Welcome to Quant Sir's Ultimate Guide – Your Trusted Companion for SSC CGL Tier I Success

Conquering the **SSC CGL Tier I** exam takes more than dedication—it demands a strategic approach, strong conceptual clarity, and precise problem-solving skills. This guide is thoughtfully curated to be your all-in-one resource, featuring an in-depth analysis of the **SSC CGL 2023 Quant Previous Year Paper - 20 July 2023 - Shift 3**, complete with accurate answer keys and detailed step-by-step solutions.

At **Quant Sir**, we focus on more than just theory. We bring you the actual 2023 question paper, paired with expertly explained solutions that decode the exam pattern, highlight frequently asked question types, and demonstrate smart techniques to tackle even the toughest problems with ease. Working with real exam-level questions will sharpen your speed, boost accuracy, and enhance your overall performance.

Whether you're a first-time candidate or a seasoned aspirant aiming to optimize your preparation, this guide is tailored to elevate your readiness. With Quant Sir by your side, you're not just working harder—you're preparing smarter, staying focused, and gearing up to excel with confidence.

SSC CGL 2023 Quant Previous Year Paper - Exam Pattern

Take a look at the exam pattern for the SSC CGL Tier I 2023 exam.

Tier I: Computer-Based Exam

Subject	No. of Questions	Maximum Marks	Duration
General Intelligence & Reasoning	25	50	60 minutes (80 min for PwD)
General Awareness	25	50	
Quantitative Aptitude	25	50	
English Comprehension	25	50	
Total	100	200	

+91-8436586516
quantsirssc@gmail.com

SSC CGL 2023 Quant Previous Year Paper - Topicwise Weightage

The table below offers a comprehensive topic-wise analysis of the SSC CGL 2023 Quant Previous Year Paper - 20 July 2023 - Shift 3. It highlights the key areas of focus and the number of questions asked from each topic, giving you a clear understanding of the exam pattern. Use this data-driven insight to sharpen your preparation, identify high-weightage topics, and allocate your study time more effectively for maximum results.

Topic	No. of Questions
Time & Work	4
Algebra	3
Trigonometry	3
Geometry & Mensuration	3
Profit, Loss & Discount	2
Simplification / BODMAS	2
Data Interpretation	2
Time, Speed & Distance	2
Percentage / Change	1
Number System	1
Simple Interest	1

SSC CGL 2023 Quant Previous Year Paper - Tips to Solve

Here are top tips for cracking the SSC CGL Quantitative Aptitude section:

Use Smart Tricks and Shortcuts: Learn time-saving methods for frequently tested topics such as Percentages, Profit & Loss, and Mensuration. These shortcuts can significantly improve your speed without compromising on accuracy.

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Focus on Both Speed and Accuracy: Quick solving is important, but precision is what fetches marks. Use approximations when needed, but always double-check your final answer to reduce negative marking.

Practice Data Interpretation Regularly: DI questions often involve tables, graphs, or charts. Regular practice helps you spot patterns quickly and extract the relevant information under timed conditions.

Master Core Formulas and Concepts: Know the key formulas in Algebra, Geometry, and Trigonometry—but more importantly, understand how and why they work so you can adapt them to a variety of questions.

Tackle Word Problems Systematically: Break word problems into smaller parts. Identify relevant data, convert it into equations, and proceed step-by-step to find the solution efficiently.

Consistency, smart planning, and a solid grasp of concepts are your best assets to score high in the Quantitative Aptitude section of SSC CGL.

SSC CGL 2023 Quant Previous Year Paper - 20 July 2023 - Shift 3

Q:1 What is the value of sin(-405°)?

1. $\frac{\sqrt{5}}{2}$
2. 1/2
3. -1/2
4. $-\frac{1}{\sqrt{2}}$

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Q:2 The slant height of a cone is 10 cm, and the radius is 6 cm. What is the total surface area of the cone? (Take π = 3.14)

1. 292.4 cm^2
2. 312.2 cm^2
3. 305.4 cm^2
4. 301.44 cm^2

Q:3 If $2y + 2/y = 7$, find the value of $y^2 + 1/y^2$.

1. 41/4
2. 45/4
3. 49/4
4. 49/2

Q:4 If $x - 1/x = 2\sqrt{2}$ and $x > 1$, what is the value of $x^6 - 1/x^6$?

1. 372√6
2. 384√6
3. 396√6
4. 420√6

Q:5 A retailer announces a discount of 30% for selling an air-conditioner marked at Rs. 92,000. The cost price of the air-conditioner is 70% below the marked price. He offers a further discount of 20% if the buyer presents his membership card of the retailer's store. The profit of the retailer with the membership card scheme is what percentage of the profit of the retailer without the membership card scheme?

1. 62%
2. 65%
3. 70%
4. 74%

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Q:6 Simplify:

$325 + 276 \div [150 - \{9 \times 9 + (83 - 4 \times 15)\}]$

1. 332
2. 333
3. 334
4. 331

Q:7 P and Q can do a job in 24 days, Q and R can do it in 30 days, while P and R can do it in 40 days. X is four times as efficient as P, Y is half as efficient as Q, and Z is 2.5 times as efficient as R. Determine the number of days required to complete the same job if X , Y and Z work together.

1. 9
2. 12
3. 8
4. 10

Q:8 The square of 72 is equal to the product of 216 and a number. Find the number.

1. 36
2. 18
3. 24
4. 48

Q:9 Find the value of $2/3 \tan^2 60° + 3 \cos^2 30° - 2 \sec^2 30° - 3/4 \cot^2 60°$.

1. 2.33
2. 2.01
3. 1.33

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4. 3.33

Q:10 The maximum value of $(\sin^{12}\theta + \cos^{20}\theta)$ for all the real values of θ is:

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

Q:11 If $a + b + c = 7$, $ab + bc + ca = 11$ and $abc = -1$, then $a^3 + b^3 + c^3$ is equal to:

1. 101
2. 107
3. 109
4. 111

Q:12 A thief is noticed by a policeman from a distance of 200 m. The thief starts running as soon as he is noticed, and the policeman chases him simultaneously. The thief and the policeman run at the speeds of 10 km/h and 11 km/h, respectively. What is the distance (in m) between them after 6 min policeman starts chasing?

1. 75
2. 100
3. 125
4. 150

Q:13 The following bar graph represents the demand and production for five companies, V, W, X, Y and Z.On the basis of the bar graph, answer the question.

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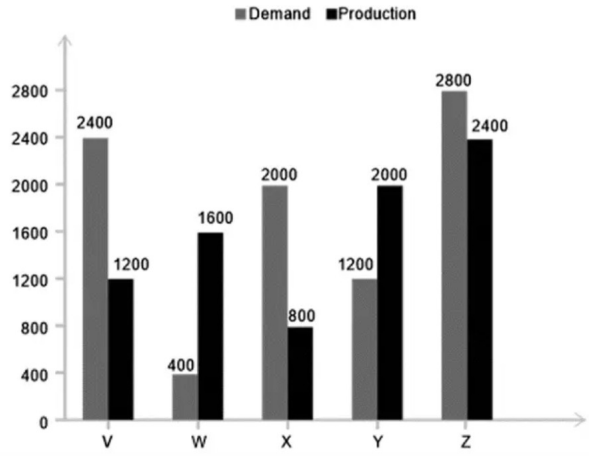


If K% of the production for company X equals the demand for company W, then K equals:

1. 40
2. 45
3. 35
4. 50

Q:14 The three sides of a triangle are 12, 17 and x units. Which of the following options is correct?

1. $5 < x < 29$
2. $5 \leq x < 29$
3. $5 \leq x \leq 29$
4. $5 < x \leq 29$

Q:15 The cost of 50 dozens of bananas is ₹2,400 and the transport cost per banana is ₹0.25. The selling price is ₹10 for a pair of bananas. What is the profit percentage (rounded off up to one decimal place)?

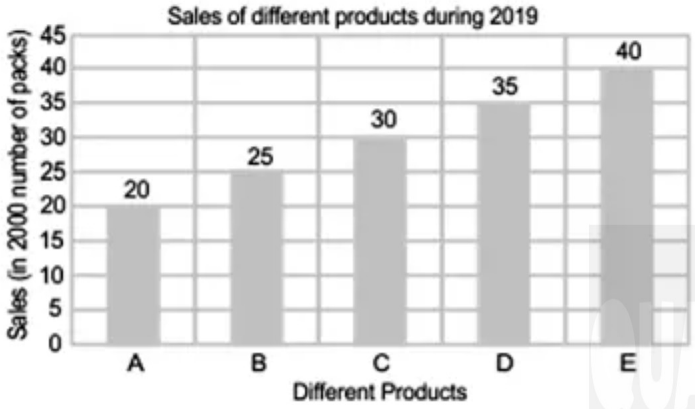
1. 14.5%
2. 17.6%
3. 15.4%
4. 16.7%

+91-8436586516
quantsirssc@gmail.com

Q:16 Study the given bar graph and answer the question that follows. A company provides five different products. The sales of these five products (in 1000 number of packs) during 2024 are shown in the bar-graph.

Sales of different products during 2024

Sales (in 1000 number of packs)



What is the approximate ratio of sales of product A to product E in 2024?

1. 1 : 2

2. 1 : 3

3. 2 : 3

4. 2 : 1

Q:17 The price of an article is increased by r%. The new price was decreased by r% later. Now the latest price is Rs.1. What was the original price of the article?

1. $\frac{10000}{10000-r^2}$

2. $\frac{10000-r^2}{10000}$

3. $\frac{100}{100-r^2}$

4. $\frac{100}{1-r^2}$

Q:18 P gives Q a head-start of 2 seconds in a 400 m race, but both finish the race at the same time. Find the time taken by P to finish the race if the speed of Q is 2 m/sec.

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1. 198 seconds

2. 199 seconds

3. 200 seconds

4. 195 seconds

Q:19 A person invests ₹ 9,840 at 5% per annum simple interest to obtain a total amount of ₹ 12,300. For how many years did he invest the sum?

1. 5 years

2. 4.5 years

3. 3.5 years

4. 3 years

Q:20 A and B working together can finish a piece of work in 8 days while B alone can do it in 24 days. In how many days can A alone finish the work?

1. 10

2. 16

3. 12

4. 14

Q:21 In a circle with center O, PA and PB are the tangents at A and B, respectively, from an external point P. If ∠APB = 24°, then find ∠AOB.

1. 158°

2. 48°

3. 156°

4. 180°

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quantsirssc@gmail.com

Q:22 A and B can do a project in 9 days. B and C can do it in 12 days while C and A can do it in 18 days. In how many days A, B and C all working together, can finish the project?

1. 9

2. 8

3. 11

4. 10

Q:23 Supraja and Kausalya can complete a work in 30 days and 20 days, respectively. If Supraja starts the work and they work on alternate days, in how many days will 75% of the work be completed?

1. 28

2. 24

3. 20

4. 18

Q:24 Solve the following expression.

8 + (-9 - 3) - (-12 - 5)

1. 14

2. 13

3. 16

4. 15

Q:25 From a point Q, the length of the tangent to a circle is 20 cm and the distance of Q from the centre of the circle is 25 cm. The radius of the circle is:

1. 5 cm

2. 10 cm

3. 15 cm

4. 12.5 cm

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SSC CGL 2023 Quant Previous Year Paper - Answer Key

You can check your score for this test here.

1. (4)	2. (4)	3. (1)	4. (3)	5. (2)
6. (4)	7. (4)	8. (3)	9. (3)	10. (3)
11. (3)	12. (2)	13. (4)	14. (1)	15. (2)
16. (1)	17. (1)	18. (1)	19. (1)	20. (3)
21. (3)	22. (2)	23. (4)	24. (2)	25. (3)

Each question carries 2 marks. Here's how to interpret your performance:

- Scored above 45? Outstanding! You're on a strong path to cracking the exam. Maintain your momentum with focused practice and continual refinement of your strategy.
- Scored between 35 and 45? Well done! You've established a solid base. Now focus on strengthening weaker areas and improving speed to push your score even higher.
- Scored below 30? Don't get discouraged. Use this as a valuable learning opportunity. Identify your problem areas, revisit key concepts, and target your practice accordingly.

To get the most out of your preparation, make sure to review the detailed step-by-step solutions provided. They'll guide you on the most efficient solving techniques, helping to improve both accuracy and speed.

Stay consistent with your practice, manage your time wisely, and keep your focus sharp. These habits are the key to boosting your performance and achieving success on exam day.

For more SSC CGL 2023 question papers, solutions, and expert tips, keep following Quant Sir—your trusted resource for smart and strategic exam preparation.

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