

SSC CGL (Tier I) -2022 - HINTS & SOLUTIONS

ANSWER KEY

1.(2)	21.(1)	41.(4)	61.(4)	81.(2)
2. (4)	22.(2)	42.(3)	62.(3)	82.(3)
3. (3)	23.(3)	43.(4)	63.(3)	83.(4)
4.(4)	24.(3)	44.(2)	64.(1)	84.(2)
5.(1)	25.(4)	45.(2)	65.(4)	85.(1)
6.(2)	26.(2)	46.(3)	66.(3)	86.(2)
7.(2)	27.(1)	47.(2)	67.(3)	87.(4)
8.(3)	28.(4)	48.(3)	68.(2)	88.(2)
9.(4)	29.(4)	49.(1)	69.(4)	89.(4)
10.(1)	30.(1)	50.(1)	70.(1)	90.(3)
11.(2)	31.(3)	51.(2)	71.(2)	91.(2)
12.(3)	32.(2)	52.(1)	72.(1)	92.(2)
13.(4)	33.(1)	53.(4)	73.(3)	93.(1)
14.(1)	34.(1)	54.(1)	74.(1)	94.(3)
15.(1)	35.(2)	55.(1)	75.(4)	95.(3)
16.(3)	36.(3)	56.(4)	76.(4)	96.(4)
17.(2)	37.(4)	57.(3)	77.(1)	97.(3)
18.(3)	38.(4)	58.(4)	78.(3)	98.(2)
19.(4)	39.(3)	59.(1)	79.(3)	99.(1)
20.(3)	40.(2)	60.(2)	80.(4)	100.(2)

HINTS & SOLUTIONS

1.(2) Pythagorean triplets
(9, 12, 15)

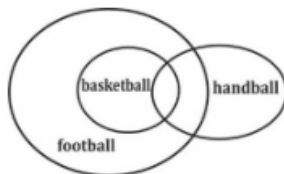


In reverse order
(-1) pattern follow

3.(3)
a e c d o / a e c d o / a e c d o
e o c o e d

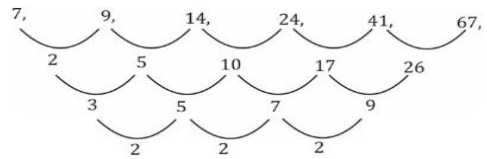
4.(4) except (d), all are divisible by 7

5.(1)
6.(2)

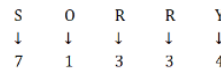
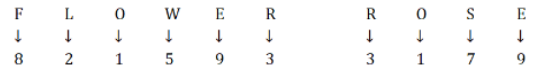


- I. ✓
- II. ×
- III. ×

7.(2)



8.(3)
9.(4)



10.(1) $9 \times (9+2) : 9$

99 : 9
In the same way
 $5 \times (5+2) : 5$
35 : 5

11.(2) Interchanging – and ÷
= $15+5 \div 10 \times 6-12$
= $15+\frac{1}{2} \times 6-12$
= 18-12
= 6

12.(3)

13.(4)

14.(1)

15.(1)

16.(3) Let no. of man in starting = m
 $15 \times m = 20 \times (m-8)$
 $15m = 20m - 160$
 $5m = 160$
M = 32

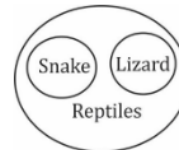
17.(2)

18.(3) Except (c), all options individually follow same pattern.

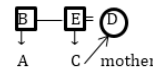
19.(4) $(5, (5+8) \times 3, 8)$

$(5, 39, 8)$
Same as
 $(6, (6+4) \times 3, 4)$
 $(6, 30, 4)$

20.(3)



21.(1)



22.(2)

23.(3)

24.(3) (+2) pattern follow.

25.(4) Except (d), all are fruits

26.(2) Brahmadeya was tax free land gift either in form of single plot or whole villages donated to Brahmans in the Chola period.

27.(1) The Vakataka Empire was a dynasty from the Indian subcontinent that originated from the Deccan in the mid-3rd century CE. Their state is believed to have extended from the southern edges of Malwa and Gujarat in the north to the Tungabhadra River in the south. Vindhya Shakti was the founder of Vakatak dynasty.

- 28.(4) Emperor Shah Jahan commissioned construction of the Red Fort on 12 May 1639, when he decided to shift his capital from Agra to Delhi and its design is credited to architect Ustad Ahmad Lahauri, who also constructed the TajMahal.
- 29.(4) Benjamin Disraeli is a British statesman and novelist who was twice prime minister of British. Disraeli admitted the Revolt of 1857 as a national revolt.
- 30.(1) Eravikulam National Park is situated in the state of Kerala. The government of Kerala resumed control in 1971 (KannanDevan Hill Produce (Resumption of lands) Act, 1971), and declared the Eravikulam-Rajamala Wildlife Sanctuary in 1975 to protect the habitat of the endangered Nilgiritahr. It became a National Park in 1978.
- 31.(3) Norwesters or the Kalbaishakhi is a local rain fall and thunder storm which occurs in India and Bangladesh. Kalbaishakhi occurs, with increasing frequency, from March till monsoon establishes over North-East India.
- 32.(2) Chota Nagpur Plateau region is rich in natural resources, with fertile land and adequate water. It is known as the mineral heartland of India.
- 33.(1) The Alps are the highest and most extensive mountain range system that lies entirely in Europe, stretching approximately 1,200 kilometres across eight Alpine countries: France, Switzerland, Italy, Monaco, Liechtenstein, Austria, Germany, and Slovenia.
- 34.(1) Article 345-Official language or languages of a State Subject to the provisions of Article 346 and 347, the Legislature of a State may by law adopt any one or more of the languages in use in the State or Hindi as the language or languages to be used for all or any of the official purposes of that State.
- 35.(2) National Disaster Management Authority has been constituted with the Prime Minister of India as its Chairman, a Vice Chairman with the status of Cabinet Minister, and eight members with the status of Ministers of State.
- 36.(3) Fiscal policy in India is formulated by Ministry of Finance.
- 37.(4) The Index of Industrial Production (IIP) is an index for India which details out the growth of various sectors in an economy such as mineral mining, electricity and manufacturing. The Eight Core Industries comprise nearly 40.27% of the weight of items included in the Index of Industrial Production (IIP).
- 38.(4) To hear a clear echo, the minimum distance should be 16.5 metre.
- 39.(3) According to Lenz law, the polarity of the induced emf is such that it opposes the change in magnetic flux responsible for its production.
- 40.(2) The Pauli Exclusion Principle states that, in an atom or molecule, no two electrons can have the same four electronic quantum numbers. As an orbital can contain a maximum of only two electrons, the two electrons must have opposing spins.
- 41.(4) Osmium is a chemical element with symbol (Os) and atomic number 76 it has maximum density
- 42.(3) Anemophily or wind pollination is a form of pollination whereby pollen is distributed by wind.
- 43.(4) Leishmaniasis is caused by a protozoa parasite from over 20 Leishmania species. Over 90 sandfly species are known to transmit Leishmania parasites. Visceral leishmaniasis (VL), also known as kala-azar is fatal if left untreated in over 95% of cases.
- 44.(2) The water-soluble vitamins are B and C. The B vitamins include thiamin, riboflavin, niacin, folate, pyridoxine, and B12. The water-soluble vitamins are easily dissolved and can be excreted in the urine.
- 45.(2) The 9-day humanitarian assistance and disaster relief (HADR) exercise code-named 'Tiger Triumph' has been started between armed forces of India and United States on the Eastern seaboard (at Visakhapatnam and Kakinada in Andhra Pradesh).

- 46.(3) The Assam State Commission for Protection of Child Rights (ASCPCR) launched a mobile app called 'SishuSuraksha', an e-complaint box for child right violations. The ASCPCR decided to develop an e-complaint box, keeping in mind the mission of a Digital India.
- 47.(2) The 11th BRICS Summit will convene in Brasilia, Brazil. The 2019 Brazilian Presidency focuses on the theme, 'BRICS: Economic Growth for an Innovative Future'.
- 48.(3) 'SLINEX 2019', the bilateral maritime exercise between India and Sri Lanka commenced on 7 September 2019 at Visakhapatnam (Andhra Pradesh).
- 49.(1) India has moved up six places to rank 34th on world travel and tourism competitiveness index, driven by rich natural and cultural resources and strong price competitiveness as per a WEF report .
- 50.(1) Indian cricket team has won the T20 Physical Disability World Cricket Series in England. In the final, India defeated England by 36 runs at the Blackfinch New Road ground in Worcester.
- 51.(2) Let the no. of bench = N
ATQ,
5N+5 = Total student
7N-3 = Total student
5N+5 = 7N-3
8 = 2N
N = 4
Total student = 25
- 52.(1)
$$\frac{(2x)^3 - (\sqrt{3}y)^3}{2x - \sqrt{3}y} = Ax^2 + Bxy + Cy^2$$

$$4x^2 + 3y^2 + 2\sqrt{3}xy = Ax^2 + Bxy + Cy^2$$
Compare on both side
A = 4, B = 2√3, C = 3
= 3×4 - 5√3×2√3 + 4×3
= 12 - 30 + 12
= -6
- 53.(4) $x^4 - 1 = 12x^2$
 $x^2 - \frac{1}{x^2} = 12$
 $x^6 - \frac{1}{x^6} - 3(12) = 12^3$
 $x^6 - \frac{1}{x^6} - 36 = 1728$
 $x^6 - \frac{1}{x^6} = 1764$
to find $(x^6 - \frac{1}{x^6}) - 7(x^2 - \frac{1}{x^2}) + 9$
= 1764 - 7 × 12 + 9
= 1773 - 84 ⇒ **1689**
- 54.(1) Cost price : mark price
100 - 25% : 100 + 20%
75 : 120
Now 25% discount = 120 - 120 × $\frac{25}{100}$
= 120 - 30
= 90
Profit = $\frac{15}{75} \times 100$
= 20%
- 55.(1)

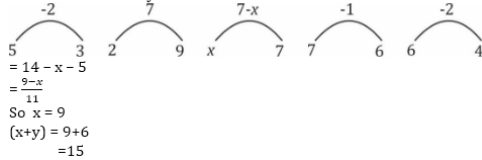
$$\begin{aligned} &= \frac{\sin x - \operatorname{cosec} x + \cot x}{\left(\frac{1}{\sin x} - \frac{\cos x}{\sin x}\right) \sin x} \\ &= \frac{\sin x - \frac{1}{\sin x} + \frac{\cos x}{\sin x}}{\frac{1 - \cos x}{\sin x}} \\ &= \frac{(\sin^2 x - 1) + \cos x}{\sin x} \\ &= \frac{(1 - \cos x) - \cos^2 x + \cos x}{\sin x (1 - \cos x)} \\ &= \frac{\cos x}{\sin x} \\ &= \cot x \end{aligned}$$

56.(4)

Number is divisible by 88 So it is also divisible by 8 and 11. If no. is divisible by 8 then $\frac{6y+4}{8}$ also divisible

$y = 6$ (for max value)

and if no. divisible by 11 then



57.(3)

Put $\theta = 30^\circ$

$$= (\sqrt{3})^2 - 3 \times 2 + 3$$

$$= 3 - 6 + 3$$

$$= 0$$

Find $\rightarrow \sec(15+\theta) + \tan \theta$

$$= \sec 45 + \tan 30$$

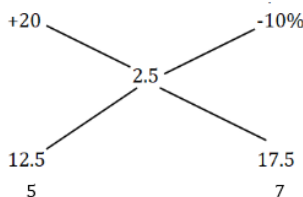
$$= \sqrt{2} + \frac{1}{\sqrt{3}}$$

$$= \frac{\sqrt{6} + 1}{\sqrt{3}}$$

$$= \frac{\sqrt{18} + \sqrt{3}}{3}$$

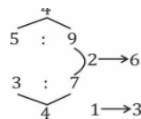
58.(4)

Rs. 300 is the 2.5% of Rs.12000



12 \rightarrow 12000
5 \rightarrow 5000

59.(1)



Present age

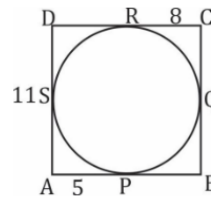
15 : 27

5 years from now

20 : 32

5 : 8

60.(2)



PA and SA are tangent

So PA = SA

SA = 5

DS = 11 - 5

= 6

DS = DR = 6

RC = 8

DC = 6 + 8

= 14 cm.

61.(4)

$$\frac{a + b}{2} + c = 155$$

= Same as more two

= add all of them

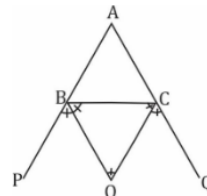
$$(a+b+c) + (a+b+c) = 378$$

$$a+b+c = 189$$

$$\text{average} = \frac{189}{3}$$

$$= 63$$

62.(3)



$$\begin{aligned} \angle BOC &= 90 - \frac{\angle A}{2} \\ &= 90 - 39 \\ &= 51^\circ \end{aligned}$$

63.(3)

A : B : C

5 : 8 : 3

$$\text{Total work} = 16 \times 7 = 112$$

B and C work for 4 days

$$\text{Total work done by B and C} = 4 \times 11 = 44$$

$$\text{Remaining} = 112 - 44 = 68$$

$$\text{Remaining work done by A} = \frac{68}{5} = 13\frac{3}{5} \text{ days.}$$

64.(1)

$$\text{ratio of area} = \left(\frac{d_1}{d_2}\right)^2 = \left(\frac{7}{5}\right)^2 = 49 : 25$$

65.(4)

$$h = \frac{\sqrt{3}}{2} a = (\text{sum of perpendicular})$$

$$\frac{\sqrt{3}}{2} a = 16\sqrt{3}$$

$$a = 32$$

$$\text{Perimeter} = 32 \times 3 = 96 \text{ cm.}$$

66.(3)

Difference between English and Chemistry = Difference between English and mathematics

67.(3)

$$150/360 \times 810 = 337.5$$

$$180/360 \times 810 = 405$$

$$\text{Difference} = 67.5$$

68.(2)

$$\text{Hindi} = \frac{70}{360} \times 810 = 157.5$$

69.(4)

$$E+H+SS=180^\circ$$

$$M+C=180^\circ$$

$$\text{Difference} = 0$$

70.(1)

Grand Test – SSC-220908



- 97.(3) Despite: without being affected by; in spite of.
Despite doesn't take 'of' with it. Also 'all the ups and downs' is the correct phrase.
- 98.(2) Infuse: fill; pervade.
Imperil: put at risk of being harmed, injured, or destroyed.
Stir: move or cause to move slightly.
- 99.(1) Discretion: the quality of behaving or speaking in such a way as to avoid causing offence or revealing confidential information.
Imprudence: a lack of caution in practical affairs.
Hence Discretion and Imprudence are antonyms to each other.
- 100.(2) Simian: relating to or affecting apes or monkeys.
Spartan: showing or characterized by austerity or a lack of comfort or luxury.
Truant: a pupil who stays away from school without leave or explanation.