

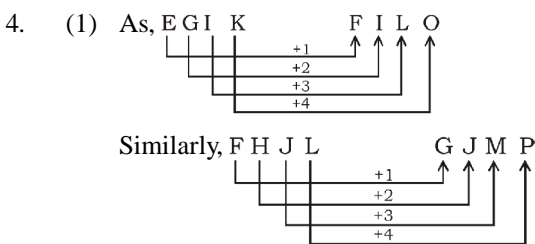


SSC CGL - 170837 GRAND TEST
HINTS AND SOLUTIONS

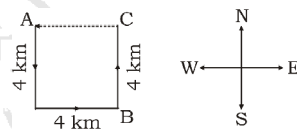
ANSWER KEY

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

- (1) Second denotes the part on which the effort is applied.
- (1) According to alphabetical order
C = 3 and $3 \times 5 + 1 = 16$
In the same way,
F = 6 and $6 \times 5 + 1 = 31$
- (3) An associate in a travel is called companion. Similarly, an associate in a profession is called colleague.

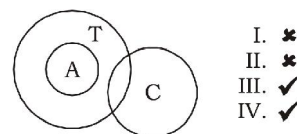


- (2) Apostate is one who renounces religion similarly, traitor is one who betrays his country.
- (1) This is the only group containing a vowel.
- (4) Each of the numbers except 144 is a perfect cube.
- (3) In all other groups, the first and second letters occupy the same positions from the beginning and end of alphabet and so do the third and fourth letters.
- (4) Star, Ring and Mesh are types of topology.
- (4) The correct alphabetical order of the given words is - Intellect, Intelligent, Intend, Intense.
- (2) Because of letter L used twice, the word TILL cannot be formed using the letters of originals word.
- (4) Sumit reached at the place 20 min before 8 : 50 am. i.e., at 8 : 30 am. Clearly the man who was 40 min late would reach the place at 9 : 00 am. So, the scheduled time of the meeting was 40 min before 9 : 00 am. i.e., 8 : 20 am.
- (3) The correct sequence is $3, 3^2, 3^3, 4, 4^2, 4^3, 5, 5^2, 5^3$ So, 10 is wrong and it must be replaced by 3^2 i.e. 9.
- (4) The movement of policeman is shown in the figure below.

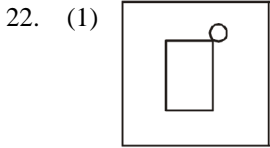


For reaching A (starting point) from C, policeman will have to move in the West direction.

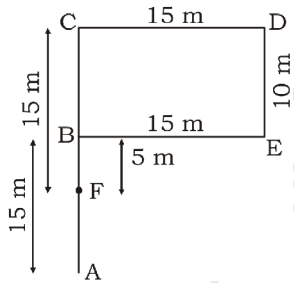
- (4) Let number of keepers be x.
Then, total number of feet
 $= 2 \times 50 + 4 \times 45 + 4 \times 8 + 2x = 2x + 312$
Total number of heads $= 50 + 45 + 8 + x = 103 + x$
 $\therefore (2x + 312) = (103 + x) + 224$ or $x = 15$
- (2) Taking Z = 2, Y = 3,, N = 14,, B = 26, A = 27, we have
ZIP = (Z + I + P) $\times 6 = (2 + 19 + 12) \times 6 = 33 \times 6 = 198$
So, VIP = (V + I + P) $\times 6 = (6 + 19 + 12) \times 6 = 37 \times 6 = 222$
- (3) Given equation,
 $15 - 3 + 10 \times 5 \div 5$
After interchanging the signs,
 $15 \times 3 - 10 \div 5 + 5 = 15 \times 3 - 2 + 5 = 45 - 2 + 5 = 50 - 2 = 48$
- (1) T R O K F Z S
-2 -3 -4 -5 -6 -7
- (3) 4 2 5 3 6 4 7 5 8 6
+1 +1 +1 +1
+1 +1 +1 +1
- (4) III and IV follows



21. (2) In right side the number is increasing by 1.
 $2 + 1 = 3, 3 + 1 = 4$ and $4 + 1 = 5$
 In left side, the number is decreasing by 2.
 $11 - 2 = 9, 9 - 2 = 7, 7 - 2 = 5$



23. (3) $3 + 1 + 4 + 2 = 10 \Rightarrow 10^2 = 100$
 $5 + 2 + 3 + 5 = 15 \Rightarrow 15^2 = 225$
 $6 + 4 + 5 + 7 = 22 \Rightarrow 22^2 = 484$
24. (2) The number which is seen in both dice will be your answer. Here, the digit 4 is that number as it is a standard dice. So, 4 will be opposite of 3.
25. (3) Let the fixed point from where Jatin starts his journey be A. Also, his walking directions are as follows.



$\therefore AF = AB - FB = 15 - 5 = 10$ meters
 So, Jatin is 10 meters away from the starting point.

51. (3) Let the first train meet the second x hrs after its start, then $40x + (x - 2) \times 50 = 110$ (the 2nd train takes $x - 2$ hrs. as the train starts two hours later than the 1st) or, $90x = 110 + 100 = 210$

$$\therefore x = \frac{210}{90} \text{ hrs} = \frac{7}{3} \text{ hrs} = 2\frac{1}{3} \text{ hrs}$$

$= 2 \text{ hrs } 20 \text{ min.} = \text{Two trains meet at } 10.20 \text{ a.m.}$

52. (1) S.I. at the rate of 4% for 2 year

$$= \frac{P \times 4 \times 2}{100} = \frac{P \times 4 \times 2}{100} \quad \dots(i)$$

S.I. at the rate of 6% for next 4 year

$$= \frac{P \times 6 \times 4}{100} = \frac{24P}{100} \quad \dots(ii)$$

For next 3 year

$$\text{S.I.} = \frac{P \times 8 \times 3}{100} = \frac{24P}{100} \quad \dots(iii)$$

$$\text{Total S.I.} = \frac{8P}{100} + \frac{24P}{100} + \frac{24P}{100} = \frac{56P}{100} = \text{Rs. } 1120$$

$$\therefore P = \frac{1120 \times 100}{56} = \text{Rs. } 2000.$$

53. (2) C.P. of 100 cups = Rs. $100 \times 10 = \text{Rs. } 1000$
 10 cups are broken
 \therefore S.P. of 90 cups = Rs. $(90 \times 11) = \text{Rs. } 990$
 Loss = Rs. $(1000 - 990) = \text{Rs. } 10$

$$\therefore \text{Loss percent} = \frac{10}{1000} \times 100 = 1\%$$

54. (3) First convert the ratio in Rs. 1 form

$$\begin{array}{ccc} 4 & : & 6 & : & 9 \\ \downarrow & & \downarrow & & \downarrow \\ 4x & & 6x & & 9x \\ \downarrow \times 5 & & \downarrow \times 2 & & \downarrow \times 1 \\ 20x & & 12x & & 9x \end{array}$$

Now, Total = Rs. 410
 $[20x + 12x + 9x] = 410$
 $\Rightarrow x = 10$

\therefore Value of Rs. 2 coin = $12 \times 10 = 120$

$$\therefore \text{No. of Rs. 2 coin} = \frac{120}{2} = 60$$

55. (2) Let there be x men originally, then 1 man will do the work in 60x days.
 In the second case, 1 man does the work in $(x + 8) 50$ days.

$$\text{Now, } 60x = 50(x + 8)$$

$$\therefore x = \frac{400}{10} = 40 \text{ men}$$

56. (2) $\% \text{ gain} = \frac{\text{Error}}{\text{True value} - \text{Error}} \times 100$

$$= \frac{50}{950} \times 100 = 5\frac{5}{19}\% = 5.26\%$$

57. (1) $\frac{90 \times 7}{x \times 3} = \frac{2}{1} \Rightarrow x = \frac{90 \times 7}{2 \times 3} = 105$

58. (2) $3M + 4C = \frac{756}{7}$

$$3M + 4C = \text{Rs. } 108/\text{day} \quad \dots(i)$$

$$11M + 13C = \frac{3008}{8}$$

$$11M + 13C = \text{Rs. } 376 \quad \dots(ii)$$

From (i) and (ii)

$$\text{Equal} \left[\begin{array}{l} 11 \times 3M + 4C = 108_{\times 11} \\ 3 \times 11M + 13C = 376_{\times 3} \end{array} \right.$$

$$33M + 44C = 1188$$

$$33M + 39C = 1128$$

$$\underline{\quad \quad \quad} \quad \quad \quad \underline{\quad \quad \quad}$$

$$5C = 60$$

$$\therefore C = 12, M = 20$$

Let the required time be x , then

$$x(7 \times 20 + 9 \times 12) = 2480$$

$$\Rightarrow x = \frac{2480}{248} = 10 \text{ days}$$

59. (2) $15\% = \text{Rs. } 11250$

$$\text{Total amount i.e. } 100\% = \frac{11250}{15} \times 100 = \text{Rs. } 75000$$

60. (3) $+20\% - 20\% + (+20\%) \text{ of } (-20\%) = -4\%$

61. (4) S.P. = Rs. 570

L% = 5%

$$\text{C.P.} = \frac{100}{95} \times 570 = 660$$

P = 5%

$$\text{S.P.} = \frac{100 + P\%}{100} \times \text{C.P.} = \frac{105}{100} \times 600 = \text{Rs. } 630$$

62. (1) Strength of milk in the first mixture = $\frac{12}{12+3} = \frac{12}{15}$

$$\text{Strength of milk in the second mixture} = \frac{10}{10+4} = \frac{10}{14}$$

∴ the ratio of their strengths

$$= \frac{12}{25} : \frac{10}{14} = 12 \times 14 : 15 \times 10 = 28 : 25.$$

63. (2) Here, 52 is a multiple of 13. Hence, the required remainder is obtained on dividing 45 by 13.

Required remainder = 6

64. (4) Required number of wickets = x (let)

According to question,

$$12.4 \times x + 26 = (x + 5) (12.4 - 0.4) = (x + 5) \times 12$$

$$\Rightarrow 12.4x + 26 = 12x + 60$$

$$\Rightarrow 12.4x - 12x = 60 - 26$$

$$\Rightarrow 0.4x = 34$$

$$\Rightarrow x = \frac{34}{0.4} = \frac{340}{4} = 85.$$

65. (1) $x - y = k, x + y = 7k$

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

$$\Rightarrow \frac{xy}{4} = k \Rightarrow \frac{4k \cdot 3k}{4} = k \Rightarrow k = \frac{1}{3}$$

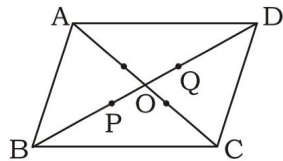
$$\therefore xy = 4k = 4 \times \frac{1}{3} = \frac{4}{3}$$

66. (4) Area of the floor = $8 \times 6 = 48 \text{ sq. m} = 4800 \text{ sq. dm.}$

Area of a square tile = $4 \times 4 = 16 \text{ sq. dm}$

$$\therefore \text{Number of tiles} = \frac{4800}{16} = 300$$

67. (2)



Centroid is the point where medians intersect.
Diagonals of parallelogram bisect each other.

$$\text{OP} = \frac{1}{3} \times 9 = 3 \text{ cm}$$

$$\text{OQ} = \frac{1}{3} \times 9 = 3 \text{ cm}$$

$$\therefore \text{PQ} = 6 \text{ cm}$$

68. (3) Two angles = A and B where $A > B$.

$$\therefore A + B = 135^\circ = \left(\frac{135 \times \pi}{180} \right) \text{ radian}$$

$$\Rightarrow A + B = \left(\frac{3\pi}{4} \right) \text{ radian} \quad \dots(i)$$

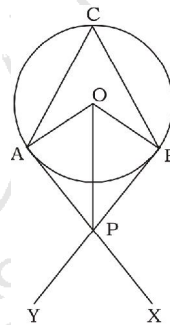
$$A - B = \frac{\pi}{12} \quad \dots(ii)$$

On adding these equations,

$$2A = \frac{3\pi}{4} + \frac{\pi}{12} = \frac{9\pi + \pi}{12} = \frac{10\pi}{12} = \frac{5\pi}{6}$$

$$\therefore A = \frac{5\pi}{12} \text{ radian}$$

69. (1)



$$\angle ACB = 65^\circ$$

$$\angle AOB = 2 \times 65^\circ = 130^\circ$$

$$\angle OAP = 90^\circ$$

$$\angle AOP = 65^\circ$$

$$\therefore \angle APO = 180^\circ - 90^\circ - 65^\circ = 25^\circ$$

70. (2) $\cos^2\theta + \cos^4\theta = 1$

$$\Rightarrow \cos^4\theta = 1 - \cos^2\theta = \sin^2\theta$$

$$\Rightarrow \tan^2\theta = \cos^2\theta$$

$$\therefore \tan^2\theta + \tan^4\theta = \cos^2\theta + \cos^4\theta = 1$$

71. (4) $9x - \frac{9}{2x} = 18 \Rightarrow x - \frac{1}{2x} = 2$

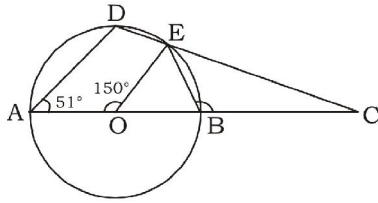
Cubing both sides,

$$x^3 - \frac{1}{8x^3} - 3x \cdot \frac{1}{2x} \left(x - \frac{1}{2x} \right) = 8$$

$$\Rightarrow x^3 - \frac{1}{8x^3} - \frac{3}{2} \times 2 = 8$$

$$\Rightarrow x^3 - \frac{1}{8x^3} = 8 + 3 = 11$$

72. (3)



$$\angle AOE = 150^\circ$$

$$\angle DAO = 51^\circ \quad \text{[Given]}$$

$$\angle EOB = 180^\circ - 150^\circ = 30^\circ$$

$$OE = OB$$

$$\therefore \angle OEB = \angle OBE = \frac{150}{2} = 75^\circ$$

$$\angle CBE = 180^\circ - 75^\circ = 105^\circ$$

73. (4) Given equations are:

$$3x + 4y = 5 \quad \dots(i)$$

$$x + 2y = 2 \quad \dots(ii)$$

On solving of (i) & (ii)

We find $x = 1, y = 1/2$

$$\therefore x + y = 1 + \frac{1}{2} = \frac{3}{2}$$

74. (4) Volume of prism = Area of base \times height

$$\Rightarrow 366 = \frac{1}{2} \times 4 \times 28 \times h$$

$$\Rightarrow h = \frac{366}{56} = 6.53 \text{ cm}$$

75. (1) $11x - 13 = -2x + 78$

$$\Rightarrow 11x + 2x = 78 + 13$$

$$\Rightarrow 13x = 91$$

$$\Rightarrow x = \frac{91}{13} = 7$$

76. (2) Remove 'Hardly' as 'not' and 'hardly' together make the sentence superfluous.

77. (1) A sentence starting with 'No sooner' always comes in inverted form i.e., helping verb + sub + main verb
Here, replace (1) by 'No sooner did the bell ring'.

78. (3) Replace 'little water' by 'a little water', as little means equivalent to nothing. 'A little' means at least 'some'

89. (2) 'Day in and day out' is the most appropriate which means 'every day for a long period of time' whereas 'all the time' means 'during the whole of a particular period of time'.

90. (1) As the sentence is in affirmative form, the helping verb could must come after noun 'the boy'.

