

SSC CGL Previous Year Paper (Solutions)

S1. Ans.(b)

Sol. $18 + 6 - 6 \div 3 \times 3 = 6$

on interchanging + and \div

$18 \div 6 - 6 + 3 \times 3$

$3 - 6 + 9 = 6 = \text{RHS}$

S2. Ans.(a)

sol.

4. Illness

6. Doctor

2. Diagnosis

3. Prescription

1. Medicine

5. Recovery

S3. Ans.(d)

S4. Ans.(b)

Sol. Rest are multiples of consecutive numbers

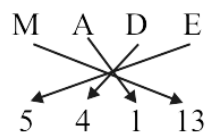
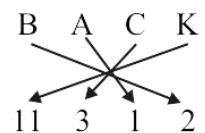
$3 \times 4 = 12$

$7 \times 8 = 56$

$5 \times 6 = 30$

S5. Ans.(b)

Sol.



S6. Ans.(d)

Sol.

$4 = 4^3 \div 2 = 64 \div 2 = 32$

$6 = 6^3 \div 2 = 216 \div 2 = 108$

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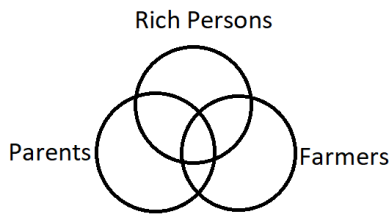
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S7. Ans.(b)

Sol.

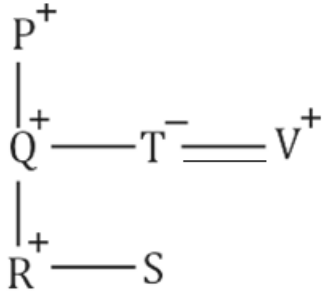


S8. Ans.(a)

Sol. -1 pattern in reverse order.

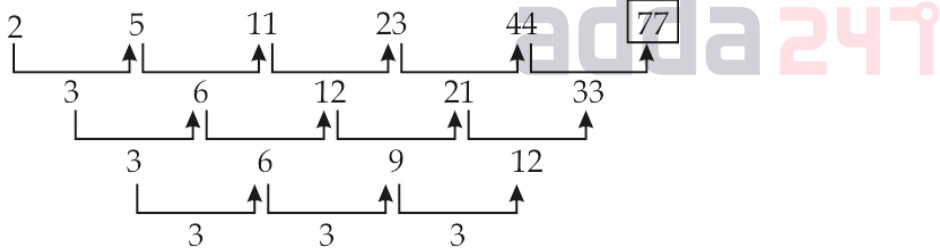
S9. Ans.(d)

Sol.



S10. Ans.(a)

Sol.



S11. Ans.(c)

Sol. Action leads to Reaction, Stimulus leads to response

S12. Ans.(a)

S13. Ans.(b)

Sol. Opposite faces are

$3 \rightarrow 6$

$5 \rightarrow 2$

$1 \rightarrow 4$

S14. Ans.(b)

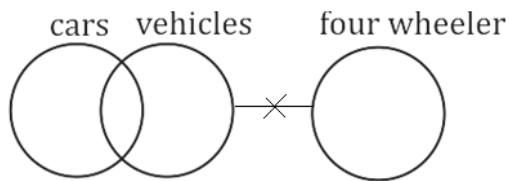
Sol. HNLJ is odd, +3, -2, +1 pattern

S15. Ans.(a)

Sol. acbddb/acbddb/acbddb

S16. Ans.(c)

Sol.



only conclusion III follows

S17. Ans.(b)

Sol. Pair of opposite letters

S18. Ans.(d)

Sol. Difference of 6 and 8

S19. Ans.(d)

Sol. Bull is an animal, rest are all birds.

S20. Ans.(d)

Sol. There are 16 triangles

S21. Ans.(c)

S22. Ans.(a)

S23. Ans.(d)

Sol. Sun contains heat, fruits contain vitamin.

S24. Ans.(c)

Sol. $\times 2 - 2$, $\times 4 - 2$ pattern

S25. Ans.(b)

Sol.

$$\frac{F - 10}{S - 10} = \frac{7}{2}$$

$$\Rightarrow 2F - 20 = 7S - 70$$

$$\Rightarrow 2F - 7S = -50 \dots(i)$$

Also,

$$\frac{F + 10}{S + 10} = \frac{9}{4}$$

$$\Rightarrow 4F + 40 = 9S + 90$$

$$\Rightarrow 4F - 9S = 50 \dots(ii)$$

on solving (i) and (ii)

$$F = 80, S = 30$$

$$F + S = 110$$



S26. Ans.(b)

Sol. Nilgiri Biosphere Reserve located in Tamil Nadu, Kerala and Karnataka was the first biosphere reserve established in 1986.

S27. Ans.(c)

Sol. Literal meaning of Chu is Snowy Range, while that of Faat is Worship. This group folk dance is performed in the honour of Mount Khangchendzonga, the guardian deity of the Sikkimese people.

S28. Ans.(b)

Sol. The ideal of residual powers in Indian constitution has been taken from the constitution of Canada.

S29. Ans.(b)

Sol. The Kailash Mansarovar Yatra, a Hinduism pilgrimage to Mount Kailash and Lake Manasarovar, traverses this pass. Lipulekh pass is connected to Chang Lobochohela, near the old trading town of Purang (Taklakot), in Tibet.

S30. Ans.(d)

Sol. Buckminsterfullerene is a type of fullerene with the formula C₆₀. Buckminsterfullerene (C₆₀), or buckyballs, is an allotrope of carbon (distinctly different from graphite and diamond).

S31. Ans.(b)

Sol. Sirimavo Bandaranaike was elected as the world's first female Prime Minister on 21 July 1960. She was a Sri Lankan stateswoman.

S32. Ans.(b)

Sol. The Rangarajan Committee has recommended total decontrol of the sugar industry by doing away with the levy sugar obligation, release mechanism and freeing of export-import.

S33. Ans.(b)

Sol. Project Tiger is a tiger conservation programme launched in April 1973 by the Government of India during Prime Minister Indira Gandhi's tenure.

S34. Ans.(b)


Sol. Fathimath Dhiyana Saeed is a Maldivian diplomat, and was the Secretary-General of the South Asian Association for Regional Cooperation. She was the first woman to hold this post since the organization's inception in 1985.

S35. Ans.(b)

Sol. The Mizoram Assembly has unanimously passed The Mizoram Maintenance of Household Registers Bill, 2019 that seeks to detect foreigners illegally residing in the north-eastern state of Mizoram.

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S36. Ans.(a)

Sol. Government has approved the grant of Maharatna status to Bharat Heavy Electricals Limited (BHEL) and Gas Authority of India Ltd.(GAIL). This decision was communicated on 1st February, 2013

S37. Ans.(a)

Sol. Chyap-Brung is the traditional musical instrument of the Limboo community. It is like a Dholak in shape but much bigger in size.

S38. Ans.(a)

Sol. The Mahājanapadas were sixteen kingdoms or oligarchic republics that existed in ancient India from the sixth to fourth centuries BCE. Two of them were most probably ganatantras and others had forms of monarchy.

S39. Ans.(d)

Sol. Ethyl acetate is a colourless liquid at room temperature with a pleasant "fruity" smell.

S40. Ans.(b)

Sol. The pituitary gland is often dubbed the "master gland" because its hormones control other parts of the endocrine system, namely the thyroid gland, adrenal glands, ovaries, and testes.

S41. Ans.(c)

Sol. The 2017–18 Ranji Trophy was the 84th season of the Ranji Trophy, the premier first-class cricket tournament that took place in India between October 2017 and January 2018. Vidarbha won the tournament, beating Delhi by 9 wickets in the final, to win their first Ranji Trophy title.

S42. Ans.(b)

Sol. SpiceJet is the first Indian budget carrier to join the International Air Transport Association (IATA), which has over 290 airlines as members.

S43. Ans.(a)

Sol. Propanal is an aldehyde that consists of ethane bearing a formyl substituent.

S44. Ans.(d)

Sol. Social media platforms and the Internet and Mobile Association of India (IAMAI) presented a 'Voluntary Code of Ethics for the General Election 2019' to the Election Commission.

S45. Ans.(d)

Sol. The Chalukya dynasty was established by Pulakeshin I in 543. Pulakeshin I took Vatapi (modern Badami in Bagalkot district, Karnataka) under his control and made it his capital. Pulakeshin I and his descendants are referred to as "Chalukyas of Badami"

S46. Ans.(b)

Sol. Article 44 provides that the State shall endeavour to secure for all citizens a Uniform Civil Code throughout the territory of India.

S47. Ans.(d)

Sol. The Special Olympics World Games 2019 was inaugurated at Abu Dhabi. The Special Olympics World Games 2019 is being hosted by the cities of Abu Dhabi and Dubai in the United Arab Emirates. For the first time, the Special Olympics is being held in the Middle East and North Africa region.

S48. Ans.(d)

Sol. The first workable prototype of the Internet came in the late 1960s with the creation of ARPANET, or the Advanced Research Projects Agency Network.

S49. Ans.(b)

Sol. Vaishali was the capital city of Vajji. Vajji also housed popular ancient cities like Hatthigama, Bhoganagara, and Kundapura.

S50. Ans.(b)

Sol. The marriage of Chandragupta I was a turning point in the life. He got Pataliputra in dowry from the Lichhavis. From Pataliputra, he laid the foundation of his empire and started conquering many neighbouring states with the help of the Licchavis. He ruled over Magadha (Bihar), Prayaga and Saketa (east Uttar Pradesh).

S51. Ans.(b)

Sol. Divisible by 72 means divisible by 8 and 9.

last 3 digit must be divisible by 8

$31y \div 8$ we get

$$y = 2$$

sum of digits must be multiple of 9.

$$\text{so, } 7 + 8 + 9 + x + 5 + 3 + 1 + 2$$

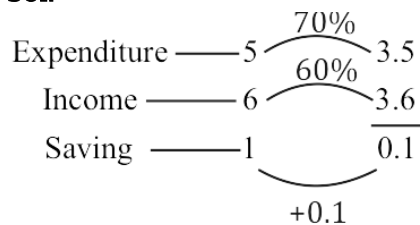
$$= 8 + x$$

$$\text{so, } x = 1$$

$$\text{now, } 5x - 3y = 5 - 6 = -1$$

**S52. Ans.(c)**

Sol.



$$\text{Increase in savings} = \frac{0.1}{1} \times 100\%$$

$$= 10\%$$

S53. Ans.(b)

Sol.

$$\angle DAK = \frac{\angle B - \angle C}{2} = \frac{16}{2} = 8^\circ$$

S54. Ans.(d)

Sol.

$$\cos\theta = \frac{B}{H} = \frac{2p}{1+p^2}$$
$$\tan\theta = \frac{P}{B} = \frac{1-p^2}{2p}$$

S55. Ans.(a)

Sol. total cars of type B = 270

$$\text{required \%} = \frac{60}{270} \times 360 = 80^\circ$$

S56. Ans.(d)

Sol. B in 2013, 2014, 2015 and 2017 = 210

All cars in 2017 = 255

$$\text{required \%} = \frac{45}{255} \times 100 = 17.6$$

S57. Ans.(b)

Sol.

$$\left(\frac{1}{2}\sec\theta + \sin\theta\right)^{-1}$$
$$= \frac{2}{\sec\theta + 2\sin\theta} = \frac{2\cos\theta}{1 + 2\sin\theta \cos\theta}$$

now, $\cos^2\theta = 3(\cot^2\theta - \cos^2\theta)$

$$\Rightarrow \cos^2\theta = 3\cot^2\theta - 3\cos^2\theta$$

$$\Rightarrow 4\cos^2\theta = 3\frac{\cos^2\theta}{\sin^2\theta}$$

$$\Rightarrow \sin\theta = \frac{\sqrt{3}}{2} \Rightarrow \theta = 60^\circ$$

$$\text{Required value} = \frac{2 \times \frac{1}{2}}{1 + 2 \times \frac{1}{2} \times \frac{\sqrt{3}}{2}}$$

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

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

S58. Ans.(d)

Sol. $(4x)^2 + (3y)^2 + (2z)^2 - 24x + 24y - 24z = -61$

$$\Rightarrow 4x = 3, 3y = -4$$

$$2z = 6$$

$$\Rightarrow x = \frac{3}{4}; y = -\frac{4}{3}; z = 3$$

$$\text{now, } (xy + 2z) = \frac{3}{4} \times \frac{-4}{3} + 2 \times 3$$

$$= 6 - 1 = 5$$



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S59. Ans.(c)

Sol. We know,

$$x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$$

now,

$$(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$$

$$(19)^2 = x^2 + y^2 + z^2 + 2(114)$$

$$\Rightarrow x^2 + y^2 + z^2 = 361 - 228$$

$$= 133$$

now,

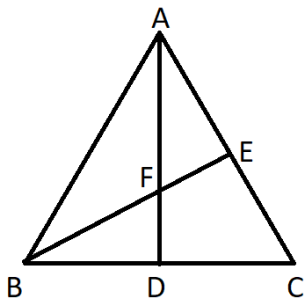
$$x^3 + y^3 + z^3 - 3xyz = (19)(133 - 114)$$

$$= 19 \times 19$$

Required value = 19

S60. Ans.(a)

Sol.



$$\triangle BDF \approx \triangle ADC$$

$$\Rightarrow \frac{BF}{AC} = \frac{BD}{AD}$$

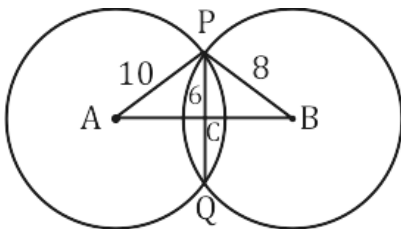
$$\Rightarrow BD = AD$$

so, $\angle ABD = \angle BAD = 45^\circ$



S61. Ans.(c)

Sol.



we know,

$$PC = CQ = 6 \text{ cm}$$

$$\text{In } \triangle APC, AC = 8 \text{ cm}$$

$$\text{In } \triangle PCB, CB = 2\sqrt{7}$$

$$AB = 8 + 2\sqrt{7} \text{ or } 13.3$$

S62. Ans.(b)

Sol.

$$\begin{aligned} & \left(\frac{\sin\theta - 2\sin^3\theta}{2\cos^3\theta - \cos\theta} \right)^2 + 1 \\ \Rightarrow & \left(\frac{\sin\theta(1 - 2\sin^2\theta)}{\cos\theta(2\cos^2\theta - 1)} \right)^2 + 1 \\ \Rightarrow & \left(\frac{\sin\theta(\cos 2\theta)}{\cos\theta(\cos 2\theta)} \right)^2 + 1 \\ = & \tan^2\theta + 1 \\ = & \sec^2\theta \end{aligned}$$

S63. Ans.(a)

Sol. Car C and E in 2013 = 88

Car D in 2014 and 2016 and E in 2017

$$= 88 + 55 = 143$$

Required ratio = 88 : 143

or, = 8 : 13

S64. Ans.(c)

Sol. $[8(x + y)^3 - 27(x - y)^3] \div [5y - x]$
 $\Rightarrow [(2x + 2y)^3 - (3x - 3y)^3] \div [5y - x]$
 $(2x + 2y - 3x + 3y)[(2x + 2y)^2 + (3x - 3y)^2 + (2x + 2y)(3x - 3y)] \div (5y - x)$
 $\Rightarrow (5y - x)(19x^2 + 7y^2 - 10xy) \div (5y - x)$
 $\Rightarrow 19x^2 + 7y^2 - 10xy$
A = 19
B = -10, C = 7
Now, A + B + C = 19 - 10 + 7 = 16

S65. Ans.(a)

Sol. Speed of A be x

Speed of B be y

ATQ,

$$\frac{15}{x} - \frac{15}{y} = \frac{30}{60}$$

$$\text{or, } y - x = \frac{xy}{30} \dots(i)$$

Also,

$$\frac{15}{y} - \frac{15}{2x} = 1$$

$$\Rightarrow 2x - y = \frac{2xy}{15} \dots(ii)$$

adding (i) & (ii)

$$x = \frac{5xy}{30}$$

$$y = 6 \text{ km/hr}$$

S66. Ans.(b)

Sol. $5 \div 5 \text{ of } 5 \times 2 + 2 \div 2 \text{ of } 2 \times 5 - (5 - 2) \div 6 \times 2$

following BODMAS

$$\frac{2}{5} + \frac{5}{2} - 1 \Rightarrow \frac{19}{10}$$

S67. Ans.(c)

Sol. ATQ,

$$\frac{23 - x}{39 - x} = \frac{32 - x}{56 - x}$$

$$1288 - 79x = 1248 - 71x$$

$$8x = 40$$

$$x = 5$$

$$\text{Mean proportion} = \sqrt{9 \times 16} = 12$$

S68. Ans.(a)

Sol. $4\% = \frac{1}{25}$

24 units \rightarrow 288

1 unit \rightarrow 12

25 units $\rightarrow 25 \times 12 = 300$

Required % $= \frac{15}{300} \times 100\% = 5\%$

S69. Ans.(d)

Sol. Total work $= (4 + 5 + 3) \times 25 = 12 \times 25 = 300$

Required time $= \frac{300 \times 35}{(4+3)100} = 15$ days

S70. Ans.(b)

Sol. 2 year CI $= 10 + 10 + \frac{10 \times 10}{100} = 21\%$

$2\frac{1}{2}$ year CI $= 21 + 5 + \frac{21 \times 5}{100} = 27.05\%$

so, 27.05% \rightarrow 1623

1% \rightarrow 60

100% \rightarrow 6000

S71. Ans.(d)

Sol.

$$\frac{\text{Ar } \Delta ABC}{\text{Ar } \Delta DEF} = \frac{(\text{Alt } \Delta ABC)^2}{(\text{Alt } \Delta DEF)^2}$$

$$\frac{100}{49} = \left(\frac{5}{x}\right)^2$$

$x = 3.5$

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S72. Ans.(c)

Sol. Final price = $1240 \times \frac{3}{4} \times \frac{7}{5} = 1302$

Overall profit = $\frac{62}{1240} \times 100\% = 5\%$

S73. Ans.(c)

Sol. Total surface area of tank = $2(\ell b + bh + \ell h) = 2(80 + 48 + 60) = 376 \text{ m}^2$

area of circular opening = $\frac{22}{7} \times 1 \times 1 = 3.14$

Required sheet = $376 - 3.14 = 372.86$ or 372.9

S74. Ans.(c)

Sol. A in 2015 and C in 2013 = 100

Total of car D = 230

required % = 43.5%

S75. Ans.(b)

Sol. Let no. of students be x

Total weight = $68.5 \times x$

$68.5x + 280 = 68.8(x + 4)$

$0.3x = 4.8$

$x = 16$

S76. Ans.(c)

Sol. Replace "in order that" with "as" because one of the uses of "as" is to connect a result with a cause. "in order that" means **so that** which is irrelevant in this context.

S77. Ans.(d)

Sol. The phrase '**costs an arm and a leg**' is used to describe anything that is considered to be extremely expensive or excessively pricey.

S78. Ans.(c)

S79. Ans.(a)

S80. Ans.(a)

S81. Ans.(b)

S82. Ans.(b)

S83. Ans.(c)

S84. Ans.(a)

Sol. **Exemplify** is the correct spelling which means be a typical example of.

S85. Ans.(c)

Sol. **Competition** is the correct spelling which means the activity or condition of striving to gain or win something by defeating or establishing superiority over others.

S86. Ans.(b)

S87. Ans.(d)

Sol. **Garrulous** means excessively talkative, especially on trivial matters.

S88. Ans.(d)

Sol. Escalate means increase rapidly.

S89. Ans.(d)

Sol. Tender means showing gentleness, kindness, and affection.

S90. Ans.(c)

S91. Ans.(b)

S92. Ans.(a)

Sol. "Get out of hand" is an idiom which means become difficult or impossible to control.

S93. Ans.(a)

Sol. Sentence needs to be in present perfect continuous because search for job started 2 months ago and is still continuing.

S94. Ans.(a)

Sol. Tilt means move or cause to move into a sloping position.

S95. Ans.(a)

S96. Ans.(a)

Sol. Vagrant means a person without a settled home or regular work who wanders from place to place and lives by begging.

S97. Ans.(b)

Sol. Native means a person born in a specified place or associated with a place by birth, whether subsequently resident there or not.

S98. Ans.(b)


Sol. The given sentence has to be in first conditional sentence and therefore, replace "it proves to be good" with "it will prove to be good". The structure of first conditional sentence is as follows: If + Present Indefinite (V1), future indefinite (will/shall + V1)

S99. Ans.(b)

S100. Ans.(b)

Sol. Since the given sentence is in present perfect tense, hence 3rd form of the verb 'disrupt' (i.e. disrupted) will be used. Hence replace 'disrupting' with 'disrupted'.

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