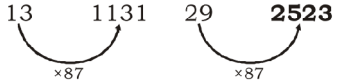
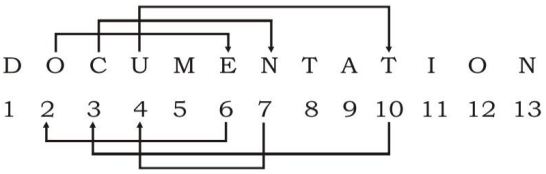
SSC CGL - 170605 GRAND TEST
HINTS AND SOLUTIONS

ANSWER KEY

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

1. (4) Adam Smith is called father of economics where as A. Lavoisier is father of (Modern) Chemistry.
2. (1) 

3. (3) A son is a part of nuclear family and a cousin is a part of an extended family.
4. (1) Stars are component of astronomy and battles make up history.
5. (4) Feta is a Greek cheese and provolone is an Italian cheese.
6. (3) 11 = Eleven = 3 'e'
   17 = Seventeen = 4 'e'
7. (3) Deke is a term used in Hockey, whereas rest are terms used in tennis.
8. (4) Except Ian Chappell, others are Captain of England Test Cricket Team whereas Ian Chappell is an australian captain.
9. (4) Renin, Pepsin and Trypsin are types of enzyme whereas Lexin is not an enzymes.
10. (4) Chitrakoot is a place in Uttar Pradesh whereas rest of the three are in Gujrat.
11. (3) Except Nose, rest are in pairs.
12. (1) In the first and second statements, the common code word is 'nat' and the common word is 'harmful'. So, 'nat' stands for 'harmful'.
    In the second and third statements, the common code word is 'dor' and the common word is 'avoid'. So, 'dor' stands for 'avoid'. Thus, in the second statement, 'vog' means 'habit'.
13. (1) The correct order is : many, me, meeta, meets, mother.
14. (3) 

    The new letter sequence is DETNMOUTACION.
    The eleventh letter from the right is T.
15. (2) a b **c** d/ a b **b** c d/ a **b** c **c** c d/ **a** b c d **d** d d.
16. (3) Clearly, F is the maternal uncle of D means F is the brother of D's mother i.e., F is the brother of C. C is the sister of B. So, F is the brother of B who is A's mother. Thus, F is the maternal uncle of A. So, A and D are the nephews of F i.e., F has two nephews.
17. (3) In terms of marks obtained,
    Mukesh < Raj, Raj < Priya, Gaurav < Priya, Kavita < Priya, Gaurav < Mukesh.
    Since Gaurav's marks is not the lowest, so, Kavita's marks is the lowest So, the sequence becomes:
    Kavita < Gaurav < Mukesh < Raj < Priya.
    Clearly, in the descending order, Raj comes second.
18. (3) Using the usual notations '×' = '>', 'ϕ' = '=', '<' = '$\not<$', '$\perp$' = '$\neq$', 'Δ' = '<' and '+' = '$\not>$', we have:
    (1) The statement is a > b < c
    $\Rightarrow$ a = c < b, which is false. [$\because$ c > b]
    (2) The statement is a > b < c
    $\Rightarrow$ b $\not<$ a > c, which is false. [$\because$ b < a]
    (3) The statement is a > b < c
    $\Rightarrow$ a $\not<$ b $\not>$ c, which is true.
    (4) The statement is a > b < c
    $\Rightarrow$ b $\not<$ a = c, which is false. [$\because$ b < a]
    Hence, the statement (4) is true.
19. (3) 5 × 0.5 + 0.5 = **3**
    3 × 1 + 1 = 4
    4 × 1.5 + 1.5 = 7.5
    7.5 × 2 + 2 = 17
    17 × 2.5 + 2.5 = 45
20. (2) 3 × 2 + 3 = 9
    9 × 3 + 2 = 29
    29 × 2 + 3 = 61
    61 × 3 + 2 = 185
    185 × 2 + 3 = **373**

21. (3) $15 + 1^3 = 16$
$16 + 2^3 = 24$
$24 + 3^3 = \mathbf{51}$

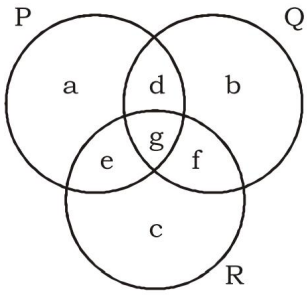
22. (4)

23. (4)

24. (2)

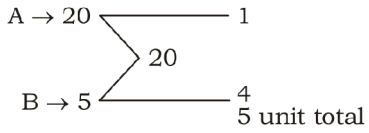
	No. of consonants	No. of vowels	
JITENDRA	5	3	$\Rightarrow 5^2 - 3^2 = 16$
DHARMENDRA	7	3	$\Rightarrow 7^2 - 3^2 = 40$
SHAHRUKH	6	2	$\Rightarrow 6^2 - 2^2 = 32$
SALMAN	4	2	$\Rightarrow 4^2 - 2^2 = 12$

25. (3)

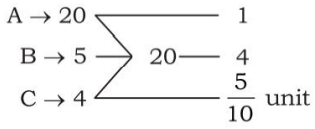


Now, a + b + c + d + e + f + g = 120.
Number of musicians who can play all the three instruments = g = 5% of 120 = 6.
Number of musicians who can play any two and only two of the instruments
= d + e + f = 30
Number of musicians who can play guitar only = a = 40.
∴ Number of musicians who can play violin alone or flute only = b + c
= 120 – (a + d + e + f + g)
= 120 – (40 + 30 + 6) = 44.

51. (1)



∴ Time taken by C = 4 days
∴ Required days to complete the work by A, B and C together



$\Rightarrow \frac{20}{10} = 2$ days.

52. (4) $10\% = \frac{1}{10}$, $25\% = \frac{1}{4}$, $20\% = \frac{1}{5}$

A : B : C : D
9 10
$5_{\times 2}$ $4_{\times 2}$
$4_{\times 2}$ $5_{\times 2}$
9 : 10 8 : 10
$\downarrow \times 80$ $\downarrow \times 80$
720 800

D got = 800 marks

$\therefore$ Required $\% = \frac{800}{1000} \times 100 = 80\%$

53. (3) $1 : \frac{2}{2} : \frac{3}{4}$
4 : 4 : 3
11 = 55
1 = 5
4 = 20
20 × 2 = 40

54. (3) Dist. travelled by bullet in 30 sec = distance travelled by train in 12 min 30 sec
30 × 330 = train in 12 min 30 sec

Speed of train = $\frac{D}{T} = \frac{9900}{750}$ sec

$= \frac{990}{75}$ m/sec $= \frac{990}{75} \times \frac{18}{5}$ kms/hr

$= 47\frac{13}{25}$ kms/hr.

55. (3) $10\% = \frac{1}{10}$

C.P S.P
10 — 11
$\downarrow \times 40.5$ $\downarrow$
405 445.5

$\because$ 1 kg potato rotten

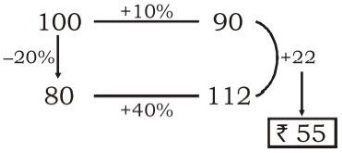
$\therefore$ S.P of remaining potato $= \frac{445.5}{9} =$ Rs.49.5/kg

56. (4) 5x × 8 : 6x × y

$\frac{5x \times 8}{6x \times y} = \frac{5}{9} \Rightarrow \frac{8}{2y} = \frac{1}{3}$

y = 12 months.

57. (1) Let the price of article be 100
ATQ,



$\therefore$ cost price of article $= \frac{55 \times 100}{22} =$ Rs.250.

58. (4) Difference of correct and incorrect marks = 64 – 46 = 18

$\therefore$ Correct mean $= 52 + \frac{18}{36} = 52.5$

59. (1) Let Vimal's age and Arun's age be 3x years & 5x years respectively.
ATQ,
3x + 5x = 80
$\Rightarrow$ 8x = 80 $\Rightarrow$ x = 10
Vimal's age = 3x = 3 × 10 = 30 years
Arun's age = 5x = 5 × 10 = 50 years
After 10 years
Vimal's age = 30 + 10 = 40 years
Arun's age = 50 + 10 = 60 years
$\therefore$ Ratio of their ages after 10 years 40 : 60 = 2 : 3.

60. (4) $15\% = \frac{3}{20}, 10\% = \frac{1}{10}, 5\% = \frac{1}{20}$

Income	Remain
20	17
10	9
20	19
4000	2907
×5 ↓	×5 ↓
20,000	**14535**

61. (2) Daily income of A + B + C = $\frac{1500}{10}$ = Rs.150

Daily income of A + C = $\frac{800}{8}$ = Rs.100

Daily income of B + C = $\frac{900}{9}$ = Rs.100

$\therefore$ Total income of B = (A + B + C) – (A + C)
= (150) – (100) = Rs. 50

62. (2) Circum. of pulley = $\pi d = \frac{22}{7} \times 10.5 = 33$ cm

$\therefore$ No. of rotation = $\frac{4950}{33} = 150.$

63. (1) Speed downstream = (9 + 3) km/hr
Speed upstream = (9 – 3) km/hr
ATQ,

$$\frac{d}{x-y} - \frac{d}{x+y} = 3$$

$$\Rightarrow \frac{d}{9-3} - \frac{d}{9+3} = 3 \Rightarrow \frac{d}{6} - \frac{d}{12} = 3$$

$$\Rightarrow \frac{2d-d}{12} = 3 \Rightarrow d = 36 \text{ kms.}$$

64. (2) Amount deposited = 31,100
1% of 10,000 = 100
31,200
96% of total sale = 31,200

$$100\% = 31200 \times \frac{100}{96} = \text{Rs.}32,500.$$

65. (2) (x + 5)° + (2x – 3)° + (3x + 4)° = 180°
(6x + 6)° = 180°

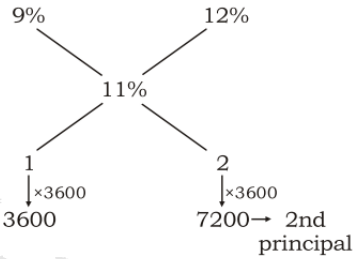
$$\therefore x = \frac{180° - 6°}{6} = 29°.$$

66. (2) $\because x + \frac{1}{x} = 4$

$$\Rightarrow x^2 + \frac{1}{x^2} = 14 \text{ and } x^3 + \frac{1}{x^3} = 52$$

$\therefore$ The value of $x^5 + \frac{1}{x^5} = 14 \times 52 - 4 = 724.$

67. (1) By alligation :



$\therefore$ total principal = 7200 + 3600 = Rs. 10,800.

68. (3) Total expenditure of man in a year
= Rs. (4 × 1800 + 8 × 2000)
= Rs. (7200 + 16000) = Rs. 23200
Total annual income = (23200 + 5600) = Rs. 28800
$\therefore$ Average monthly income
= $\frac{28800}{12}$ = Rs.2400

69. (3) Take the value of θ = 45°

$$\therefore x = \text{cosec}\,\theta - \sin\theta = \sqrt{2} - \frac{1}{\sqrt{2}}$$

$$x^2 = \frac{1}{2} \text{ similarly } y^2 = \frac{1}{2}$$

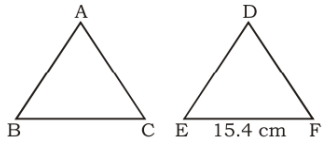
$$\therefore x^2y^2(x^2 + y^2 + 3) = \frac{1}{2} \times \frac{1}{2}\left(\frac{1}{2} + \frac{1}{2} + 3\right) = 1.$$

70. (3) 2x + y = 15
y = 15 – 2x
similarly x = 26 – 2z
$\therefore$ 2y + z = 25
$\Rightarrow$ 30 – 4x + z = 25
$\Rightarrow$ 30 – 4(26 – 2z) + z = 25
$\Rightarrow$ 9z – 74 = 25

$$\Rightarrow z = \frac{74 + 25}{9} = 11$$

71. (4) If the quotient in the first case be x.
Then, number = 5x + 3
On squaring, the number = $(5x + 3)^2$
= $25x^2 + 30x + 9$
On dividing by 5, remainder = 9 – 5 = 4

72. (4)



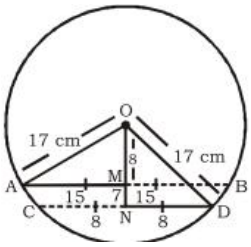
$\because$ ΔABC and ΔDEF are similar then

$$\frac{ar(ABC)}{ar(DEF)} = \frac{BC^2}{EF^2} \Rightarrow \sqrt{\frac{64}{121}} = \frac{BC}{15.4}$$

$$\therefore BC = \frac{8 \times 15.4}{11} = 11.2 \text{ cm}$$

73. (2) When 36798 is divided by 78.
Remainder = 60
$\therefore$ The least number to be subracted = 60

74. (4)



Length of = OM = 8 cm (By Triplet)
$\because$ Length of ON = 15 cm (By Triplet)
$\therefore$ Length of MN = 15 – OM = 7 cm

75. (1) Each internal angle = $\frac{(2n-4)90^\circ}{n}$

$$\therefore \frac{(2n-4)90^\circ}{n} = 144^\circ$$

$\Rightarrow 180^\circ n - 360^\circ = 144^\circ n \Rightarrow 36n = 360^\circ \Rightarrow n = 10.$

76. (2) Add 'the' before poor, as 'the poor' represents class of poor people.

77. (2) Remove 'had', when two actions take place subsequently, the first action which happened earlier will be in past perfect tense and the 2 nd action will be simple past tense.

78. (2) Nouns such as 'information' have no plural form, but adding a few words before those certain uncountable nouns make them countable, thus plural. Thus, it should be 'prakash gave me two pieces of information'.

79. (2) Words such as 'everything' and 'everyone' i.e both living and non-living will take a relative pronoun 'that'. Thus, replace 'who' by 'that'.

80. (1) 'When you have found out' is correct. If the 2 nd action takes place after the 1 st action has already finished, the 1 st action will be in present perfect tense.

91. (3) Since, this is a case of an unfulfilled wish, it will take 'had' as a main verb.