

SSC CGL (Tier I) 2022 - HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

- 1.(3) Country Leading producer.
 Brazil Coffee
 China Tea.
 Assam is a leading producer of Tea in India.
- 2.(2)
 $= (1 + 4) \times (2 + 6)$
 $= 5 \times 8$
 $= 40$
 Same as. $= (1 + 1) \times (2 + 3)$
 $= 2 \times 5$
 $= 10.$
- 3.(4) bdca/ bdca/ bdca
- 4.(2)
-
- 5.(3) Sahara desert is in several countries of Africa continent. Similarly, Atacama desert is in Chile country of South America continent.
- 6.(2)
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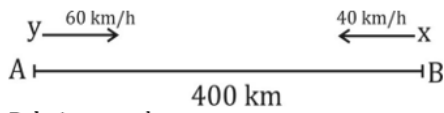
- 7.(2)
 8.(2)
 $5 \times 2 - 1 = 9$
 $9 \times 2 + 1 = 19$
 $19 \times 2 - 1 = 37$
 $37 \times 2 + 1 = 75$
 $75 \times 2 - 1 = 149$
- 9.(1) Except (a), all are capitals of states
- 10.(4)
 $6^2 + 6 = 42$
 $7^2 + 7 = 56$
 $8^2 + 8 = 72$
 $8^2 + 9 = 90$
- 11.(2)
 $8 \times 7 : 8 \times 9 = 56 : 72$
 $4 \times 7 : 4 \times 9 = 28 : 36$
- 12.(3)
 $1w = 1M + 1b$
 $m = \frac{3}{2}b.$
 Let boys receive = $2x$
 Man = $3x$
 And women = $3x + 2x$
 $= 5x$
 $= 3m + 4w + 6b$
 $= 3 \times 3x + 4 \times 5x + 6 \times 2x$
 $= 9x + 20x + 12x$
 $= 41x$
 $41x \rightarrow 410$
 $x \rightarrow 10$
 then 6 boys receive amount = $6 \times 2x$
 $= 6 \times 20$
 $= 120$
- 13.(3)
 14.(2)
 15.(1)
 16.(4)
 17.(3) Directly coded
 18.(4) Sum is 27
 19.(4) Pythagoras triplets
 20.(3)
 Interchanging - and +
 $= 12 + 6 \div 12 \times 6 - 6$
 $= 12 + \frac{1}{2} \times 6 - 6$
 $= 15 - 6$
 $= 9$
- 21.(3)
 22.(1)
-
- I ×
 II √
 III ×
- 23.(2) Except (b) all are divisible by 11.
 24.(3) +2, -2 pattern.
 25.(2) 31 triangles
 26.(2) Kanishka came to rule an empire in Bactria extending from Turfan in the Tarim Basin to Pataliputra on the Gangetic plain. The main capital of his empire was located at Purushapura modern day Peshawar.

Grand Test – SSC –



- 27.(3) The Battle of Talikota (23 January 1565) was a watershed battle fought between the Vijayanagara Empire and the Deccan sultanates. Sadashiv Raya of Tuluva dynasty was ruling Vijaynagar during this time.
- 28.(4) In January 1528, the Battle of Chanderi took place in the aftermath of the Battle of Khanwa in which the Mughal Emperor Babur had defeated a confederacy of Rajputs and Afghans which was headed by Rana Sanga of Mewar.
- 29.(1) Vasco da Gama, discoverer of the sea route to India (1498), established the first Portuguese factory at Kochi in 1502, and the Portuguese viceroy Alfonso de Albuquerque built the first European fort in India there in 1503.
- 30.(2) The wide treeless grassy plains in South America are called Pampas.
- 31.(4) Bushmen tribes are found in Kalahari desert. The Kalahari Desert is a large semi-arid sandy savannah in southern Africa.
- 32.(2) Kimberley is famous for diamond mining. The Big Hole, Open Mine or Kimberley Mine is an open-pit and underground mine in Kimberley, South Africa, and claimed to be the largest hole excavated by hand.
- 33.(4) The Kali Gandaki or Gandaki River is one of the major rivers of Nepal and a left bank tributary of the Ganges in India. It is also called Krishna Gandaki in Nepal.
- 34.(2) According to Article 75(3) of the Constitution of India the Council of Ministers are collectively responsible to the House of the People Lok Sabha and to the Lok Sabha in particular.
- 35.(1) The Balwant Rai committee submitted its report in November 1957 and recommended the establishment of the scheme of 'democratic decentralisation' which finally came to be known as Panchayati Raj. It recommended for three tier Panchayati Raj system in India.
- 36.(3) In perfect competition a firm maximizes profit by setting output such that marginal revenue is equal to marginal costs.
- 37.(2) The rate of tax increase as the amount of the tax base increases is called Progressive tax.
- 38.(4) The charge passing through the circuit always passes through an appliance (which acts as a resistor) or through another resistor, which limits the amount of current that can flow through a circuit.
- 39.(3) Light and other types of electromagnetic radiation are transverse waves. Water waves and S waves (a type of seismic wave) are also transverse waves. In transverse waves, the vibrations are at right angles to the direction of travel.
- 40.(4) Hydrogenation is the process where hydrogen atoms bind to the double bond of a compound, facilitating its conversion to a single bond, in the presence of a catalyst. Hydrogenation is commonly used during the manufacturing of food products where unsaturated fats and oil are converted to saturated fats and oils.
- 41.(3) Among the following elements, the lowest melting point is of Argon i.e. -189.4°C
- 42.(4) In evolutionary biology, parasitism is a relationship between species, where one organism, the parasite, lives on or in another organism, the host, causing it some harm, and is adapted structurally to this way of life. Ascariasis is caused by parasite *Ascaris lumbricoides*.
- 43.(3) Stamen is the pollen producing part of a flower, usually with a slender filament supporting the anther.
- 44.(2) A Bio fertilizer is a substance which contains living microorganisms which, when applied to seeds, plant surfaces, or soil, colonize the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant. They convert nitrogen to ammonia.
- 45.(2) Chena is regarded as the oldest form of cultivation in Sri Lanka, extending as far back as 5000 years in Sri Lankan history.
- 46.(3) The World Tourism Day (WTD) is observed every year on 27th of September to create awareness on the role of tourism among the international community and to demonstrate how it affects social, cultural, political and economic values worldwide. The 2019 theme is "Tourism and Jobs: A Better Future for All".
- 47.(1) Bulgarian economist Kristalina Georgieva has been named as the new Managing Director (MD) of the International Monetary Fund (IMF).
- 48.(3) Prime Minister Narendra Modi and visiting Mongolian President Khaltmaagiin Battulga have jointly unveiled a golden statue of Lord Buddha at Gandan Tegchenling Monastery in Ulaanbaatar through video-conferencing in New Delhi.
- 49.(2) The 8th edition of joint military exercise titled Shaheen VIII has started between the air forces of China and Pakistan in Chinese city of Holton, which is closer to the Indian border near Ladakh.
- 50.(3) The book titled 'Chandra Shekhar – The Last Icon of Ideological Politics' has been authored by Rajya Sabha deputy chairman Harivansh and writer Ravi Dutt Bajpai.
- 51.(2)
- | | | | |
|----------------------|---------|---------|--------------|
| 50p | 1 rupee | 2 rupee | |
| 6 × 6 | 2 × 6 | 1 × 6 | → 9 × 6 coin |
| 36 | 12 | 6 | → 54 coins |
| Rupee → 18 + 12 + 12 | | | |
| → 42 | | | |
-
- | | | | |
|----------|-----|---------|--------------------|
| 25p | 50p | 1 rupee | |
| 6 | 5 | 3 | = 14 coin |
| *6 (1.5) | 2.5 | 3 | = 7 rupee × 6 = 42 |
| 36 | 30 | 18 | = 84 coins |
- 52.(3)
- | | | | |
|-----|---|---|---|
| | x | y | z |
| E → | 3 | 5 | 8 |
- Work complete in 40 days.
Total w → 40×16
→ 640
- x and y work for 20 days = $20 \times 8 = 160$
Remaining = $640 - 160 = 480$
z can do work in = $\frac{480}{8} = 60$ days.
- 53.(1)
- $$\frac{\sin^2 \theta \cdot \cos^2 \theta}{\sin^2 \theta (1 - \cos^2 \theta)} = \frac{1}{3}$$
- $$\frac{\cos^2 \theta}{\sin^2 \theta} = \frac{1}{3}$$
- $$\cot \theta = \frac{1}{\sqrt{3}}$$
- $$\cot \theta = \cot 60$$
- $$\theta = 60^{\circ}$$
- find → $\sec \theta + \tan \theta$
= $\sec 60 + \tan 60$
= $(2 + \sqrt{3})$
- 54.(1)

Grand Test – SSC –



Relative speed
 = 60 + 40
 100 km/h
 Time = $\frac{400}{100}$
 Time = 4h
 So distance from B is = s × t
 = 40 × 4
 160 km.

55.(4)

$$x^2 + y^2 - 2xy + y^2 + 6y + 9 = 0$$

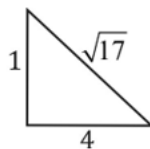
$$(x - y)^2 + (y + 3)^2 = 0$$

$$x = y, y = -3 = x$$

$$= -27 + 54 + 81$$

$$= 108$$

56.(2)



$$\tan \theta = \frac{1}{4}$$

$$= \sin \theta \cdot \cos \theta$$

$$= \frac{1}{\sqrt{17}} \times \frac{4}{\sqrt{17}}$$

$$= \frac{4}{17}$$

57.(2)

Average of 10 no. → 41

sum → 410

first 3 no. → 38

sum → 114

last 4 no. → 45.5

sum → 182.0

let 6th no. → x

4th no. → x + 2

5th no. → x + 3

$$410 = 114 + 182 + 3x + 5.$$

$$410 = 301 + 3x$$

$$109 = 3x$$

$$x = \frac{109}{3}$$

$$4^{\text{th}} \text{ no.} \rightarrow \frac{109}{3} + 2 \quad | \quad 6^{\text{th}} \text{ no.} \rightarrow \frac{109}{3}$$

$$= \frac{115}{3}$$

$$\text{Average} = \frac{\frac{115}{3} + \frac{109}{3}}{2}$$

$$= \frac{224}{6}$$

$$= 37.3$$

58.(4)

$$= \frac{15}{9} \text{ of } \left(\frac{3}{2} \div 1\right) \div \left(\frac{4}{3} \times \frac{4}{3} \div 1\right) \text{ of } \left(\frac{4}{5} \div \frac{2}{5} \times \frac{25}{8}\right)$$

$$= \frac{45}{18} \div \left(\frac{16}{9}\right) \text{ of } \left(\frac{4}{5} \times \frac{5}{2} \times \frac{25}{8}\right)$$

$$= \frac{15}{6} \div \frac{16}{9} \text{ of } \frac{25}{4}$$

$$= \frac{15}{6} \div \frac{100}{9} = \frac{15}{6} \times \frac{9}{100}$$

$$= \frac{9}{40}$$

59.(1)

Put x = 6, y = 3

$$x + y = 9$$

$$xy = 18$$

$$= 6^3 + 3^3$$

$$= 216 + 27$$

$$= 243$$

60.(3)

1 year → 18%

$$\frac{5}{9} \text{ year} \rightarrow 18 \times \frac{5}{9} = 10\%$$

For 1 year interest = 1800

$$\text{Next } \frac{5}{9} \text{ year interest} = 1000 + 180$$

$$= 2980$$

61.(2)

Let Rs. 100 is the cp of each article.

$$14\% \text{ profit} \rightarrow \begin{matrix} \text{cp} & \text{sp} \\ 100 & 114 \end{matrix}$$

$$14\% \text{ loss} \rightarrow \begin{matrix} 100 & 86 \end{matrix}$$

$$50 \times_{57} 43 \times_{57}$$

$$50 \times_{43} 57 \times_{43}$$

$$700 < \frac{2850}{2150} \quad \frac{2451}{2451} > \text{both are same}$$

$$5000 = \text{Rs } 820$$

$$700 = \frac{820}{5000} \times 700$$

$$= \frac{820 \times 7}{50}$$

$$= \frac{574}{5} = 114.8$$

62.(3)

$$\frac{60}{320} \times 100 = 18.75\%$$

63.(1)

$$\frac{3700}{3700+2000+1800+2400} \times 100$$

$$\frac{3700}{9900} \times 100 = 37.4\%$$

64.(1)

$$\text{Rice} = \frac{160}{400} \times 100 = 40\%(\text{max})$$

$$\text{Other cereals} = \frac{190}{500} \times 100 = 3.8\%$$

65.(4)

$$\text{Rice} = \frac{2000}{5} = 400$$

$$\text{Barley} = \frac{1800}{5} = 360$$

$$\text{Difference} = 40$$

66.(1)

$$\frac{150}{450} \times 100 = 33.33\% \text{ decrease}$$

67.(1)

volume of hollow Cylinder $V = \pi(r_1^2 - r_2^2)h$

$$\frac{22}{7} \times 2 \times 1 \times 518$$

$$= \frac{44 \times 518}{7}$$

$$= 44 \times 74$$

$$= 3256$$

$$1 \text{ cm}^2 \rightarrow 9.5 \text{ gm}$$

$$3256 \text{ cm}^3 = 9.5 \times 3256 \text{ gm}$$

$$= 30932 \text{ gm}$$

$$= 30.93 \text{ kg}$$

68.(4)

$$a = b$$

$$\frac{2 \cos x}{1 + \cos x + \sin x} = \frac{c}{1 + \cos x}$$

$$\text{put } x = 0^\circ$$

$$\frac{2}{1+1+0} = \frac{c}{1+1}$$

$$\frac{2}{2} = \frac{c}{2}$$

$$c = 2$$

69.(2)

Let price of an item = 10

And they sale item before reduction = 10 item

Total amount = 100

ATQ

10/ item 10 item

6 10 + x% of 10

$$6(10 + x\% \text{ of } 10) = 150 \text{ (50\% increase revenue)}$$

$$10 + x\% \text{ of } 10 = 25$$

$$\frac{x}{10} = 15$$

$$x = 150$$

Grand Test – SSC –



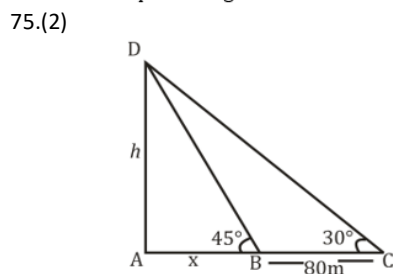
70.(3) When a number is divisible by 72
Then it is also divisible by 9×8
If any no. divisible by 8
Then last 3 digit also divisible
 $= \frac{5y8}{8}$
 $= \text{put } y = 2$
and if no. divisible by 9
then sum is also divisible by 9
 $= 52x423528$
 $\Rightarrow x = 5$
 $= 3x - 2y$
 $= 15 - 4 = 11$

71.(2) power of 7 is the cyclic of 4
 $\frac{333}{7^1} = 1$ (remainder)
 $7^1 = 7$

72.(1) Let the price of each article = 10
And total articles = 10
MP = 15 (50% above)
 $\Rightarrow 6 \times 15 = 90$
 $\Rightarrow 4 \times 9 = 36$
Total selling 126
Total cost price = 100
Profit = 26%

73.(2) $\frac{\text{Area of } \triangle ABC}{\text{Area of } \triangle DEF} = \left(\frac{\text{altitude of } \triangle ABC}{\text{altitude of } \triangle DEF}\right)^2$
 $\frac{13}{11} = \frac{6.5}{x}$
 $x = 5.5 \text{ cm}$

74.(3) $\begin{matrix} x & y \\ 5 & 6 \\ \swarrow & \searrow \\ & 1 \end{matrix} \xrightarrow{1 \times 2} \begin{matrix} 11 & 13 \\ \swarrow & \searrow \\ & 2 \end{matrix}$
 $\begin{matrix} 10 & 12 \\ 11 & 13 \end{matrix} \xrightarrow{1 - 5}$
Y's present age = $12 \times 5 = 60$
Z's present age = 67



In $\triangle ABD$
 $\tan 45 = \frac{h}{x}$
 $h = x$
in $\triangle ACD$
 $\tan 30 = \frac{h}{80+x}$
 $\frac{1}{\sqrt{3}} = \frac{h}{80+x}$
 $80 + h = \sqrt{3}h$ ($h = x$)
 $h(\sqrt{3} - 1) = 80$
 $h = \frac{80(\sqrt{3}+1)}{2}$
 $h = 40(\sqrt{3} + 1)$

- 76.(3) Replace pronoun 'their' with 'its'.
According to the Subject-Verb Agreement rule, singular subject takes singular verb/pronoun with it. Here manja, a synthetic kite string being singular will take singular pronoun 'its'.
- 77.(3) Byzantine means complicated and difficult to understand.
- 78.(3)
- 79.(1) A slap on the wrist means a mild reprimand or punishment.
- 80.(3) Partake: join in (an activity).
Pulsate: to expand and contract rhythmically.
Plummet: to fall very quickly and suddenly.
Perforate: pierce and make a hole or holes in.
- 81.(3) Run into the sand means to be stymied, obstructed, or foiled; to reach a point where one cannot make any further progress.
- 82.(3) A malevolent person deliberately tries to cause harm or evil.
- 83.(2) Plural noun 'measures' should be characterized with plural verb 'have been'.
Piecemeal is an adjective characterized by unsystematic partial measures taken over a period of time. Hence option B is the correct choice.
- 84.(2) Bustle: move in an energetic and busy manner.
Amble: walk or move at a slow, relaxed pace.
Scamper: run with quick light steps, especially through fear or excitement.
Scutter: move hurriedly with short steps.
Hence Bustling and Ambling are antonyms to each other.
- 85.(2) Regime: a system or ordered way of doing things.
Methodology: a system of methods used in a particular area of study or activity.
Hence Regime and Methodology are synonyms to each other.
- 86.(4)
- 87.(1)
- 88.(2)
- 89.(2)
- 90.(3)
- 91.(1) Replace 'missed out' with 'miss out'.
Modals take base form of verb with them.
- 92.(3)
- 93.(3) Pertinacious means holding firmly to an opinion or a course of action.
- 94.(1) Hold a brief means to support or defend a position by argument.
- 95.(3) Impregnate means soak or saturate (something) with a substance.
- 96.(1) The order of the day is the correct phrase which means the prevailing custom or state of affairs.
- 97.(3) Ruffle means to annoy or upset someone, or to make someone very nervous.
Oblige means do as (someone) asks or desires in order to help or please them.
- 98.(4) **Maverick** means an unorthodox or independent-minded person.
Conformist means a person who conforms to accepted behavior or established practices.
- 99.(2) Abut means be next to or have a common boundary with.
- 100.(4)