



**SSC CHSL - CHT1 : 180227 GRAND TEST**

**HINTS AND SOLUTIONS**

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

1. (3) A haiku is a type of poem, and a fable is a type of story.

2. (1)  $8 : 336 :: 6 : 120$   
 $\frac{8}{8 \times 7 \times 6} = \frac{6}{6 \times 5 \times 4}$

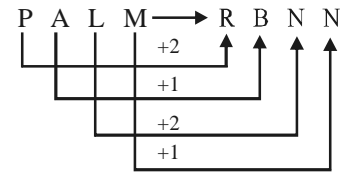
3. (4)

A	B	C	D
+13	+14	+15	+16
N	P	R	T
F	G	H	I
+13	+14	+15	+16
S	U	W	Y

4. (4)

H	A	N	D	J	B	P	E
			+2				
			+1				
			+2				
			+1				

Similarly,



5. (1)  $72 - 41 = 125$   
 $30 - 12 = 18$   
 $51 - 42 = 9$   
 $20 - 11 = 9$

Except 125, the rest of the difference are one of the factor of 9.

6. (4)  $F \xrightarrow{+3} I \xrightarrow{+2} K$   
 $M \xrightarrow{+3} G \xrightarrow{+2} I$   
 $M \xrightarrow{+3} P \xrightarrow{+2} R$   
 $K \xrightarrow{+3} N \xrightarrow{-10} D$

7. (3) Only Renounce has different meaning whereas the other three words have similar meanings.

8. (2) Violin is a musical instrument with four strings of treble pitch played with a bow.

9. (1)

C	A	R	S	I	T	W	E	L	L
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
∅	α	δ	η	ψ	κ	σ	i	γ	γ
M	A	P	γ	α	μ	β			
↓	↓	↓	↓	↓	↓	↓			
μ	α	β	So,	<b>L</b>	<b>A</b>	<b>M</b>	<b>P</b>		

10. (1) Arrival, Introduction, Presentation, Discussion, Recommendation.

11. (1) The correct sequence is  $5^2, 7^2, 9^2, 11^2, 13^2$  and  $15^2$ . So, 36 is wrong.

12. (4)

S	P	I	D	E	R
↓	↓	↓	↓	↓	↓
(v)	(vi)	(iv)	(iii)	(i)	(ii)

13. (2)

J	U	N	E		
↓	↓	↓	↓		
P	Q	R	S		
A	U	G	U	S	T
↓	↓	↓	↓	↓	↓
W	Q	F	Q	M	N

Therefore,

G	U	E	S	T
↓	↓	↓	↓	↓
F	Q	S	M	N

14. (3) Meaningful order of words :

(iii) Crime



(i) Police



(iv) Judge



(v) Judgement



(ii) Punishment

15. (2)  $6 + 18 = 24$

$24 + 36 = 60$

$60 + 60 = 120$

$120 + 90 = 210$

$210 + 126 = \boxed{336}$

16. (2)  $\frac{225}{15} = 15 \rightarrow 15 \times 2 = 30$

$\frac{70}{7} = 10 \rightarrow 10 \times 2 = 20$

$\frac{?}{3} = \frac{8}{2} \rightarrow 2 \times ? = 8 \times 3$

$\therefore \frac{24}{2} = 12$

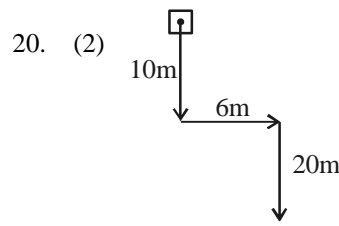
17. (3) S E Q U E N C E 23. (3) A simple multiplication series where a number is 3 times its predecessor.  
 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
 H V J F V M X V 24. (1) The numbers 1, 2, 5 and 6 are on the adjacent faces of the number 3. So, the number 4 lies opposite 3.

Opposite Letters  
 Similarly,

C H I L D R E N 25. (4)  
 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ 51. (3)  
 X S R O W I V M 52. (2) A → 14  
 B → 16

18. (4) Here, it is mentioned that morning walks improves health. but this does not mean that all healthy people go for morning walks. So, I does not follow. Also, nothing is mentioned about evening walks in the statement. So, II also does not follow.

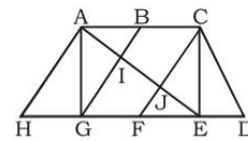
19. (2)  $\begin{matrix} 2 & \times & 3 \\ \downarrow \times 2 & & \downarrow \times 3 \\ 4 & & 9 \end{matrix}$        $\begin{matrix} 5 & \times & 6 \\ \downarrow \times 5 & & \downarrow \times 6 \\ 25 & & 36 \end{matrix}$   
 $\begin{matrix} 1 & \times & 9 \\ \downarrow \times 1 & & \downarrow \times 9 \\ 1 & & 81 \end{matrix}$        $\begin{matrix} 4 & \times & 7 \\ \downarrow \times 4 & & \downarrow \times 7 \\ 16 & & 49 \end{matrix}$



From the diagram it is clear that Shankar started his journey from North to South.

21. (4)

22. (4) The figure may be labelled as shown.



The simplest triangles are AHG, AIG, AIB, JFE, CJE and CED i.e. 6 in number. Triangles composed of two components each are ABG, CFE, ACJ and EGI i.e. 4 in number.

Triangles composed of three components each are ACE, AGE and CFD i.e. 3 in number.

There is only one triangle i.e. AHE composed of four components.

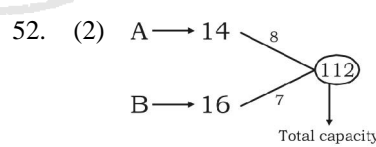
Therefore, There are  $6 + 4 + 3 + 1 = 14$  triangles in the given figure.

23. (3) A simple multiplication series where a number is 3 times its predecessor.

24. (1) The numbers 1, 2, 5 and 6 are on the adjacent faces of the number 3. So, the number 4 lies opposite 3.

25. (4)

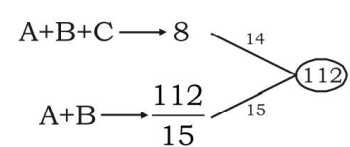
51. (3)



Time required to fill the tank =  $\frac{112}{15}$  hr

According to question when leak is open.

Total time (A + B + C) =  $\frac{112}{15} + \frac{32}{60} = 8$  hours



Efficiency of leak pipe (C) =  $15 - 14 = 1$  unit/hr

Required time for pipe C to empty tank =  $\frac{112}{1} = 112$  hr

53. (3) B's 1 day's work =  $\left(\frac{1}{12} - \frac{1}{20}\right) = \frac{2}{60} = \frac{1}{30}$

Now, (A + B)'s 1 day's work

=  $\left(\frac{1}{20} + \frac{1}{30 \times 2}\right) = \frac{4}{60} = \frac{1}{15}$

[∵ B works for half day only]

So, A and B together will complete the work in 15 days.

54. (3) Let Rajan's present age be x years.

Then, his age at the time of marriage = (x - 8) years

∴  $x = \frac{6}{5}(x - 8) \Rightarrow 5x = 6x - 48 \Rightarrow x = 48.$

Rajan's sister's age at the time of his marriage

= (x - 8) - 10 = (48 - 18) = 30 years

∴ Rajan's sister's present age = (30 + 8) years = 38 years

55. (1)

56. (3) Here interior angle - exterior angle = 60°

$\frac{(n-2) \times 180}{n} - \frac{360}{n} = 60$

$\Rightarrow \frac{1}{n} [(n-2) \times 180 - 360] = 60$

$\Rightarrow \frac{1}{n} [180n - 360 - 360] = 60$

$\Rightarrow \frac{1}{n} [180n - 720] = 60$

$\Rightarrow 180n - 720 = 60n$

$\Rightarrow 120n = 720$

$\Rightarrow n = \frac{720}{120} = 6.$

57. (1) L.C.M. of 18, 36, 45 and 60 = 180

Now,  $\frac{17}{18} = \frac{17 \times 10}{18 \times 10} = \frac{170}{180}$

$\frac{31}{36} = \frac{31 \times 5}{36 \times 5} = \frac{155}{180}$

$\frac{43}{45} = \frac{43 \times 4}{45 \times 4} = \frac{172}{180}$

$\frac{59}{60} = \frac{59 \times 3}{60 \times 3} = \frac{177}{180}$

Since, 155 < 170 < 172 < 177,

So,  $\frac{155}{180} < \frac{170}{180} < \frac{172}{180} < \frac{177}{180}$

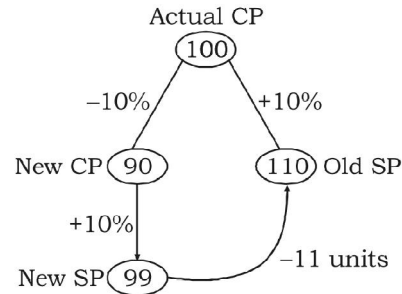
Hence,  $\frac{31}{36} < \frac{17}{18} < \frac{43}{45} < \frac{59}{60}$

58. (4)

59. (1)

60. (1)

61. (2) Let the cost price of the bicycle = 100 units  
ATQ,



11 units = 132

1 unit =  $\frac{132}{11} = 12$

Actual CP (100 units) = 12 × 100 = 1200

62. (1)  $15000 \times \left(1 + \frac{R}{100}\right)^2 - 15000 - \left(\frac{15000 \times R \times 2}{100}\right) = 96$

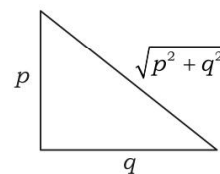
$\Rightarrow 15000 \left[\left(1 + \frac{R}{100}\right)^2 - 1 - \frac{2R}{100}\right] = 96$

$\Rightarrow 15000 \left[\frac{(100 + R)^2 - 10000 - 200R}{10000}\right] = 96$

$\Rightarrow R^2 - \frac{96 \times 2}{3} = 64 \Rightarrow R = 8$

63. (1)

64. (3)



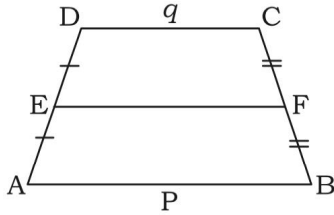
$\frac{p \times \frac{\sqrt{p^2 + q^2}}{p} - q \times \frac{\sqrt{p^2 + q^2}}{p}}{p \times \frac{\sqrt{p^2 + q^2}}{q} + q \times \frac{\sqrt{p^2 + q^2}}{p}} = \frac{\frac{p}{q} - \frac{q}{p}}{\frac{p}{q} + \frac{q}{p}} = \frac{p^2 - q^2}{p^2 + q^2}$

65. (1) Difference between C.I. & S.I. for 2 years

at 5% rate = (10.25% - 10) = 0.25%

0.25% of 4000 = 10

66. (3) Let ABCD is trapezium and E, F are the mid points, then



$$EF = \frac{1}{2}(AB + DC) \Rightarrow EF = \frac{1}{2}(p + q)$$

$$\because \{AB = p, DC = q\}$$

67. (1)  $\angle COB = 360^\circ - (110^\circ + 90^\circ) = 160^\circ$   
 $\Rightarrow x = \angle CAB = \frac{1}{2}\angle COB = \frac{1}{2} \times 160^\circ = 80^\circ$

68 (2)

69 (2)

70. (3) 
$$\frac{\sin 2\theta + \sin \theta}{\cos 2\theta + \cos \theta + 1} = \frac{2 \sin \theta \cdot \cos \theta + \sin \theta}{2 \cos^2 \theta - 1 + \cos \theta + 1}$$

$$= \frac{\sin \theta(2 \cos \theta + 1)}{2 \cos^2 \theta + \cos \theta} = \frac{\sin \theta(2 \cos \theta + 1)}{\cos \theta(2 \cos \theta + 1)} = \frac{\sin \theta}{\cos \theta} = \tan \theta$$

71. (3) Let the original price be ₹ 100  
 Then, marked price = ₹ 130  
 Final price = 90% of ₹ 130

$$= ₹ \left( \frac{90}{100} \times \frac{90}{100} \times 130 \right) = ₹ 105.30$$

$$\therefore \text{Increase in price} = (105.30 - 100)\% = 5.3\%$$

72. (1) 3 : 2

73. (2) Avg. Demand

$$= \frac{3000 + 600 + 2500 + 1200 + 3300}{5} = 2120$$

Avg. Production

$$= \frac{1500 + 1800 + 1000 + 2700 + 2200}{5} = 1840$$

$$\therefore \text{Required diff} = 2120 - 1840 = 280$$

74. (3) Required percentage =  $\frac{2700}{1500} = 1.80$

75. (1) Required percentage =  $\frac{600}{2500} \times 100 = 24\%$

