



SSC CGL & CHSL 2024



DAY-1

आरंभ बैच

MATHS INTRODUCTION



LIVE 06:00 PM

2024 के सपने होंगे पूरे





MISSION SSC -2024

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Particulars	Details
Name of the exam	Combined Graduate Level Examination
Official website	ssc.nic.in
Short name	SSC CGL exam
Exam conducting authority	Staff Selection Commission
Exam level	Graduate
Age limit	18 to 32 years
Frequency of exam	Once per year
SSC CGL exam pattern 2024	Tier 1: Computer-based test Tier 2: Computer-based test Document Verification (DV)
Mode of application	Online
Contact details	Staff Selection Commission, Block No. 12, CGO Complex, Lodhi Road, New Delhi-110003



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Exam Name	Advertisement Date	Application Dates	Exam Date
Selection Post Examination, Phase-XII, 2024	01 Feb 2024	01 to 28 Feb 2024	April - May 2024
Sub-Inspector in Delhi Police and Central Armed Police Forces Examination, 2024	15 Feb 2024	15 Feb to 14 March 2024	May - June 2024
JE	29 Feb 2024	29 Feb to 29 March	May - June 2024
CHSL	2 April	2 April to 1 May	June - July 2024
MTS	7 May	7 May to 6 June	July - August 2024
CGL	11 June	11 June to 10 July	Sep- Oct 2024
Stenographer	16 July	17 July to 14 Aug	Oct-Nov 2024
JHT	23 July	23 July to 21 Aug	Oct- Nov 2024
GD Constable	27 August	27 Aug to 27 Sept	Dec - Jan 2025



SSC CGL Tier 1 Exam Pattern

Subject	No. of Questions	Marks	Duration
General Intelligence and Reasoning	25	50	1 Hour
General Awareness	25	50	
Quantitative Aptitude	25	50	
English Comprehension	25	50	
Total	100	200	



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Paper	Session	Section	Subject	Questions	Marks
I	I (2 hours and 15 minutes)	I (1 hour)	Module I – Mathematical abilities Module II – Reasoning and General Intelligence	30 30 Total – 60	60 x 3= 180
		II (1 hour)	Module I – English Language Comprehension Module II – General Awareness	45 25 Total = 70	70 x 3 = 210
		III (15 minutes)	Module – I – Computer Knowledge module	20	20 x 3 = 60
	II (15 minutes)	III	Module – II : Data Entry Speed Test	One data entry task	
II	2 hours		Statistics (Paper I & II as above)	100	100 x 2 = 200
III	2 hours		General Studies (Paper I & II as above) (Finance & Economics)	100	100 x 2 = 200
			Total	500	850



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- Ratio & Proportion
- Square roots, Averages
- Interest
- Profit and Loss
- Discount
- Partnership Business
- Mixture and Alligation
- Time and distance
- Time & Work
- Basic algebra
- Surds
- Graphs of Linear Equations
- Triangles
- Circles
- Quadrilaterals
- Regular Polygons
- Circle
- Right Prism
- Right Circular Cone
- Right Circular Cylinder
- Sphere
- Hemispheres
- Rectangular Parallelepiped
- Regular Right Pyramid with triangular or square base
- Trigonometric ratio
- Degree and Radian Measures
- Standard Identities
- Complementary angles
- Heights and Distances.
- Histogram
- Frequency polygon



1. **Understand the exam pattern:** It is essential to understand the exam pattern before starting your preparation. The **SSC CGL** maths section includes questions from Arithmetic, Algebra, Geometry, Trigonometry, Mensuration, and Data Interpretation.
2. **Make a study plan:** Make a study plan that includes all the topics mentioned above, and allot time accordingly. Also, make sure to allocate more time for difficult topics and practice more questions.
3. **Get the right study material:** Get the right study material for **SSC CGL** maths, such as books, online resources, and previous year's question papers. This will help you understand the types of questions that have been asked in the past and help you practice accordingly.
4. **Practice regularly:** Regular practice is key to success in **SSC CGL** maths. Practice as many questions as possible, and try to solve them within the given time limit.
5. **Focus on weak areas:** Identify your weak areas and focus more on those topics. Work on improving your understanding of these topics by watching online tutorials or taking help from your teacher or mentor.
6. **Take mock tests:** Take mock tests regularly to assess your progress and identify areas where you need to improve. This will also help you improve your time management skills.
7. **Revision:** Revision is crucial for **SSC CGL** maths. Revise all the important formulas, concepts, and shortcuts regularly.



1 $(3^{25} + 3^{26} + 3^{27} + 3^{28})$ is divisible by / विभाजित है ?

A. 11

B. 16

C. 25

D. 30



2 A number when divided by 80 leaves remainder 20. what is the remainder when the same number is divided by 16?

एक संख्या जब 80 से विभाजित की जाती तो शेष 20 प्राप्त होता, शेष क्या होगा जब उसी संख्या को 16 से विभाजित किया जाए ?

1) 2

2) 4

3) 6

4) 8



3 The sum of first 50 odd natural number is
पहले 50 विषम प्राकृतिक संख्या का योग है

(1)

1000

(2)

1250



4

The simplified value of /मान ज्ञात करे

$$\left(1 - \frac{1}{3}\right) \left(1 - \frac{1}{4}\right) \left(1 - \frac{1}{5}\right) \dots \left(1 - \frac{1}{99}\right) \left(1 - \frac{1}{100}\right) \text{ is}$$

(1) $\frac{2}{99}$

(2) $\frac{1}{25}$

(3) $\frac{1}{50}$

(4) $\frac{1}{100}$



- 5** The ratio of two numbers is 3:4 and their HCF is 5. their LCM is:
दो संख्याओं का अनुपात 3:4 है और उनका मांसा 5 है।
उनके लांसाहै:

(1) 10

(2) 60

(3) 15

(4) 12



6

The value of

$$4 - \frac{5}{1 + \frac{1}{3 + \frac{1}{2 + \frac{1}{4}}}}$$
 is

(1) $\frac{1}{8}$

(2) $\frac{1}{64}$

(3) $\frac{1}{16}$

(4) $\frac{1}{32}$



7 The value of / मान ज्ञात करे

$$\frac{1}{1+2^{a-b}} + \frac{1}{1+2^{b-a}} \text{ is}$$

(1) a-b

(2) b-a

(3) 1

(4) 0



Find the unit digit $(122)^{173}$
इकाई का अंक ज्ञात करे

1)2

2)3

3)7

4)9



9 The average height of 30 boys out of a class of 50 is 160 cm. If the height of remaining boys is 165 cm, the average of the whole class (in cm) is:

50 के एक समूह में से 30 लड़कों की औसत ऊंचाई 160 सेमी है। यदि शेष लड़कों की ऊंचाई 165 सेमी है, तो पूरे समूह का औसत (सेमी में) है:

(1) 161

(2) 162

(3) 163

(4) 164



1
0 By mistake, instead of dividing Rs 117 among A, B and C in the ratio $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ it was divided in the ration of 2:3:4. Who gains the most and by how much ?

गलती से, A, B और C के बीच 117 रुपये को अनुपात $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ में विभाजित करने के बजाय इसे 2:3:4 के में विभाजित किया गया था। कौन सबसे अधिक लाभ और कितना पाएगा ?

(1) A, Rs 28

(2) B, Rs 3

(3) C, Rs 20

(4) C, Rs 25



- 1 Solution A contains 10% acid and solution B contains 30% acid. In what ratio should solution A be mixed with Solution B to obtain a mixture with 25% acid?
- 1 मिश्रण A में 10% अम्ल और मिश्रण B में 30% अम्ल है। 25% अम्ल के साथ मिश्रण प्राप्त करने के लिए किस अनुपात में A और B मिश्रण मिलाया जाना चाहिए?

(1) 1:2

(2) 3:1

(3) 1:3

(4) 2:1



1 The value of a machine depreciates every year at the
2 rate of 10% on its value at the beginning of that year.
If the current value of the machine is Rs 729, its
worth 3years ago was:

किसी मशीन का मूल्य हर वर्ष 10% की दर से गिरता है तो 3 वर्ष
पहले मूल्य क्या होगा यदि 3 वर्ष बाद 729 है ?

(1) Rs 1000

(2) Rs

750.87

(3) Rs



3 A man bought 500 metres of electronic wire at 50 paise per metre. He sold 50% of it at a profit of 5% At what per cent should he sell the remainder so as to gain 10% on the whole transaction?

एक आदमी ने 50 पैसे प्रति मीटर पर 500 मीटर इलेक्ट्रॉनिक तार खरीद ता है ,उसने इसका 50% 5% के लाभ पर बेच दिया, शेष को कितने % पर बेचना चाहिए ताकि पूरे लेनदेन पर 10% हासिल किया जा सके?

(1) 13%
(2) 12.5%

(3) 15%

(4) 20%



14

Ticket for an adult is Rs. 1500 and that of a child is Rs. 800 . One child goes free with two adults. If a group has 25 adults and 12 children, what is the discount the group gets?

एक वयस्क के लिए टिकट 1500 रुपये है और एक बच्चे का टिकट 800 रुपये है . एक बच्चा दो वयस्कों के साथ मुक्त (है) जाता है. यदि किसी समूह में 25 वयस्क और 12 बच्चे हैं, तो समूह को क्या छूट मिलती है?

26.47%

(2) 20.38

%



1
5

Mr. Dutta desired to deposit his retirement benefit of Rs 3 lacs partly to a post office and partly to a bank at 10% and 6% interests respectively. If his monthly interest income was Rs 2000, then the difference of his deposits in the post office and in the bank was :

श्री दत्ता ने अपनी सेवानिवृत्ति का 3 लाख रुपए का लाभ आंशिक रूप से एक डाकघर में और एक बैंक में जमा करता है ब्याज की दर क्रमशः 10% और 6% है , यदि मासिक ब्याज आय 2000 रुपए थी, तो डाकघर और बैंक में जमा राशि का अंतर यह था :

50000

(2) Rs

40000



1
6 18 men or 36 boys working 6 hours a day can plough a field in 24 days. In how many days will 24 men and 24 boys working 9 hours a day plough th same field ?
18 पुरुषों या 36 लड़कों को 6 घंटे एक दिन में काम कर 24 दिनों में एक खेत हल कर सकते हैं. कितने दिनों में 24 पुरुषों और 24 लड़को 9 घंटे एक दिन हल एक ही खेत हल काम करेंगे?

(1) 9

(2) 10

(3) 6

(4) 8



1
7 Two cars A and B travel from one city to another. At speeds of 72 kmph and 90kmph respectively. If car B takes 1 hours lesser than can A for the journey, then what is the distance (in km.)between the two cities?

दो कारें A और B एक शहर से दूसरे शहर में यात्रा करते हैं। क्रमशः 72 किमी प्रति घंटे और 90 किमी प्रति घंटे की गति से, यदि कार B यात्रा के लिए A से 1 घंटे कम लेता है, तो क्या दूरी है (किमी में.) दो शहरों के बीच?

(1) 270

(2) 360

(3) 240

(4) 400



1
8

If $n = 7 + 4\sqrt{3}$, then the value of $\left(\sqrt{n} + \frac{1}{\sqrt{n}}\right)$

is

/मान ज्ञात करे

(1) $2\sqrt{3}$

(2) 4

(3) -4

(4) $-2\sqrt{3}$



1
9 If $x + \frac{1}{x} = 17$, $\frac{x^4 + \frac{1}{x^2}}{x^2 - 3x + 1}$?

(1) $\frac{2431}{7}$

(2) $\frac{3375}{7}$

(3) $\frac{3375}{14}$

(4) $\frac{3985}{9}$



2
0

$a+b=3$, then $a^3+b^3+9ab-27$

(1) 24

(2) 25

(3) 0

(4) 27



2

1

The base of a triangle is $12\sqrt{3}$ cm and two angles at the base are 30° and 60° respectively. The altitude of the triangle is

त्रिकोण का आधार $12\sqrt{3}$ cm तथा आधार पर दो कोण क्रमशः 30° तथा 60° हैं। त्रिकोण की ऊंचाई है

(1) 24

(2) 12

(3) 9

(4) 27



2
2

Two circles of diameters 10cm and 6cm have the same centre. A chord of the larger circle is a tangent of the smaller one. The length of the chord is

दो व्रत जिनके व्यास 10cm और 6cm जिनका केंद्र समान है। बड़े वृत्त की जीवा छोटे व्रत की स्पर्श रेखा है तो जीवा की लंबाई ज्ञात करे ?

(1) 4 cm

(2) 8 cm

(3) 6 cm

(4) 10 cm



2

Circumcentre of ΔPQR is O. If $\angle QPR = 55^\circ$ and \angle

3 $QRP = 75^\circ$ what is the value in degree of $\angle OPR$?

परिकेन्द्र ΔPQR का \circ है $\angle QPR = 55^\circ$ और $\angle QRP = 75^\circ$
तो कोण $\angle OPR$?

(1) 45

(2) 40

(3) 65

(4) 70



2

4

The perimeter of a triangle is 54 m and its sides are in the ratio of 5:6:7. The area of the triangle is .

एक त्रिकोण की परिधि 54 मीटर है और इसके पक्ष 5:6:7 के अनुपात में हैं। त्रिकोण का क्षेत्र है

(1) 18 m^2

(2) $54 \sqrt{6}$

m^2

(3) $27 \sqrt{2} \text{m}^2$

(4) 25 m^2

