



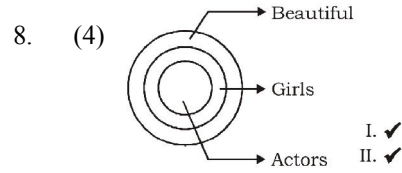
SSC CGL - 180503 GRAND TEST
HINTS AND SOLUTIONS

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

1. (1) T R I P P L E
 ↓ -1 ↓ -1 ↓ -1 ↓ -1 ↓ -1 ↓ -1
 S Q H O O K D

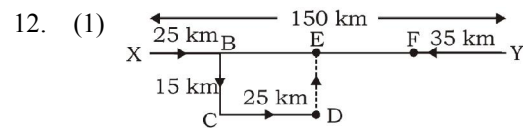
 D I S P O S E
 ↓ -1 ↓ -1 ↓ -1 ↓ -1 ↓ -1 ↓ -1
 C H R O N R D

2. (3) As, $123 + 3^2 = 123 + 9 = 132$
 So, $235 + 5^2 = 235 + 25 = 260$
3. (2) Second is the process of gradual disappearances of the first.
4. (2) $2197 = 13^3$
 $19683 = 27^3$
5. (4) All except Park are halting places of various transport means.
6. (4) Except (4), each contains 2 consonants and 3 vowels.
7. (3) Except (3), in all options first and last & middle two letters are opposite.



Both I and II follows.

9. (4) $Q > P > T$ and $S > Q > R$
 From the above two relations, it is clear that S runs fastest among all.
10. (3) The word 'SHINE' can be formed.
11. (4) Putting the proper signs in the given expression,
 We get: $252 \div 9 \times 5 - 32 + 92$
 $= 28 \times 5 - 32 + 92 = 140 - 32 + 92 = 232 - 32 = 200$

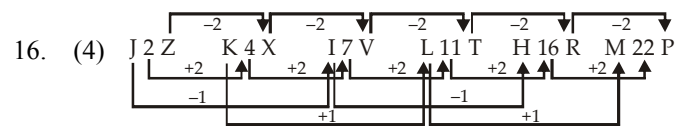
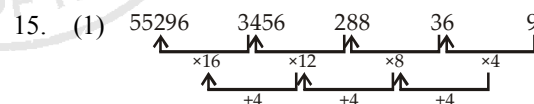


Required distance = EF
 $= 150 - (25 + 25 + 35)$
 $= 150 - 85 = 65$ kms

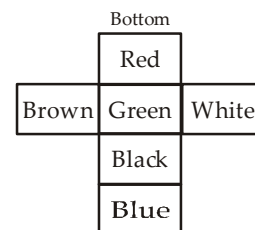
13. (2) All the thieves are criminals while judge is different from these.



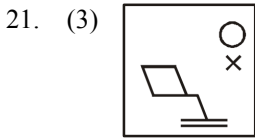
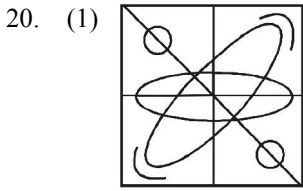
14. (4) $Q \$ R \rightarrow$ Q is the father of R
 $R @ T \rightarrow$ R is the brother of T
 Hence, Q is the father of T
 $T * M \rightarrow$ T is the daughter of M
 Hence, M is the mother of T
 Hence, M is the wife of Q.



17-18.



17. (2) White is opposite to brown.
18. (1) (Black, White, Brown and Red) are adjacent to green.
19. (1) $(11 + 9) \times (11 - 9) = 40$
 $(15 + 7) \times (15 - 7) = 176$
 $(25 + 21) \times (25 - 21) = 184$



22. (4) Let salary = Rs. x . Then tips = Rs. $\left(\frac{5}{4}x\right)$

$$\text{Total income} = \text{Rs.} \left(x + \frac{5}{4}x\right) = \text{Rs.} \left(\frac{9x}{4}\right)$$

$$\therefore \text{Required fraction} = \left(\frac{5x}{4}, \frac{4}{9x}\right) = \frac{5}{9}$$

23. (4) Except the figure in option (4), all other figures can be rotated into each other.

24. (1)

25. (3)

51. (2) Per copy cost price for the customer of 45 magazines

$$= \frac{7}{10} \times 90 = \text{Rs.} 63$$

Per copy cost price for the buyer of 26 magazine

$$= \frac{3}{4} \times 90 = \text{Rs.} 67.50$$

$$\therefore \text{Required diff.} = 67.50 - 63 = ₹ 4.50$$

52. (2) Relative speed of both trains = $45 + 45 = 90 \text{ km/h}$

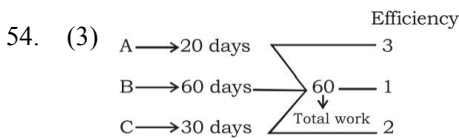
$$\therefore \text{time taken by trains} = \frac{450}{90} = 5 \text{ hrs.}$$

$$\therefore \text{distance covered by crow} = 100 \times 5 = 500 \text{ km}$$

53. (3) S.I for 2 years = 25%

C.I for 2 years = 26.5625%

$$\therefore \text{Required sum} = \frac{510}{26.5625} \times 25 = \text{Rs.} 480$$



According to the question,

$$5 \text{ days work of } (A + B + C) = 6 \times 5 = 30$$

Now C left the work. So next 3 days A and B will work

$$\text{Work done by A and B} = 4 \times 3 = 12 \text{ units}$$

$$\text{Remaining work} = (60 - 42) = 18 \text{ units}$$

Required time for A to complete the rest of the work

$$= \frac{18}{3} = 6 \text{ days}$$

55. (4) $n + \frac{2n}{3} + \frac{n}{2} + \frac{n}{7} = 97$

$$\Rightarrow \frac{42n + 28n + 21n + 6n}{42} = 97$$

$$\Rightarrow \frac{97n}{42} = 97$$

$$\Rightarrow n = \frac{97 \times 42}{97} = 42$$

56. (4) If $x = 7$

$$x^5 - 8x^4 + 8x^3 - 9x^2 + 7x + 5$$

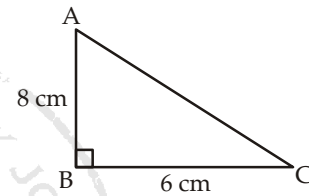
split it in form of x

$$x^5 - 7x^4 - x^4 + 7x^3 + x^3 - 7x^2 - 2x^2 + 7x + 5$$

Put x in the place of 7

$$\text{then } x^5 - x^5 - x^4 + x^4 + x^3 - x^3 - x^2 - x^2 + 5 - x^2 + 5 - 49 + 5 = -44$$

57. (1)



$$AC = \sqrt{6^2 + 8^2} = 10 \text{ cm}$$

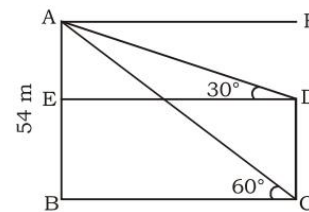
$$\therefore \text{circum radius} = \frac{10}{2} = 5 \text{ cm}$$

i.e. mid-point of hypotenuse.

58. (3) If $a + \frac{1}{a} = 1$, then $a^3 = -1$

$$\therefore \left(\frac{3}{x}\right)^3 = (-1) \Rightarrow \frac{27}{x^3} = -1 \Rightarrow x^3 = -27$$

59. (2)



$$AB = \text{temple} = 54 \text{ m}$$

$$CD = \text{temple} = h \text{ m}$$

$$BC = \text{width of river} = x \text{ m}$$

From DABC,

$$\tan 60^\circ = \frac{AB}{BC}$$

$$\Rightarrow BC = \frac{54}{\sqrt{3}} = 18\sqrt{3} \text{ m}$$

From $\triangle ADE$,

$$\tan 30^\circ = \frac{AE}{DE} \quad [\because DE = BC = 18\sqrt{3}]$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{54 - h}{18\sqrt{3}}$$

$$\Rightarrow 54 - h = 18$$

$$\Rightarrow h = 54 - 18 = 36 \text{ m}$$

60. (1) Area of the circle = $\pi r^2 = \pi(2)^2 = 4\pi$

The circle is cut to make a square

\therefore Perimeter of square = Perimeter of circle

$$\Rightarrow 4a = 2\pi r \Rightarrow a = \frac{2\pi \times 2}{4} = \pi$$

$$\therefore \text{Area of the square} = a^2 = \pi^2$$

$$\therefore \text{required ratio} = \frac{4\pi}{\pi^2} = 4 : \pi$$

61. (3) $(a^2 - b^2) \sin\theta + 2ab \cos\theta = a^2 + b^2$

$$\text{or } \left(\frac{a^2 - b^2}{a^2 + b^2} \right) \sin\theta + \left(\frac{2ab}{a^2 + b^2} \right) \cos\theta = 1$$

On comparing it by

$$\sin^2\theta + \cos^2\theta = 1$$

$$\text{We get } \sin\theta = \frac{a^2 - b^2}{a^2 + b^2} \text{ and } \cos\theta = \frac{2ab}{a^2 + b^2}$$

$$\therefore \tan\theta = \frac{\sin\theta}{\cos\theta} = \frac{a^2 - b^2}{2ab}$$

62. (3) Let the C.P. of each article be Rs. x

$$\therefore \frac{50x \times 120}{100} + \frac{50x \times 140}{100} - \frac{100x \times 125}{100} = 100$$

$$\Rightarrow 60x + 70x - 125x = 100 \Rightarrow 5x = 100 \Rightarrow x = \text{Rs.}20$$

63. (3) 25% (stolen) + 10% (Dropped)

$$\Rightarrow 35\% = \frac{7}{20}, 50\% = \frac{1}{2}$$

Sum - Remain

$$\begin{array}{r} 20 \quad - \quad 13 \\ 2 \quad - \quad 1 \\ \hline 40 \quad - \quad 13 \\ \downarrow \times 130 \quad \downarrow \times 130 \\ 5200 \quad 1690 \end{array}$$

64. (3) $\frac{M_1 D_1 T_1}{W_1} = \frac{M_2 D_2 T_2}{W_2}$

$$\Rightarrow \frac{16 \times 6 \times 25}{150 \times 20 \times 12} = \frac{12 \times 8 \times D}{800 \times 15 \times 6}$$

After solving this $D_2 = 50$ days

65. (1) Sum of temperatures on 1st, 2nd, 3rd and 4th days

$$= (58 \times 4) = 232 \text{ degrees}$$

Sum of tempratures on 2nd, 3rd, 4th and 5th days

$$= (60 \times 4) = 240 \text{ degrees}$$

Temperature on 5th day - temperature on 1st day = 8 degrees

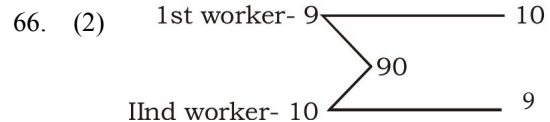
Let the temperature on 1st and 5th days be $7x$ and $8x$ degrees respectively.

$$\text{Then, } 8x - 7x = 8$$

$$\therefore 8 \times 8 - 7 \times 8$$

$$x = 8$$

$$\therefore \text{Temperature on 5th day} = 8 \times 8 = 64^\circ$$



According to question,

$$\begin{array}{l} (\text{Ist} + \text{IInd}) = 19 \text{ unit} \\ (\text{given}) \frac{90}{5} = 18 \text{ unit} \end{array} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} 1 \text{ unit}$$

$$\therefore 1 \text{ unit} = 10$$

$$\therefore \text{Total no. of gems} = 90 \times 10 = 900$$

67. (4) $\angle AOC = \angle BOD$

$$\therefore \angle AOC = 40^\circ$$

According to question,

$$\angle BOE = 30^\circ$$

$$\therefore \angle COD + \angle DOB + \angle BOE = \text{Reflexive } \angle COE$$

$$\therefore 180^\circ + 40^\circ + 30^\circ = \text{Reflexive } \angle COE$$

$$\therefore \angle COE = 250^\circ$$

68. (3) Let the numbers be $3x$ and $3y$.

$$\therefore 3x + 3y = 36$$

$$\Rightarrow x + y = 12 \quad \dots(i)$$

$$\text{and } 3xy = 105 \quad \dots(ii)$$

Dividing equation (i) and (ii),

$$\frac{x}{3xy} + \frac{y}{3xy} = \frac{12}{105} \Rightarrow \frac{1}{3y} + \frac{1}{3x} = \frac{4}{35}$$

69. (3) Between 100 and 200 are 102, 105, ..., 198

Let number of terms = n

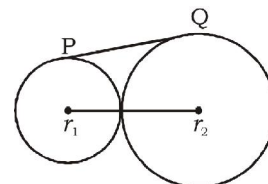
$$\therefore 198 = 102 + (n - 1)3$$

$$\Rightarrow n - 1 = \frac{198 - 102}{3} = 32$$

$$n = 33$$

$$\therefore S = \frac{n}{2} \times (a + l) = \frac{32}{2} (102 + 198) = 4950$$

70. (4)

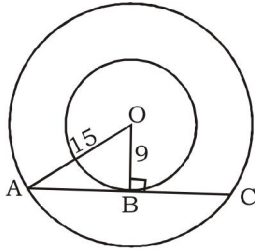


$$PQ = 2\sqrt{r_1 r_2} = 2\sqrt{4 \times 9} = 12 \text{ cm}$$

$$\therefore \text{Area of the square (having side } PQ = 12 \text{ cm)} = 12^2 = 144 \text{ cm}^2$$

71. (4) $3 \cos 80^\circ \cdot \operatorname{cosec} 10^\circ + 2 \cos 59^\circ \cdot \operatorname{cosec} 31^\circ$
 $= 3 \cos(90^\circ - 10^\circ) \cdot \operatorname{cosec} 10^\circ + 2 \cos(90^\circ - 31^\circ) \cdot \operatorname{cosec} 31^\circ$
 $= 3 \sin 10^\circ \cdot \operatorname{cosec} 10^\circ + 2 \sin 31^\circ \cdot \operatorname{cosec} 31^\circ$
 $= 3 + 2 = 5$

72. (1)



In $\triangle OAB$,

$OB \perp AB$

$$\therefore OB^2 + AB^2 = OA^2$$

$$\Rightarrow 9^2 + AB^2 = 15^2$$

$$\Rightarrow AB^2 = 225 - 81 = 144$$

$$\Rightarrow AB = 12 \text{ cm}$$

\therefore The length of the chord is $2 \times 12 = 24 \text{ cm}$

73. (2) Percentage increase

$$= \frac{125 - 105}{105} \times 100 = \frac{20}{105} \times 100 \approx 19\%$$

74. (1) Percentage decrease

$$= \frac{200 - 180}{200} \times 100 = \frac{20}{200} \times 100 = 10\%$$

75. (3) Total production of toys in 2005 = 675 thousand
 Total production of toys in 2006 = 750 thousand

$$\text{Percentage increase} = \frac{750 - 675}{675} \times 100 = 11\%$$

76. (2) Replace 'although' by 'but', as but should be used here to suggest a contrast.

78. (2) The tense of the first part (is - present tense) does not match with the second part (could - past tense), though the sentence refers a past event. Thus, replace 'is' by 'was'.

80. (2) When two actions take place in past then earlier one takes past perfect tense and the 2nd one simple present tense.

90. (3) Sentence starting with 'Hardly' takes an inversion form.

91. (1) 'None' takes singular verb after it.

92. (2) When an action is complete, it will take **having + V₃** form.

