



## Probability Practice Questions for SSC CGL - Practice Set of 10 Questions

Probability is one of the key topics in the Quantitative Aptitude section of the SSC CGL exam, often testing both your conceptual understanding and problem-solving skills. In this blog, we've compiled a set of carefully selected probability practice questions to help you sharpen your skills for the SSC CGL exam. These Probability Practice Questions for SSC CGL are provided to you along with their answer keys and detailed solutions that will explain to you all the steps involved in solving each question. We'll also provide book recommendations for further study and some expert tips on how to effectively prepare for this topic. Whether you're a beginner or looking to fine-tune your approach, this blog is designed to guide you through mastering probability for SSC CGL.

## Probability Practice Questions for SSC CGL

We have provided 10 questions in this 'Probability Practice Questions for SSC CGL' blog for the upcoming CGL examination. Solve these Probability practice questions for SSC CGL to aid your revision of this particular topic. So, All the best!

**Question:1** In the question, two equations I and II are given. You have to solve both equations to establish the correct relation between  $x$  and  $y$  and choose the correct option.

A packet contains 12 tablets out of which 5 are blue in colour and rest of them are red in colour. If 2 tablets are picked from the packet, then what is the probability that both of them are of the same colour?

1.  $31/66$
2.  $19/43$
3.  $25/41$
4.  $35/71$
5. None of the above

**Question:2** A bag contains 8 Red and 6 green balls. 4 balls are picked up one after another without replacement. Find the probability of getting balls of alternate colors.

1.  $10/143$
2.  $20/143$
3.  $30/143$
4.  $40/143$
5. none of these

**Question:3** Number of coins of Rs. 1, Rs. 2 and Rs. 5 in a bag are 5, 3 and 2. If 4 coins are drawn from the bag at random then what is the probability that total value of those coins will be less than Rs. 11?



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1.  $4/105$
2.  $5/11$
3.  $8/11$
4.  $7/11$
5.  $1/30$

**Question:4** If all the terms of series 4, 12, 36, 108.....57395628 are in geometric progression then find the sum of all its terms.

1. 32589724
2. 36589796
3. 86093440
4. 43025996

**Question:5** Find the standard deviation of the individual heights of 10 students in a class, if the sum of the square of the mean deviation is 25.6 feet.

1. 16
2. 1.6
3. 0.16
4. 19.6

**Question:6** What is the value of  $(7C0 + 7C2 + 7C4 + 7C6)/(7C1 + 7C3 + 7C5 + 7C7)$ ?

1. 0
2. 1
3.  $\frac{1}{2}$
4. 2

**Question:7** A bag contains coins of one rupee, two rupee & five rupees. The total money in the bag is Rs. 358. If the total number of one rupee and two rupee coins are 128 and in ratio of coins is 3 : 5. Find the probability of getting a 5 rupee coin if a coin is randomly picked from the bag?

1.  $16/57$
2.  $11/89$
3.  $15/79$
4.  $13/84$

**Question:8** If the second term of a geometric series is 187.5 and the fourth term is 1171.875, then find the sum of the 6 terms of that series.



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1. 15025.03125
2. 11452.03125
3. 12157.03125
4. 10014.03125

**Question:9** What is the value of  $100^2 - 99^2 + 98^2 - 97^2 + 96^2 - 95^2 + 94^2 - 93^2 \dots 12^2 - 11^2$  ?

1. 5050
2. 4985
3. 4995
4. 4950

**Question:10** What is the mean of the median and range of the following data?

3, 8, 7, 12, 4, 3, 16, 20, 23, 10, 9, 15, 2, 7

1. 14.5
2. 14.75
3. 13.75
4. 19.5

## Probability Practice Questions for SSC CGL - Answer Key

Before jumping on to the detailed solutions, please check out your score on this test. And drop your honest scores in the comment section below.

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

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

## Probability Practice Questions for SSC CGL - Detailed Solutions

## Probability Practice Questions for SSC CGL - Practice Set of 10 Questions

In this section, we've provided detailed solutions to the Probability 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. **31/66**.

Number of red tablets =  $12 - 5 = 7$

Required probability =  $5C2/12C2 + 7C2/12C2$

=  $10/66 + 21/66$

=  $31/66$

**Question:2** The correct answer is **option 2** i.e. **20/143**.

Since the balls to be picked are of different colors without replacement, there are 2 possibilities

Red, Green, Red, Green, or Green, Red, Green, Red

Probability = The number of favorable outcomes/The total number of outcomes

Hence probability =  $[(8/14) \times (6/13) \times (7/12) \times (5/11)] + [(6/14) \times (8/13) \times (5/12) \times (7/11)] = 20/143$

**Question:3** The correct answer is **option 4** i.e. **7/11**.

The number of coins of Rs. 1, Rs. 2, and Rs. 5 in a bag are 5, 3, and 2.

So, the Total of different cases and total value:

$\Rightarrow 1 + 1 + 1 + 1 = \text{Rs. } 4$

$\Rightarrow 1 + 1 + 1 + 2 = \text{Rs. } 5$

$\Rightarrow 1 + 1 + 2 + 2 = \text{Rs. } 6$

$\Rightarrow 1 + 2 + 2 + 2 = \text{Rs. } 7$

$\Rightarrow 1 + 1 + 1 + 5 = \text{Rs. } 8$

$\Rightarrow 1 + 1 + 2 + 5 = \text{Rs. } 9$

$\Rightarrow 1 + 2 + 2 + 5 = \text{Rs. } 10$

$\Rightarrow 2 + 2 + 2 + 5 = \text{Rs. } 11$

$\Rightarrow 1 + 1 + 5 + 5 = \text{Rs. } 12$

$\Rightarrow 1 + 2 + 5 + 5 = \text{Rs. } 13$

$\Rightarrow 2 + 2 + 5 + 5 = \text{Rs. } 14$

Hence, Total cases = 11

$\Rightarrow$  Cases in which the total value of 4 coins will be less than Rs. 11 = 7

Hence, the Required probability =  $7/11$ .



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**Question:4** The correct answer is **option 3** i.e. **86093440**.

Series: 4, 12, 36, 108.....57395628

First term  $a = 4$

Last term  $T_n = 57395628$

Common ratio  $r = \text{Second term/First term} = 12/4 = 3$

$T_n = ar(n - 1)$

$\Rightarrow 57395628 = 4 \times 3(n - 1)$

$\Rightarrow 14348907 = 3(n - 1)$

$\Rightarrow 315 = 3(n - 1)$

$n = 16$

So, Sum

$S_{16} = a(rn - 1)/(r - 1)$

$\Rightarrow S_{16} = 4(3^{16} - 1)/(3 - 1)$

$\Rightarrow S_{16} = 2 \times 43046720$

$\Rightarrow S_{16} = 86093440$

**Question:5** The correct answer is **option 2** i.e. **1.6**.

Standard deviation

$$= \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n}}$$

$\bar{x}$  is the mean of data and  $(x_i - \bar{x})$  is the mean deviation

Given,

$\Rightarrow \sum (x_i - \bar{x})^2 = 25.6$

$\Rightarrow \sigma = \sqrt{\frac{25.6}{10}}$

$= 1.6$

**Question:6** The correct answer is **option 2** i.e. **1**.

$\Rightarrow nCr = nCn-r$

$\therefore 7C0 = 7C7$

$\Rightarrow 7C2 = 7C5$

$\Rightarrow 7C4 = 7C3$

$\Rightarrow 7C6 = 7C1$

$\therefore 7C0 + 7C2 + 7C4 + 7C6 = 7C1 + 7C3 + 7C5 + 7C7$

$\therefore (7C0 + 7C2 + 7C4 + 7C6)/(7C1 + 7C3 + 7C5 + 7C7) = 1$

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**Question:7** The correct answer is **Option 3** i.e. **15/79**.

The bag contains coins of one rupee, two rupees & five rupees and the total money in the bag is Rs. 358.

The total number of one rupee and two rupee coins are 128 and in ratio of coins is 3:5.

Probability of an event = Favorable ways/Total ways

Number of 1 rupee coins =  $(3/8 \times 128) = 48$

Number of 2 rupee coins =  $(5/8 \times 128) = 80$

Let the number of 5 rupee coins be x.

$5x + 1(48) + 2(80) = 358$

$5x = 358 - 208$

$x = 30$

Total number of coins =  $48 + 80 + 30 = 158$

So the bag contains a total of 158 coins out of which the number of five rupee coin is 30

Probability of getting a 5-rupee coin =  $30/158 = 15/79$

**Question:8** The correct answer is **option 3** i.e. **12157.03125**.

The 12 terms geometric series =  $a, ar, ar^2, ar^3, \dots, ar^{11}$

r = the common ratio

a = first term

The second term of a geometric series  $ar = 187.5$

The fourth term  $ar^3 = 1171.875$

$ar^3/ar = 1171.875/187.5$

$\Rightarrow r^2 = 6.25$

$r = 2.5$

$\Rightarrow ar = 187.5$

$\Rightarrow a = 187.5/2.5 = 75$

Sum of the series

$$= \frac{a(r^n - 1)}{r - 1}$$

$$S_n = \frac{75(2.5^6 - 1)}{2.5 - 1}$$

$$= (75 \times 243.140625)/1.5$$

$$= 50 \times 243.140625$$

$$= 12157.03125$$



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**Question:9** The correct answer is **option 3** i.e. **4995**

Formula used:

$$\text{Sum} = n/2(a + l) \text{ ---- (1)}$$

Where n = number of terms, a = first term, and l = last term

Calculations:

$$\Rightarrow 100^2 - 99^2 + 98^2 - 97^2 + 96^2 - 95^2 + 94^2 - 93^2 \dots 12^2 - 11^2 ?$$

Can be written as;

$$\Rightarrow (100 + 99)(100 - 99) + (98 + 97)(98 - 97) + \dots (12 + 11)(12 - 11)$$

$$\Rightarrow 100 + 99 + 98 + 97 + \dots + 12 + 11$$

Where, n = 90

l = 11 and a = 100

Using equation (1), we get

$$\text{Sum} = 90/2(100 + 11)$$

$$\Rightarrow 4995$$

**Question:10** The correct answer is **option 2** i.e. **14.75**.

Given :

Data : 3, 8, 7, 12, 4, 3, 16, 20, 23, 10, 9, 15, 2, 7

Formula used :

When the data is arranged in ascending order and the number of terms is even

$$\text{Median} = [(n/2)\text{th} + (n/2 + 1)\text{th}]/2 \text{ ---- (1)}$$

$$\text{Range} = \text{Upper limit} - \text{lower limit} \text{ ---- (2)}$$

Calculations :

According to the question, we have

$$\Rightarrow 3, 8, 7, 12, 4, 3, 16, 20, 23, 10, 9, 15, 2, 7$$

Arrange the data in ascending order, we get

$$\Rightarrow 2, 3, 3, 4, 7, 7, 8, 9, 10, 12, 15, 16, 20, 23$$

Using equation (1), we get

$$\Rightarrow \text{Median} = (7\text{th} + 8\text{th})/2$$

$$\Rightarrow (8 + 9)/2$$

$$\Rightarrow 8.5$$

Using equation (2), we get

$$\Rightarrow \text{Range} = 23 - 2$$

$$\Rightarrow 21$$

$$\text{Mean} = (8.5 + 21)/2$$

$$\Rightarrow 29.5/2 = 14.75$$

Hence, the mean of the median and range of the given data is 14.75.



## Best Quant Book for SSC CGL 2024

"Quant Sir" by Raja Bhattacharjee is an essential guide for mastering quantitative aptitude for SSC CGL Tier 1. It offers chapter-wise coverage, time-saving shortcuts, past exam questions, and expert advice on which questions to skip, along with detailed weightage analysis. With over 4,000 questions organized by difficulty levels - easy, moderate, and hard - the book is specifically crafted to elevate your preparation and boost your performance.

- **Comprehensive and Unique Content:** "Quant Sir" provides a complete approach to confidently tackle every aspect of the SSC CGL Tier I exam.
- **8 Layers of Coverage:** The book is organized into 8 structured layers, ensuring thorough coverage of each topic.
- **Chapter-Specific Questions:** Strengthen your understanding with chapter-specific questions that emphasize key concepts.
- **Previous Year's Questions:** Includes solved questions from the past 5 years to familiarize you with the types of questions commonly asked.
- **Difficulty-Based Practice:** With over 4,000 questions categorized by difficulty level, you can practice according to your current proficiency.
- **New Question Types and Skipping Strategies:** Features new question types and offers expert advice on which questions to skip, helping you focus on the most important areas.

You can also download a sample of "

Quant Sir

" by clicking on the embedded link. This sample will give you a glimpse of the book's content and help you assess whether the author's approach fits your learning style.

## Tips to Prepare Probability Questions for SSC CGL

Are you eager to enhance your numerical skills for the SSC CGL exam? Prepare to explore a range of tips, tricks, and strategies to elevate your preparation!



## Probability Practice Questions for SSC CGL - Practice Set of 10 Questions

- Begin by mastering the foundational concepts of probability, such as outcomes, events, sample spaces, and probability formulas. Be clear about terms like independent and dependent events, mutually exclusive events, and complementary events.
- Familiarize yourself with the key probability formulas, such as:
  - Probability of an event = (Number of favorable outcomes) / (Total number of possible outcomes).
  - Complementary Rule:  $P(A') = 1 - P(A)$ .
  - Addition Rule for non-mutually exclusive events:  $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ .
  - Conditional Probability and Multiplication Rule for independent events.
- Solve past SSC CGL papers with the help of 'Quant Sir' book to understand the typical pattern of probability questions.
- Learn to visualize problems using tree diagrams, Venn diagrams, or tables for clarity, especially for complex questions.
- Spend time solving

### mock tests

- to become familiar with the question patterns.
- Skip overly time-consuming questions and revisit them later to optimize your exam strategy.
- Use quality books such as "*Quant Sir*" by Raja Bhattacharjee and "*Quantitative Aptitude for Competitive Examinations*" by R.S. Aggarwal, which provide clear explanations and ample practice questions on probability.

In summary, recognizing the significance of Probability practice questions for SSC CGL along with regular practice and correct resources are vital. We hope our blog has offered valuable insights into question patterns and relevant resources. Stay updated with the latest SSC CGL exam news by visiting our page,

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. Practice hard, and best of luck with your upcoming exams. Keep following the Dhronas for updates, vacancy information, and other announcements.