

SSC CGL 2017: Quantitative Aptitude

Chapter 4: Sequence and Series

SSC CGL 2018 Crash Course सभी विषयों की तैयारी सिर्फ 60 दिनों में

SSC CGL 2017 के सभी विषयों का **Topic Wise** प्रश्न तथा उत्तर का **PDF File** हमारे **Mobile App** पर फ्री में उपलब्ध है।

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(1) If the 1st and the 3rd term of an arithmetic progression are -10 and -4, what is the 12th term?
यदि अंकगणितीय प्रगति के पहले और तीसरे पद -10 और -4 हैं, तो 12वां पद क्या है?

SSCGL2017-22AUG-S2 : 64

(a) 26 (b) 20 (c) 17 (d) 23

(2) The 3rd and 7th term of an arithmetic progression are -9 and 11 respectively. What is the 15th term?
एक समांतर श्रेणी का तीसरा और सातवां पद क्रमशः -9 और 11 है। 15वां पद कौन सा है?

SSCGL2017-21AUG-S3 : 64

(a) 28 (b) 87 (c) 51 (d) 17

(3) The 3rd and 9th term of an arithmetic progression are 8 and 10 respectively. What is the 16th term?
समांतर श्रेणी का तीसरा और नौवां पद क्रमशः 8 और 10 है। 16वां पद क्या है?

SSCGL2017-17AUG-S1 : 64

(a) 34 (b) 28 (c) 25 (d) 31

(4) What is the sum of all prime numbers between 60 and 80?
60 से 80 के बीच आने वाली सभी अभाज्य संख्याओं का योग कितना है?

SSCGL2017-16AUG-S3 : 51

(a) 272 (b) 284 (c) 351 (d) 414

(5) The 3rd and 8th term of an arithmetic progression are -13 and 2 respectively. What is the 14th term?
समांतर श्रेणी का तीसरा और आठवां पद क्रमशः -13 और 2 है। 14वां पद क्या है?

SSCGL2017-17AUG-S2 : 64

(a) 23 (b) 17 (c) 20 (d) 26

(6) What is the sum of the first 12 terms of an arithmetic progression if the first term is -19 and last term is 36?
एक समांतर श्रेणी के प्रथम 12 पदों का योग क्या होगा, यदि पहला पद -19 है और अंतिम पद 36 है।

SSCGL2017-17AUG-S3 : 64

(a) 192 (b) 230 (c) 102 (d) 214

(7) What is the sum of the first 12 terms of an arithmetic progression if the 3rd term is -13 and the 6th term is -4?
समांतर श्रेणी के पहले 12 पदों का योग क्या है यदि तीसरा पद -13 और छठा पद -4 है?

SSCGL2017-18AUG-S1 : 64

(a) 67 (b) 45 (c) -30 (d) -48

(8) The 4th and 7th term of an arithmetic progression are 11 and -4 respectively. What is the 15th term?
समांतर श्रेणी का चौथा और सातवां पद क्रमशः 11 और -4 है। 15वां पद क्या है?

SSCGL2017-18AUG-S2 : 64

(a) -49 (b) -44 (c) -39 (d) -34

(9) What is the sum of the first 17 terms of an arithmetic progression if the first term is -20 and last term is 28?
एक समांतर श्रेणी के प्रथम 17 पदों का योग क्या है, यदि पहला पद -20 है और अंतिम पद 28 है।

SSCGL2017-18AUG-S3 : 64

(a) 68 (b) 156 (c) 142 (d) 242

(10) The 7th and 12th term of an arithmetic progression are -15 and 5 respectively. What is the 16th term?
समांतर श्रेणी का सातवां और बारहवां पद क्रमशः -15 और 5 है। 16वां पद क्या है?

SSC CGL 20

SSCGL2017-19AUG-S1 : 64

(a) 25 (b) 29 (c) 21 (d) 33

(11) The 2nd and 8th term of an arithmetic progression are 17 and -1 respectively. What is the 14th term?

एक समांतर श्रेणी का दूसरा और आठवां पद क्रमशः 17 और -1 है। 14 वां पद क्या है?

SSCGL2017-19AUG-S2 : 64

(a) -22 (b) -25 (c) -19 (d) -28

(12) What is the sum of the first 9 terms of an arithmetic progression if the first term is 7 and last term is 55?

एक समांतर श्रेणी के प्रथम 9 पदों का योग क्या होगा, यदि पहला पद 7 है और अंतिम पद 55 है।

SSCGL2017-19AUG-S3 : 64

(a) 219 (b) 137 (c) 231 (d) 279

(13) If the 3rd and the 5th term of an arithmetic progression are 13 and 21, what is the 13th term?

यदि एक अंकगणितीय प्रगति का तीसरा और पांचवां पद 13 और 21 है, तो 13 वां पद क्या है?

SSCGL2017-20AUG-S1 : 64

(a) 53 (b) 49 (c) 57 (d) 61

(14) What is the average of all natural numbers from 21 to 39? 21 से 39 तक कि सभी प्राकृतिक संख्याओं कि औसत क्या है?

SSCGL2017-20AUG-S2 : 56

(a) 30 (b) 31 (c) 29 (d) 28

(15) The 2nd and 6th term of an arithmetic progression are 8 and 20 respectively. What is the 20th term?

एक समांतर श्रेणी का दूसरा और छठा पद क्रमशः 8 और 20 है। 20वां पद क्या होगा ?

SSCGL2017-20AUG-S2 : 64

(a) 56 (b) 65 (c) 62 (d) 59

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(16) What is the sum of the first 11 terms of an arithmetic progression if the 3rd term is -1 and the 8th term is 19?

एक समांतर श्रेणी के प्रथम 11 पदों का योग क्या है, यदि तीसरा पद -1 है और आठवां पद 19 है।

SSCGL2017-21AUG-S1 : 64

(a) 204 (b) 99 (c) 25 (d) 104

(17) The 3rd and 6th term of an arithmetic progression are 13 and -5 respectively. What is the 11th term?

एक समांतर श्रेणी का तीसरा और छठा पद क्रमशः 13 और -5 है। 11वां पद कौन सा है?

SSCGL2017-21AUG-S2 : 64

(a) -29 (b) -41 (c) -47 (d) -35

(18) What is the sum of the first 12 terms of an arithmetic progression if the first term is 3 and last term is 47?

अंकगणितीय प्रगति के पहले 12 पदों को योग क्या है, यदि पहला पद 3 है और अंतिम पद 47 है।

SSCGL2017-22AUG-S1 : 64

(a) 260 (b) 300 (c) 280 (d) 220

(19) The 3rd and 8th term of an arithmetic progression are -14 and 1 respectively. What is the 11th term?

एक समांतर श्रेणी का तीसरा और आठवां पद क्रमशः -14 और 1 है। 11-वां पद कौन सा है?

SSCGL2017-22AUG-S3 : 64

(a) 14 (b) 16 (c) 20 (d) 10

(20) The 5th and 9th term of an arithmetic progression are 7 and 13 respectively. What is the 15th term?

एक समांतर श्रेणी का पांचवा और नौवां पद क्रमशः 7 और 13 है। 15वां पद क्या है?

SSCGL2017-23AUG-S1 : 64

(a) 22 (b) 21 (c) 55 (d) 59

(21) The 3rd and 6th term of an arithmetic progression are 19 and 37 respectively. What is the 13th term?

एक समांतर श्रेणी का तीसरा और छठा पद क्रमशः 19 और 37 है। 13वां पद क्या है?

SSCGL2017-23AUG-S2 : 64

(a) 79 (b) 43 (c) 45 (d) 49

(22) What is the sum of the first 13 terms of an arithmetic progression if the 5th term is 1 and the 8th term is -17?

एक समांतर श्रेणी के प्रथम 13 पदों का योग क्या है, यदि पांचवा पद 1 है और आठवां पद -17 है।

SSCGL2017-23AUG-S3 : 64

(a) -140 (b) 61 (c) -143 (d) 166

(23) What is the sum of the first 11 terms of an arithmetic progression if the 4th term is 11 and the 7th term is -4?

समांतर श्रेणी के पहले 11 पदों का योग क्या है यदि चौथा पद 11 और सातवां पद -4 है?

SSCGL2017-06AUG-S1 : 64

(a) -75 (b) 55 (c) 11 (d) 100

(24) What is the sum of the first 11 terms of an arithmetic progression if the first term is -31 and last term is 29?

समांतर श्रेणी के पहले 11 पदों का योग क्या है यदि पहला पद -31 है और अंतिम पद 29 है?

SSCGL2017-06AUG-S3 : 64

(a) 42 (b) -11 (c) 28 (d) 12

(25) What is the sum of the first 13 terms of an arithmetic progression if the first term is -10 and last term is 26?
एक अंकगणितीय प्रगति के पहले 13 पदों का योग क्या है, अगर पहला पद -10 है और अंतिम पद 26 है।

SSCGL2017-20AUG-S3 : 64

- (a) 104 (b) 140 (c) 84 (d) 98

SSC CGL 2017 Subject wise Questions & Answers

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Answer Key

1	D	2	C	3	D	4	C	5	C
6	C	7	C	8	B	9	A	10	C
11	C	12	D	13	A	14	A	15	C
16	B	17	D	18	B	19	D	20	A

21	A	22	C	23	C	24	B	25	A
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SSC CGL 2018

CRASH COURSE



EXAM DATE
04-06-2019 to 19-06-2019

REASONING

Analogy	01-February
Odd one Out	05-February
Alphabetical & Number Series	09-February
Picture Reasoning	13-February
Dice and Cube	17-February
Coding Decoding	21-February
Dictionary	25-February
Missing Term & Filler	01-March
Direction Sense	05-March
Venn Diagram	09-March
Clock & Calander	13-March
Statement based Question	17-March
Mathematical Operation	21-March
Puzzle & Jumbling	25-March
Symbol Replacement	29-March
Matrix Grid	28-March
Word Cannot be formed	01-April

QUANTITATIVE APTITUDE

Algebra	02-February
Trigonometry	06-February
Number System	10-February
AP Number Series	14-February
Time and Work	18-February
Time and Distance	22-February
Simple and Compound Interest	26-February
Data Interpretation	02-March
Coordinate Geometry	06-March
Geometry	10-March
Percentage	14-March
Average	18-March
Profit Loss & Discount	22-March
Mensuration Area Valuem	26-March
Ration & Proportion	30-March

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60 दिनों में मोबाइल एप्प पर

GENERAL AWARENESS

History	03-February
Geography	07-February
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Economics	15-February
Physics	19-February
Chemistry	23-February
Biology	27-February
Computer	03-March
Sports	07-March
Art and Culture	11-March
Inventor and Invention	15-March
Government Scheme	19-March
Book and Award	23-March
Other	27-March
Current	31-March

ENGLISH

Passage	04-February
Antonyms	08-February
Synonyms	12-February
Spelling	16-February
One Word Substitution	24-February
Error	28-February
Fill in Blanks	04-March
Cloze Test	08-March
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Idioms Phrase	16-March
Sentence Arrangement	16-March
Voice	20-March
Speech	24-March

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SSC CGL 20

Solution

(1)
210 divided by 11
Quotient = 19
Reminder = 1
 $210 - 1 = 209$

(2)
 $x + \frac{9}{x} = 10$
 $\Rightarrow x^2 + 9 = 10x$
 $\Rightarrow x^2 - 10x + 9 = 0$
After solving we get
 $X = 9, 1$

(3)
LCM of 7, 11, 14 = 154
 $1812 / 154$ remainder = 118
 $154 - 118 = 36$

(4)
Multiple each term by 113, 120, 145 and 160. So that denominator of each term can be equated. Now look up for the largest term that is 17/160.

(5)
Perfect square and a perfect cube That means it has to be x^6
 $3^6 = 729$
 $4^6 = 4096$
 $5^6 = 15625$

(6)
 $37 \times 66 = 2442$ is the least nearest multiple of 37.
The remainder when 2468 is divided by 37 = $2468 - 2442 = 26$.

(7)
Let fraction is x
According to question
 $2x + \frac{1}{x} = \frac{17}{6}$
 $2x^2 + 1 = \frac{17x}{6}$
After solving
 $12x^2 - 17x + 6 = 0$
 $12x^2 - 8x - 8x + 6$
After solving
 $(4x - 3)(3x - 2)$
 $x = \frac{3}{4} = \frac{2}{3}$
 $\frac{2}{3}$ is not in given option
So $\frac{3}{4}$ is correct answer.

(8)
Let 1st no. be x ,
Second no = $x + 1$
Third no = $x + 2$
Now, $(x + x + 1 + x + 2)^2 = x^2 + (x + 1)^2 + (x + 2)^2 + 292$
 $= (3x + 3)^2 = x^2 + x^2 + 2x + 1 + x^2 + 4 + 4x + 292$

After solving
 $x^2 + 8x - 6x - 48 = 0$
 $x(x + 8) - 6(x + 8) = 0$
 $x = 6$.
 \therefore Largest no. = 8

(10)
 $5000 = 2 \times 2 \times 2 \times 5 \times 5 \times 5 \times 5$
Divide by 2 = 2500 (it is a perfect square of 50)

(11)
LCM of 2, 3 and 7 is 42
 $700 / 42 = 16$
 $300 / 42 = 7$
 $16 - 7 = 9$

(12)

1	1	0	1	1	1	1
1×2^6	1×2^5	0×2^4	1×2^3	1×2^2	1×2^1	1×2^0
$64 + 32 + 0 + 8 + 4 + 2 + 1 = 111$						

(13)
 $(x + 7/x) = 11/2$
 $\Rightarrow (x^2 + 7)/x = 11/2$
 $\Rightarrow 2x^2 + 14 = 11x$
 $\Rightarrow 2x^2 - 11x + 14 = 0$
 $\Rightarrow (x - 2)(2x - 7) = 0$
 $x = 2, \quad x = 7/2$

(14)
Total Number between 700 and 950 = 250
Divisible by 3 = $250 / 3 = 83$
Divisible by 7 = $250 / 7 = 35$
LCM of 3, 7 = 21
Divisible by 21 = $714, \dots, 945 = 12$
Neither Divisible by 3 nor 7 = $250 - (83 + 35) + 12 = 144$

(15)
Let the fraction be $\frac{x}{y}$
So adding 5 we get $\frac{x+5}{y} = \frac{6}{5}$
So $5x + 25 = 6y$

Similarly $\frac{x}{y+4} = \frac{1}{2}$

We get $2x = y + 4$

Multiplying first equation by 6 and simultaneously solving both the equation we get x as 7 and y as 10
So $\frac{7}{10}$

(16)

SSC CGL 20

$$A = \frac{2}{9}(B + C)$$

$$B + C = \frac{9}{2}A$$

$$\text{So, } A + \frac{9}{2}A = 60500$$

$$11A = 60500 \times 2$$

$$A = \text{Rs. } 11000$$

And

$$B = \frac{3}{7}(A + C)$$

$$A + C = \frac{7B}{3}$$

$$B + \frac{7}{3}B = 60500$$

$$B = \text{Rs. } 18150$$

$$C = 60500 - 11000 - 18150 = \text{Rs. } 31350$$

(17)

$$1200 = 2 \times 2 \times 3 \times 10 \times 10$$

3 is required to become perfect square

(18)

First natural number = 1

Last natural number = 93

We know

$$\text{Average} = \frac{\text{first natural number} + \text{last natural number}}{2}$$

$$= \frac{1+93}{2} = \frac{94}{2} = 47$$

(19)

For divisibility by 11,

Sum of digits at even places minus sum of digits at odd places should be 0 or divisible by 11

$$\therefore 6 + 4 - 5 - M = 0 \text{ or a multiple of } 11$$

If value of M is 5, then it is 0 and divisible by 11.

(22)

So,

On factorizing the given number 1287

$$= 1287 = 3 \times 3 \times 11 \times 13$$

$$= 9 \times 11 \times 13$$

So, highest number is 13.

(23)

$$2116 = (46)^2$$

Is the perfect square

(24)

Let number = x

As per question

$$x + 4/x = 5$$

$$x^2 + 4 = 5x$$

$$x^2 - 5x + 4 = 0$$

$$x = 1 \text{ and } 4$$

If we take $x = 4$ then it satisfy the OPTION

So, $x = 4$

(25)

4131/19 Remainder 8

19-8

= 11 Added

(26)

Let the fraction be x

$$\therefore x - 1/x = 72/77$$

$$\Rightarrow x^2 - 1 = 72x/77$$

$$\Rightarrow 77x^2 - 77 - 72x = 0$$

$$\Rightarrow 77x^2 - 72x - 77 = 0$$

On solving above eqn.

$$x = 11/7$$

(28)

Let fraction = $\frac{x}{y}$

$$\frac{4x}{y} + \frac{6y}{x} = 11$$

$$4x^2 + 6y^2 = 11xy$$

$$\Rightarrow 4x^2 + 6y^2 - 11xy = 0$$

$$\Rightarrow (4x-3)(x+2y) = 0$$

$$\Rightarrow \frac{x}{y} = \frac{3}{4}, -\frac{2}{1}$$

(29)

9999/93 Remainder=48

Highest four-digit no. divisible by 93 is = 9999 - 48 = 9951

(31)

Let the fraction be x

\therefore ATQ

$$2x + 3/x = 29/3$$

$$\Rightarrow 2x^2 + 3 = 29/3 x$$

$$\Rightarrow 6x^2 - 29x + 9 = 0$$

Solving the eqn. we get

$$x = 9/2$$

(35)

So, 329 is completely divided by 7. So, nothing is to be add - on.

(38)

$$C : A = 63 : 24$$

$$= 21 : 8$$