your progress, and sharpen your exam strategy.





# QUANT SIR

## For SSC CGL TIER 1



Exclusive Book for SSC CGL 2024

### Key Features :

- ✓ 8 layers of distribution
- ✓ Previous Year Questions
- ✓ Updated & New Content
- ✓ Detailed Solution

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[Source: The Dhronas]

## Practice Questions for SSC CGL

We have provided 10 questions pertaining to the quantitative aptitude section of the SSC CGL examination. Solve these Practice Questions for SSC CGL to flourish your knowledge and skills for the examination. So, All the best!

**Question 1:** If the product of 7 consecutive prime numbers is 570570. Find the 4th smallest number.

1. 7
2. 11
3. 13
4. 5

**Question 2:** If in a triangle ABC,  $AC^2 + 2AB^2 - 3BC^2 = (\sqrt{3}AB - BC/2)^2$ , then what is the value of  $\angle ABC$ ?

1.  $30^\circ$
2.  $45^\circ$
3.  $60^\circ$
4.  $120^\circ$

**Question 3:** The average weight of 66 students in school is 68 kg, when 12 new students are admitted to the school, the average increases by 4 kg. Then find the average weight of the new students.

1. 92.5
2. 72
3. 94
4. 98

**Question 4:** If the income tax is increased by 29%, then the net income is reduced by 4%. Find the rate of income tax.

1. 15.69%
2. 12.12%
3. 11.11%
4. 30.36%

**Question 5:** Ajay buys four articles at the same price and he sold the first product at a profit of 15%, the second article at a loss of 10%, the third article at a profit of 20%, and the fourth article at a loss of 5%. Find his overall loss or profit%.





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1. 5%
2. 4%
3. 2%
4. 1.5%

**Question 6:** What should be subtracted from 3, 7, 4, and 6 so that they are in proportion?

1. 9
2. 4
3. 5
4. 3

**Question 7:** Two cars travel the same distance starting at 10:00 am and 11:00 am, respectively, on the same day. They reach their common destination at the same point of time. If the first car travelled for at least 6 hours, then the highest possible value of the percentage by which the speed of the second car could exceed that of the first car is:

1. 25
2. 30
3. 10
4. 20

**Question 8:** A and B joins together to complete a work. A will be paid Rs (90000/d) and B will be paid Rs (60000/d) on completing the work, where d is the total time (in days) taken to complete the work. If A and B works together whole time, A is paid Rs 22500 whereas if B works alone, he is paid Rs 5000. What will be the salary of B, if A works on alternative days (starting on first day) and B works the whole time? (in rupees)

1. 8000
2. 15000
3. 10000
4. 12000

**Question 9:** x is the average of all angles lesser than  $360^\circ$  satisfying the condition,  $|\tan \theta| = 1$ . What is the value of  $\cos x + \tan x$ ?

1. 0
2. 1
3. -1
4. 2

**Question 10:** A triangle is cut from inside a circle in such a way that one of its bases coincides with the diameter of length 14 cm and another base of the triangle makes  $45^\circ$  with the diameter of the circle. Find the remaining area of the circle.

1. 616 cm<sup>2</sup>
2. 580 cm<sup>2</sup>
3. 105 cm<sup>2</sup>
4. 154 cm<sup>2</sup>

## Practice Questions for SSC CGL - Answer Key

Check out your score in this test.

1. (1)	6. (3)
2. (1)	7. (4)
3. (3)	8. (3)
4. (2)	9. (3)
5. (1)	10. (3)

Now, let us provide you with the detailed solutions of these Practice Questions for SSC CGL in the upcoming segment.

## Practice Questions for SSC CGL - Solutions

In this section, we've provided detailed solutions to the Practice Questions for SSC CGL, aimed at equipping you with the knowledge and confidence needed for success. By going through these solutions, you'll not only gain insights into the types of questions featured in the SSC CGL exam but also understand the level of difficulty you can anticipate.

**Question 1:** The correct answer is **Option 1 i.e. 7.**

The resultant number is divisible by 2 and 5. Thus prime numbers must include 2 and 5.

So, the involved prime numbers must be 2, 3, 5, 7, 11, 13, and 19.

The fourth smallest number is 7.

**Question 2:** The correct answer is **Option 1 i.e. 30°.**

$$\Rightarrow AC^2 + 2AB^2 - 3BC^2/4 = (\sqrt{3}AB - BC/2)^2$$

$$\Rightarrow AC^2 + 2AB^2 - 3BC^2/4 = 3AB^2 + BC^2/4 - \sqrt{3} AB \cdot BC$$

$$\Rightarrow AC^2 = AB^2 + BC^2 - 2 AB \cdot BC (\sqrt{3}/2)$$

$$\Rightarrow AC^2 = AB^2 + BC^2 - 2 AB \cdot BC \cos 30^\circ$$

$$\text{Cosine rule : } AC^2 = AB^2 + BC^2 - 2 AB \cdot BC \cos \angle ABC$$

$$\Rightarrow \angle ABC = 30^\circ$$



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**Question 3:** The correct answer is **Option 3 i.e. 94 kg.**

$$\text{Average of the new items added} = A + (1 + N/n)x$$

Where N = Initial quantity = 66

n = New added quantity = 12

A = initial average = 68 kg

x = increased average = 4 kg

So, the average of the new students =  $68 + (1 + 66/12)4$

$$= 68 + 26$$

$$= 94 \text{ kg}$$

**Question 4:** The correct answer is **Option 2 i.e. 12.12%.**

$$\text{Income tax rate} = \text{Tax/Total income} \times 100$$

29% tax = 4% Net income

$$\text{Tax/net income} = 4/29$$

$$\text{Total income} = \text{tax} + \text{net income} = 4 + 29 = 33$$

$$\text{Income tax rate} = (4/33) \times 100 = 12.12\%$$

**Question 5:** The correct answer is **Option 1 i.e. 5%.**

If the cost price of all the products bought is the same and they are sold at different losses and profits then, we can directly find the overall loss or profit using the trick

Trick:- write the profit and loss that occurred (+ sign indicates profit and - sign indicates loss) and divide them by the number of products

Applying the trick in the given question

$$\text{Profit or loss\%} = (15 - 10 + 20 - 5)/4$$

$$\text{Profit or loss\%} = 20/4 = 5\% \text{ (the value is positive)}$$

Hence, the profit will be 5%

**Question 6:** The correct answer is **Option 3 i.e. 5.**

Let x be subtracted to given numbers

$$\Rightarrow \left( \frac{3-x}{7-x} \right) = \left( \frac{4-x}{6-x} \right)$$

$$\Rightarrow (3-x)(6-x) = (4-x)(7-x)$$

$$\Rightarrow 18 - 3x - 6x + x^2 = 28 - 4x - 7x + x^2$$

$$\Rightarrow 18 - 9x = 28 - 11x$$

$$\Rightarrow 2x = 10$$

$$\Rightarrow x = 5$$

So, 5 must be subtracted from given numbers so that the numbers will be in proportion.

**Question 7:** The correct answer is **Option 4 i.e. 20.**

We know that, distance = speed × time

The distance covered by both the cars is equal, let the speed of both cars be  $v_1$  and  $v_2$  kmph and time taken be  $t_1$  and  $t_2$  hours respectively.

$$\Rightarrow v_1 t_1 = v_2 t_2$$

As both cars reach at the same time then the time taken by the second car is 1 hour less than the first car.

$$\Rightarrow v_1 t_1 = v_2 (t_1 - 1)$$

$$\Rightarrow t_1 \geq 6$$

By putting  $t_1 = 6$

$$\Rightarrow 6v_1 = 5v_2$$

$$\Rightarrow v_1 = 5v_2/6$$

$$\Rightarrow \text{Required percentage change} = (1 - 5/6)/5/6$$

$$\Rightarrow 1/5 = 20\%$$

**Question 8:** The correct answer is **Option 3 i.e. 10000.**

Let the number of days taken individually by A and B to complete the work be 'a' and 'b' days respectively

If B works alone, he is paid Rs 5000

$$\text{Salary} = 60000/d$$

$$5000 = 60000/b$$

$$b = 12 \text{ days}$$





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If A and B work together, A is paid Rs 22500

$$\text{Salary} = 90000/d$$

$$22500 = 90000/d$$

$$d = 4 \text{ days}$$

$$1/a + 1/b = 1/4$$

$$1/a + 1/12 = 1/4$$

$$1/a = (3 - 1)/12$$

$$\therefore a = 6 \text{ days}$$

If A works on alternative days, his efficiency is halved

It is equivalent to working every day, but individually he can complete the work in 12 days, not in 6 days

In the new case

$$\text{Time taken by A and B together} = (1/12 + 1/12) - 1$$

$$\Rightarrow 6 \text{ days}$$

$$\text{Salary of B} = 60000/6 = \text{Rs } 10000$$

**Question 9:** The correct answer is **Option 3 i.e. -1.**

$$\tan \theta = \pm 1$$

$$\theta = 45^\circ, 135^\circ, 225^\circ \text{ or } 315^\circ$$

$$\text{Average} = (45 + 135 + 225 + 315) / 4$$

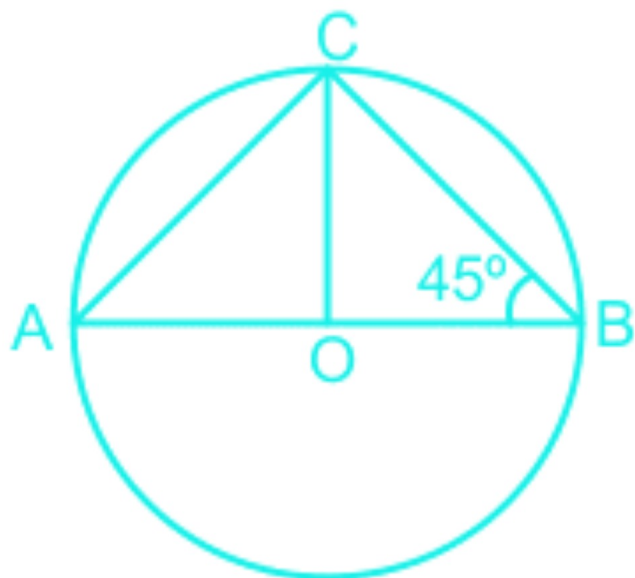
$$\Rightarrow 180^\circ$$

$$\cos x + \tan x = \cos 180^\circ + \tan 180^\circ$$

$$\Rightarrow -1 + 0 = -1$$

**Question 10:** The correct answer is **Option 3 i.e 105 cm<sup>2</sup>.**





Understanding	Application
Area of circle = $\pi r^2$ Area of triangle = $(1/2) \times \text{base} \times \text{height}$ Diameter = 14 cm Radius = 7 cm $\angle ABC = 45^\circ$	$\angle OCB = 45^\circ$ $\angle BOC = 90^\circ$ So, triangle OBC is a right isosceles triangle. OC is perpendicular to AB and OC = OB Area of triangle = $(1/2) \times 14 \times 7$ $= 49 \text{ cm}^2$ Area of circle = $(22/7) \times 7 \times 7$ $= 154 \text{ cm}^2$ Area of remaining part $= 154 - 49 = 105 \text{ cm}^2$

Comment your score below, with each question worth 1 mark. If you scored above 7, congratulations! You're one step closer to selection. If your score is between 5 and 7, you're doing well—keep it up. If you scored less than 5, you'll need to put in some extra effort on this paper. But don't worry, we're here to help you succeed in the exam.

Until then, keep practicing for the exam!

The Dhronas

is committed to providing you with more practice questions for SSC CGL, complete with answer keys and solutions.