

SSC MOCK TEST – 12 (SOLUTION)

- (B) Drum is beaten and piano is played.
- (A) Frog is an amphibian and snake is a reptile.
- (B) Rice comes under cereals and tea comes under Beverage.
- (B) Spoon is used to feed and Broom is used to Sweep.
- (A) $5 = 5 \times 4 \times 3 \times 2 \times 1 = 120$
 $7 = 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 5040$
- (A) Odometer is used to measure the speed of a vehicle and seismograph is used to measure earth quake.
- (B)

A	C	F	J	M	O	R	V
↗ +2 ↘		↗ +3 ↘		↗ +4 ↘		↗ +3 ↘	
D	F	I	M	P	R	U	Y
↗ +2 ↘		↗ +3 ↘		↗ +4 ↘		↗ +3 ↘	
- (C) Furniture is made of woods and ornaments is made of Gold.
- (B)

11	143	13	221
↘ ×13 ↗		↘ ×17 ↗	
Next prime number after 11		Next prime number after 13	
- (C) A group of soldiers is 'Barrack' and a group of singers is 'Chorus'.
- (C) All except 'Defence' are forms of attack.
- (A) Except (A), In all the second is eaten by the first.
- (A) 3 is a prime number.
- (D) Parsley, Basil, Dill are types of herbs. 'Mayonnaise' is not a herb.
- (D) Except 'Punctuation', rest are parts of speech.
- (B) All except 'Roof' are animal's shelter.
- (B) Brass is an alloy whereas others are metals.
- (B) An ounce measures weight and the other choices measure length.
- (C) All except letter 'C' can be drawn with the help of lines.
- (C) Except 'Bay', all are landforms.
- (C)

36	54	18	27	9	13.5
↘ ×1.5 ↗		↘ ÷3 ↗		↘ ×1.5 ↗	
- (A) a a **a** / b b b / **c** c c / a a b / **b** b c / **c** c a
- (C)

1, 5, 5, 9,	7, 11, 11, 15,	12, 17, 17, 21
↗ +8 ↘		↗ +9 ↘
- (C) **SWORD**
- (B) $52 + 17 + 12 + 8 = 89$
 $61 + 24 + 33 + 49 = 167$
 $121 + 61 + 33 + 15 = 230$

26. (B)

3	8	10	2	5	1
↓ ×(3-1)	↓ ×(8-1)	↓ ×(10-1)	↓ ×(2-1)	↓ ×(5-1)	↓ ×(1-1)
6	56	90	2	20	0

27. (D) $\frac{3 \times 8 \times 4}{2} = \frac{96}{2} = 48$
 $\frac{5 \times 7 \times 2}{2} = \frac{70}{2} = 35$

28. (D)

3,	$\frac{1}{3}$,	14,	$\frac{1}{14}$,	25,	$\frac{1}{25}$,	36
↗ +11 ↘		↗ +11 ↘		↗ +11 ↘		
↖ Reciprocal ↗		↖ Reciprocal ↗		↖ Reciprocal ↗		

29. (D)

$\frac{2}{17}$,	$\frac{4}{19}$,	$\frac{7}{22}$,	$\frac{11}{26}$,	$\frac{16}{31}$	
↗ +2 ↘		↗ +3 ↘		↗ +4 ↘	

30. (B)

2.1	5.2	8.4	11.7	15.1	18.6
↗ +3.1 ↘		↗ +3.2 ↘		↗ +3.3 ↘	

31. (D)

$11\frac{1}{9}$,	$12\frac{1}{2}$,	$14\frac{2}{7}$,	$16\frac{2}{3}$,	20	
↓	↓	↓	↓	↓	
$\frac{100}{9}$	$\frac{25}{2} = \frac{100}{8}$	$\frac{100}{7}$	$\frac{50}{3} = \frac{100}{6}$	$\frac{100}{5}$	
↖ -1 ↗		↖ -1 ↗		↖ -1 ↗	

- (B)
- (C)
- (D)
- (B)
- (B) At 10 o'clock difference between minute and hour hand = 50 minutes and for the meeting of both the hands, minute hand has to travel 50 minutes more.

\therefore Time spent = $\frac{50 \times 12}{11} = \frac{600}{11}$

= $54\frac{6}{11}$ minutes

So, the time at which both the hands

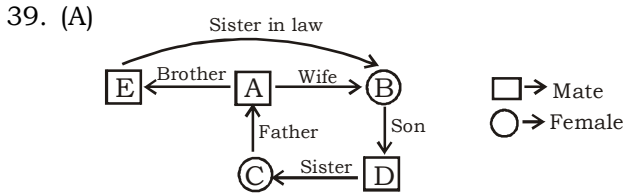
coincide with each other = $10 + 54\frac{6}{11}$

= $10 : 54\frac{6}{11}$

37. (A) $112 \times 4 \div 1 - 8 + 2$
After changing the signs we have,
 $112 + 4 - 1 \times 8 \div 2$
 $= 112 + 4 - 1 \times 4$
 $= 112 + 4 - 4$
 $= 112$

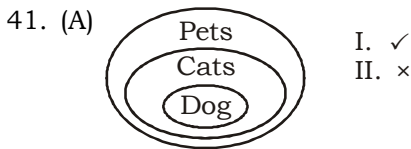
38. (A) ZYXWVUTSRQPONM
LKJIHGFEDCBA
After removing every second letter.

ZXVTRP LIHFDB
6 letters middle 6 letters



40. (A)

Number of triangles at base = $n = 7$
 \therefore Total number of triangles in given figure
 $= \frac{n(n+1)}{2} = \frac{7 \times 8}{2} = 28$



42. (D) Health will be better or not can't be concluded from the given statement and we know warning is given at the time when we feel that it is needed. So neither conclusion I nor II follows.

43. (B) In English alphabet, we have 15 letters which can be written through lines.
A, E, F, J, I, K, L, M, N, T, V, W, X, Y, X,

44. (B) $n(H) = 34, n(E) = 25, n(H \cup E) = 50$

$$n(H \cap E) = n(H) + n(E) - n(H \cup E) \\ = 34 + 25 - 50 \\ = 9$$

45. (A)

46. (D)

47. (B)

2	5	3
$\downarrow 2^3$	$\downarrow 5^3$	$\downarrow 3^3$
8	125	27
$\downarrow 8^{-1}$	$\downarrow 125^{-1}$	$\downarrow 27^{-1}$
7	124	26
712426		

4	2	1
$\downarrow 4^3$	$\downarrow 2^3$	$\downarrow 1^3$
64	8	1
$\downarrow 64^{-1}$	$\downarrow 8^{-1}$	$\downarrow 1^{-1}$
63	7	0
6370		

3	2	8
$\downarrow 3^3$	$\downarrow 2^3$	$\downarrow 8^3$
27	8	512
$\downarrow 27^{-1}$	$\downarrow 8^{-1}$	$\downarrow 512^{-1}$
26	7	511
267511		

48. (C)

49. (D)

50. (C)

51. (A) Let CP of refrigerator be x and Camera be y respectively.

$$x = \frac{12000}{80} \times 100 \\ = ₹ 15000$$

$$y = \frac{15000}{120} \times 100 \\ = ₹ 12500$$

Total C.P = $15000 + 12500 = ₹ 27000$

Total S.P = $12000 + 15000 = ₹ 27500$

Then, profit = $27500 - 27000 = ₹ 500$

52. (B) $\sqrt{2063 - \sqrt{1408 + 36}}$
 $= \sqrt{2063 - \sqrt{1444}}$
 $= \sqrt{2063 - 38}$
 $= \sqrt{2025}$
 $= 45$

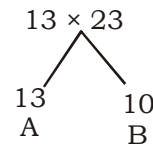
53. (A) Let the price, of article be 100%
Then C P = 75%

$$\text{Then MP} = 75 \times \frac{140}{100} \\ = 105\%$$

$$\text{SP of article} = 105 \times \frac{70}{100} \\ = 73.5\%$$

$$\text{Loss percentage} = 75\% - 73.5\% \\ = 1.5\%$$

54. (C) Ratio of efficiency $\Rightarrow 130 : 100 = 13 : 10$
Ratio of time = $10 : 13$
A completes 13 units in a day.
Then his work in 23 days = 13×23 Units



$$\text{Required days} = \frac{13 \times 23}{10 + 13}$$

$$= \frac{13 \times 23}{23} \\ = 13 \text{ days}$$

55. (D) $\sqrt{0.04 \times 4 \times a} = 0.004 \times .4 \times \sqrt{b}$

$$\sqrt{a} = \frac{0.004 \times 0.4}{\sqrt{0.16}}$$

$$= \frac{0.004 \times 0.4}{0.04} \\ = 0.004 \times 10 \\ = 0.04$$

56 (A) Let $x^a = y^b = z^c = K$

$$x = K^{\frac{1}{a}}, y = K^{\frac{1}{b}}, z = K^{\frac{1}{c}}$$

$$y^2 = xz \text{ (Given)}$$

$$\left(K^{\frac{1}{b}}\right)^2 = K^{\frac{1}{a}} \times K^{\frac{1}{c}}$$

$$K^{\frac{2}{b}} = K^{\frac{1}{a} + \frac{1}{c}}$$

$$\frac{2}{b} = \frac{1}{a} + \frac{1}{c} = \frac{a+c}{ac}$$

$$b = \frac{2ac}{a+c}$$

57. (D) Let CP of article be 100 %

$$\text{then SP} = 87\frac{1}{2}\%$$

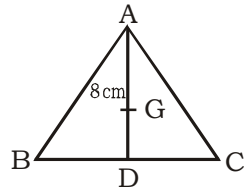
$$87\frac{1}{2}\% + ₹103.60 = 106\%$$

$$\frac{37}{2}\% = ₹ 103.60$$

$$100\% = \frac{103.60 \times 2}{37} \times 100$$

$$= ₹ 560$$

58. (A)



$$AG : DG = 2 : 1$$

$$8 : DG = 2 : 1$$

$$DG = \frac{8}{2} \times 1$$

$$DG = 4$$

$$AD \Rightarrow AG + DG = 8 + 4 = 12 \text{ cm}$$

59. (B) Distance travelled by train = $\frac{10}{19} \times 380$

$$= 200 \text{ km}$$

Distance travelled by Car = $\frac{7}{19} \times 380$

$$= 140 \text{ km}$$

Distance travelled by bus = $\frac{2}{19} \times 380$

$$= 40 \text{ km}$$

$$\text{Fare of train per km} = \frac{5}{7} \times 0.35 = ₹ 0.25$$

$$\text{Fare of car per km} = \frac{9}{7} \times 0.35 = ₹ 0.45$$

Total fare

$$= 200 \times 0.25 + 140 \times 0.45 + 40 \times 0.35$$

$$= ₹ 127$$

60.(C) Let α and β be the two roots of the equation.

$$\alpha + \beta = -p, \quad \alpha\beta = q$$

$$\alpha + \beta = \alpha^2 + \beta^2 \text{ [given]}$$

$$-p = (\alpha + \beta)^2 - 2\alpha\beta$$

$$-p = p^2 - 2q$$

$$\text{or } p^2 + p = 2q$$

61.(A) Let the two numbers be a and b,

$$a \times b = 24 \text{ (} a-b) \dots\dots(I)$$

$$a + b = 14 \dots\dots\dots(II)$$

$$b = 14 - a \dots\dots\dots(III)$$

$$a \times (14 - a) = 24 \text{ (} a-14+a)$$

$$14a - a^2 = 48a - 336$$

$$a^2 - 34a - 336 = 0$$

$$a^2 + 42a - 8a - 336 = 0$$

$$a(a+42) - 8(a+42) = 0$$

$$(a+42)(a-8) = 0$$

$$a + 42 = 0$$

$$a = -42$$

$$b = 56$$

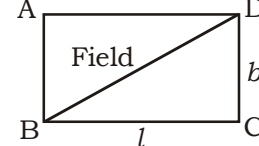
$$a - 8 = 0$$

$$a = 8$$

$$b = 6$$

It can't be consider | So, large number is 8.

62.(C) A



distance travelled by A = BD

$$\sqrt{l^2 + b^2} \Rightarrow \frac{52 \times 15}{60} = 13 \text{ m}$$

distance travelled by B = BC + CD

$$l + b \Rightarrow \frac{68 \times 15}{60} = 17 \text{ m}$$

$$(l + b)^2 = l^2 + b^2 + 2lb$$

$$17^2 = 13^2 + 2lb$$

$$2lb = 289 - 169 = 120$$

$$(l - b)^2 = l^2 + b^2 - 2lb$$

$$(l - b)^2 = 169 - 120 = 49$$

$$l - b = \sqrt{49} \text{ cm}$$

$$= 7 \text{ cm}$$

$$l + b = 17$$

$$l - b = 7$$

$$l = 12 \text{ cm,}$$

$$b = 17 - 12$$

$$b = 5 \text{ cm}$$

Area of field = lb

$$= 12 \times 5$$

$$= 60 \text{ cm}^2$$

63.(B) Ratio of B and current = 5 : 2 : 2
 Ratio of current and $B_2 = \frac{3}{2} : 3 : 4$
 Ratio of B_1 : current : $B_2 = 15 : 6 : 8$
 Ratio of $B_1 : B_2 = 15 : 8$

64. (A) Area of circle = πr^2

$$= \frac{22}{7} \times 35 \times 35$$

$$= 3850 \text{ Cm}^2$$

Length of $\widehat{AB} \Rightarrow 36 = \frac{\theta}{360} 2\pi r$

Area of $\widehat{AB} = \frac{\theta}{36} \times 2\pi r \times \frac{r}{2}$

$$= 36 \times \frac{35}{2}$$

$$= 630 \text{ cm}^2$$

Area of shaded part = $3850 - 630$
 $= 3220 \text{ cm}^2$

65. (D) $\left(\sqrt{\frac{x-a}{x-b}} - \sqrt{\frac{x-b}{x-a}} \right)^2 = \left(\frac{b-a}{x} \right)^2$

$$\Rightarrow \frac{x-a}{x-b} + \frac{x-b}{x-a} - 2 \sqrt{\left(\frac{x-a}{x-b} \right) \left(\frac{x-b}{x-a} \right)}$$

$$= \left(\frac{b-a}{x} \right)^2$$

$$\Rightarrow \frac{(x-a)^2 + (x-b)^2 - 2(x-b)(x-a)}{(x-b)(x-a)}$$

$$= \left(\frac{a-b}{x} \right)^2$$

$$\Rightarrow \frac{(x-a-x+b)^2}{x^2 - ax - bx + ab} = \left(\frac{a-b}{x} \right)^2$$

$$\Rightarrow \frac{(b-a)^2}{x^2 - ax - bx + ab} = \frac{(b-a)^2}{x^2}$$

$$x^2 = x^2 - ax - bx + ab$$

$$ab = x(a+b)$$

$$x = \frac{ab}{a+b}$$

66.(B) 50% increase in 5 years = $1 + \frac{50}{100}$

$$= \frac{3}{2} \text{ times}$$

If 10 year = $\left(\frac{3}{2} \right)^2$ times &

$$15 \text{ years} = \left(\frac{3}{2} \right)^3 \text{ times}$$

and in 20 years = $\left(\frac{3}{2} \right)^4$ times

$$\therefore x \left(\frac{3}{2} \right)^2 = y \left(\frac{3}{2} \right)^3 = z \left(\frac{3}{2} \right)^4 = K$$

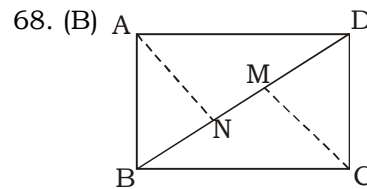
$$x = \frac{4}{9} K, y = \frac{8}{27} K, z = \frac{16}{81} K$$

$$x : y : z = \frac{4}{9} K : \frac{8}{27} K : \frac{16}{81} K = 9 : 6 : 4$$

67. (C) Coins ₹ 1 ₹ 0.50 ₹ 0.25
 Values 13 11 7

No. of coins	13	22	28		
Total coins	→			63	
				} × 6	
				378	

Required number of
 Coins $\Rightarrow 22 \xrightarrow{\times 6} 132$



ABCD is parallelogram

BD is 70 Cm.

AN = CM = 27 cm (Given)

$$\text{Area of ABCD} = \frac{1}{2} \times 70 \times 27 + \frac{1}{2} \times 70 \times 27$$

$$= 1890 \text{ Sq. Cm.}$$

69. (A) Let A purchased the watch for ₹ x

$$x \times \frac{140}{100} \times \frac{80}{100} = 864$$

$$x = ₹ 771.4285$$

70. (B) Let the parts be x, y and $[5200 - (x+y)]$

$$\frac{x \times 4 \times 1}{100} = \frac{y \times 6 \times 1}{100}$$

$$= \frac{[5200 - (x+y)] \times 8 \times 1}{100}$$

$$\Rightarrow \frac{x}{y} = \frac{6}{4} = \frac{3}{2}$$

$$y = \frac{2}{3} x$$

$$\text{So, } \frac{x \times 4 \times 1}{100} = \frac{\left[5200 - \left(x + \frac{2}{3}x \right) \right] \times 2}{100}$$

$$x = 2 \left[5200 - \frac{5}{3}x \right]$$

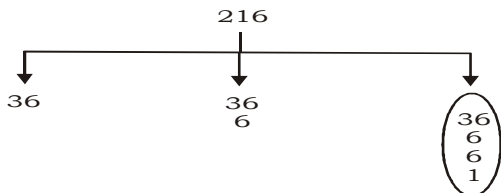
$$x = 10400 - \frac{10}{3}x$$

$$\frac{13}{3}x = 10400$$

$$x = ₹ 2400$$

71. (D) $16\frac{2}{3}\% = \frac{1}{6}$;

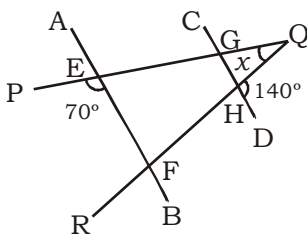
Let principal amount be $(6)^3 = 216$



Compound interest for the 3rd year = 49
 $\left. \begin{matrix} 49 \\ \times 1 \end{matrix} \right\}$

So, SI of 1 year = $36 \xrightarrow{\times 1} 36$
 and for 5 year = $36 \times 5 = ₹ 180$

72. (A)



Since, $AB \parallel CD$ and PQ is transversal.

$$\angle PEF = \angle EGH \text{ [corresponding angle]}$$

$$\angle HGQ = 180 - 70 = 110^\circ$$

$$\angle HGQ + \angle GQH = \angle QHD$$

$$110 + x = 140^\circ$$

$$x = 30^\circ$$

73 (C)

$$4a_1 = 68 \text{ cm}$$

$$a_1 = 17 \text{ cm}$$

$$\text{Area of 1st square} = (17)^2 = 289 \text{ cm}^2$$

$$4a_2 = 60 \text{ cm}$$

$$a_2 = 15 \text{ cm}$$

$$\text{Area of 2nd square} = 225 \text{ cm}^2$$

$$\text{Difference} = (289 - 225) \text{ cm}^2 = 64 \text{ cm}^2$$

$$\text{Area of 3rd square} = 64 \text{ sq cm}$$

$$\text{Side} = \sqrt{64} = 8 \text{ cm}$$

$$\text{Perimeter} = 4a_3$$

$$= 4 \times 8$$

$$= 32 \text{ cm}$$

74. (B) Required installment

$$= \frac{23205}{\frac{10}{11} + \frac{100}{121} + \frac{1000}{1331} + \frac{10000}{14641}}$$

$$= \frac{23205}{13310 + 12100 + 11000 + 10000}$$

$$= \frac{23205 \times 14641}{46410}$$

$$= ₹ 7320.50$$

75. (C) Let x be the number of wickets taken till the last match.

$$(12.4x + 26) = 12(x + 5)$$

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

$$0.4x = 34$$

$$x = 85$$

76. (A) Let the person's wealth be 100%.

Then, share of the elder son = $100 \times \frac{2}{5} = 40\%$

Share of the younger son = 30%

According to question,

$$40\% - 30\% = 2000$$

$$10\% = 2000$$

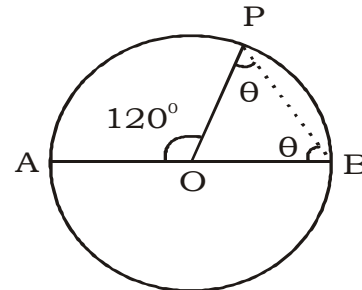
$$100\% = 20,000$$

Remaining amount saved in trust C

$$= 20000 \times \frac{30}{100} = ₹ 6000$$

$$\text{Required sum} = \frac{2}{10} \times 6000 = ₹ 1200$$

77. (C)



In $\triangle PBO$,

$$\angle POB = 180 - 120 = 60^\circ$$

$$OB = [\text{radius of circle}]$$

$$\angle OPB + \angle PBO + \angle POB = 180^\circ$$

$$\theta + \theta + 60 = 180^\circ$$

$$2\theta = 120^\circ$$

$$\theta = 60^\circ$$

78.(A) Let area be x .
Let $l_1 : l_2 : l_3 = 1 : 2 : 3$
 $\therefore l_1 : l_2 : l_3 = \frac{x}{1} : \frac{x}{2} : \frac{x}{3} = 6 : 3 : 2$

\therefore Ratio of volumes

$$= \pi r_1^2 h_1 : \pi r_2^2 h_2 : \pi r_3^2 h_3$$

$$= 2\pi r = 1, \quad h_1 = 6$$

$$r_1 = \frac{1}{2\pi}, \quad h_1 = 6$$

$$2\pi r_2 = 2, \quad h_2 = 3$$

$$r_2 = \frac{2}{2\pi}, \quad h_2 = 3$$

$$2\pi r_3 = 2, \quad h_3 = 3$$

$$r_3 = \frac{2}{2\pi}, \quad h_3 = 3$$

Ratio of volumes

$$= \pi r_1^2 h_1 : \pi r_2^2 h_2 : \pi r_3^2 h_3$$

$$= \left(\frac{1}{2\pi}\right)^2 \times 6 : \left(\frac{2}{2\pi}\right)^2 \times 3 : \left(\frac{2}{2\pi}\right)^2 \times 3$$

$$= \frac{1}{4\pi^2} \times 6 : \frac{4}{4\pi^2} \times 3 : \frac{4}{4\pi^2} \times 3$$

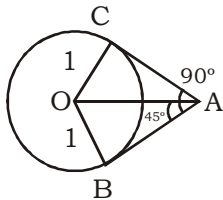
$$= 6 : 12 : 12$$

$$= 1 : 2 : 2$$

79. (C) $x + y + z = (b-c)(a-b) + (c-a)(b-d) + (a-b)(c-d)$
 $= 0$

Hence, $x^3 + y^3 + z^3 = 3xyz$

80. (D)



$$\sin 45^\circ = \frac{OB}{OA}$$

$$\frac{1}{\sqrt{2}} = \frac{1}{OA}$$

$$OA = \sqrt{2} \text{ Unit}$$

81. (B) Let P be = ₹ x

R = 20%

T = 3 years

A = ₹ y

$$y = x \left(1 + \frac{20}{100}\right)^3 = x \left(\frac{6}{5}\right)^3$$

$$\frac{y}{x} = \frac{216}{125}$$

Hence, $y : x = 216 : 125$

82. (C)

83. (C) Let the original number = 100%

$$\text{Total increase} = 100 \times \frac{120}{100} \times \frac{120}{100} - 100$$

$$= 44\%$$

$$\text{Required \%} = \frac{44}{100} \times 100$$

$$= 30\frac{5}{9}\%$$

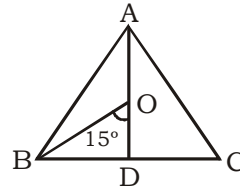
84. (D) $n \times 2\pi rh = 72\%$ of Area

$$150 \times 2 \times \frac{22}{7} \times 1.68 \times 4.5 = \text{Area} \times \frac{72}{100}$$

$$\text{Area} = \frac{150 \times 2 \times 22 \times 1.68 \times 4.5 \times 100}{7 \times 72}$$

$$= 9900 \text{ m}^2$$

85. (A)



$$\angle OBD = 180 - (90 + 15)$$

$$= 75^\circ$$

$$\angle ABC = 2 \times 75 = 150^\circ$$

86. (C) $r = \frac{\text{Area of } \Delta}{S} \left(\text{where } S = \frac{a+b+c}{2} \right)$

$$5 = \frac{\text{Area of } \Delta}{\frac{40}{2}}$$

$$\text{Area of } \Delta = 100 \text{ cm}^2$$

87. (C) Let CP of article = 100%

SP = 135%

Required discount percentage

$$= \frac{135 - 108}{135} \times 100$$

$$= \frac{27}{135} \times 100$$

$$= 20\%$$

88. (B) Let their investment be x , y and z respectively.

Then, $14x : 8y : 7z = 5 : 7 : 8$

$$\frac{14x}{8y} = \frac{5}{7}$$

$$y = \frac{14 \times 7}{8 \times 5} x$$

$$y = \frac{49}{20} x$$

$$\frac{14x}{7z} = \frac{5}{8}$$

$$\frac{x}{z} = \frac{5}{16}$$

$$z = \frac{16}{5}x$$

Required ratio

$$= x : y : z$$

$$\Rightarrow x : \frac{49}{20}x : \frac{16}{5}x$$

$$\Rightarrow 20 : 49 : 64$$

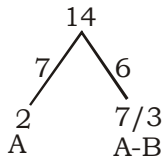
89. (B) $5M + 2C = 4(1M + 1C)$

$$5M + 2C = 4M + 4C$$

$$M = 2C$$

$$M : C = 2 : 1$$

90. (A)



$$\text{Required time} = \frac{14}{7-6} = 14 \text{ Hours.}$$

91. (C) $\frac{a}{3} = \frac{b}{5} = \frac{c}{7} = C$

$$a = 3K, b = 5, c = 7K$$

$$\frac{a+b+c}{b}$$

$$\Rightarrow \frac{3K+5K+7K}{5K}$$

$$\Rightarrow \frac{15K}{5K}$$

$$\Rightarrow 3$$

92. (A) $1 + 9 + 25 + \dots + 121$

$$\Rightarrow 1^2 + 3^2 + 5^2 + \dots + 11^2$$

$$\Rightarrow (1^2 + 3^2 + 5^2 + \dots + 11^2) - (2^2 + 4^2 + 6^2 + \dots + 10^2)$$

$$\Rightarrow \left(\frac{n(n+1)(2n+1)}{6} \right)$$

$$\Rightarrow \left[\frac{11 \times 12 \times 23}{6} \right] - \left[4 \left(\frac{5 \times 6 \times 11}{6} \right) \right]$$

$$\Rightarrow 506 - 220 = 286$$

Short Trick :-

$$\text{Formula} = \frac{n(n+1)(n+2)}{6}$$

[where n is last no.]

$$= \frac{11 \times 12 \times 13}{6}$$

$$= 286$$

93. (A) $\frac{a}{3-5a} + \frac{b}{3-5b} + \frac{c}{3-5c} = 1$

$$\Rightarrow \frac{5a}{3-5a} + \frac{5b}{3-5b} + \frac{5c}{3-5c} = 5 \times 1$$

$$\Rightarrow \frac{5a}{3-5a} + 1 + \frac{5b}{3-5b} + 1 + \frac{5c}{3-5c} = 5 + 3$$

$$\Rightarrow \frac{5a+3-5a}{3-5a} + \frac{5b+3-5b}{3-5b} + \frac{5c+3-5c}{3-5c} = 8$$

$$\Rightarrow \frac{3}{3-5a} + \frac{3}{3-5b} + \frac{3}{3-5c} = 8$$

$$\Rightarrow 3 \left(\frac{1}{3-5a} + \frac{1}{3-5b} + \frac{1}{3-5c} \right) = 8$$

$$\Rightarrow \frac{1}{3-5a} + \frac{1}{3-5b} + \frac{1}{3-5c} = \frac{8}{3}$$

94. (C) $6M = 8F = 10C$

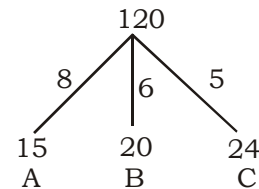
$$M : F : C = \frac{1}{6} : \frac{1}{8} : \frac{1}{10} = 20 : 15 : 12$$

$$(4M + 4F + 5C) D = 65 \times 6M$$

$$(4 \times 20 + 4 \times 15 + 5 \times 12) D = 65 \times 6 \times 20$$

$$D = \frac{65 \times 6 \times 20}{200} = 39 \text{ days}$$

95. (B)

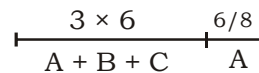


Ist day (A) = 8 Units

IInd day (B) = 6 Units

IIIrd day (C) = 5 Units

$$3 \text{ days} = 19 \text{ Units}$$



$$\text{Total days} = 18 + \frac{6}{8}$$

$$= 18 \frac{3}{4} \text{ days}$$

96. (D) Total employees in marketing = $3600 \times \frac{18}{100}$

$$\text{Number of Male} = \frac{7}{12} \times 36 \times 18$$

$$= 378$$

97. (C) Total number of employees working in HR department = $3600 \times \frac{14}{100}$

Total number of women employees working

in HR department = $\frac{3}{4} \times 36 \times 14$

Required ratio = $27 \times 14 : 36 \times 14$
= 3 : 4

98. (A) Total male employees in production

department = $\frac{11}{12} \times 3600 \times \frac{28}{100} = 924$

Total male employees in Accounts

department = $\frac{2}{9} \times 3600 \times \frac{17}{100} = 136$

Total male employees in production and account department = $924 + 136$
= 1060

99. (B) The number of women working in the IT and HR departments

= $\frac{4}{9} \times 3600 \times \frac{23}{100} + 378 = 746$

Required percentage = $\frac{746}{3600} \times 100$
= 20.72%

100. (D) The number of women employees working in the marketing and accounts department

= $\frac{5}{12} \times 3600 \times \frac{18}{100} + \frac{7}{9} \times 3600 \times \frac{17}{100}$

⇒ $15 \times 18 + 28 \times 17 = 746$

The number of male employees working in the marketing and accounts departments.

⇒ $3600 \times \frac{35}{100} - 746 = 1260 - 746$
= 514

Required percentage = $\frac{746}{514} \times 100$
= 145.13%

101. (C) Ashoka also known as Ashoka the Great, was an Indian emperor of the Maurya Dynasty. Ashoka means 'Painless, without sorrow'. In his edicts, he is referred to as 'Devanampriya beloved of the Gods' and Priyadarsin who regards everyone with affection.

- Samudragupta was the ruler of Gupta Empire and successor to Chandragupta I. The coins issued by him bearing the epithets like Parakramah (valour), Kritantaparashu (deadly battle axe) and Vyaghra Parakramah (valourous tiger) prove his being a skilful warrior.

- Chandragupta II was also called Vikramaditya, powerful emperor of Northern India.

- Skandagupta ascended the Gupta throne and assumed the title of Kramaditya Vikramaditya.

102. (C) The Supreme Court Judgment in the case of Namit Sharma V/s Union of India has brought the whole RTI mechanism in the country to a standstill.

- RTI 2005 came into force on 12th October, 2005. The Act was extended to the whole India except the state of J&K. It includes the right to inspect works, documents, records, take notes, extracts or certified copy of documents or records, take certified samples of material etc.

103. (C) Article 243 I of the Indian Constitution prescribes that the Governor of a state shall, as soon as may be within one year from the commencement of the Constitution (73rd A) Act, 1992 and thereafter at the expiration of every fifth year constitute a Finance Commission to review the financial position of the Panchayats and to make recommendations to the Governor as to the distribution between the State and the Panchayats of the net proceeds of the taxes, duties, tolls and fees leviable by the state etc.

In the options given (R) is not the correct explanation of (A): As, Union Finance Commission make recommendation to president as to the measures needed to augment the Consolidated Fund of a State to supplement the resources of the panchayats and municipalities in the state on the basis of the recommendations made by the Finance Commission of the state mentioned in Article 280 of the Constitution.

106. (C) The pollutants generated by the cigarette arise from the chemical process of burning organic matter. Combustion of tobacco, paper and gases, emitted by the cigarette are benzene and carbon monoxide (CO) which are invisible to the eye. These particles enter deep into the lungs where they can cause serious health problems.

107. (B) Kidney stones are made up of a compound called Calcium Oxalate and are the result of an accumulation of dissolved minerals on the inner lining of the kidneys. These deposits can grow to the size of a golf ball while maintaining

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| <p>a sharp, crystalline structure. Calcium and vitamin D supplements could increase the risk of developing kidney stones because they raise levels of calcium in the blood and urine.</p> <p>108. (B) Union Government in the fourth week of December 2014 decided to launch 'Operation all out' against Bodo militants in Assam. This decision was to review the security situation in Assam after National Democratic Front of Bodoland (NDFB) militants on 23rd December 2014 massacred at least 81 tribal people in two districts of Assam, Kokrajhar and Somitpur. The two tier armed operation was carried by Indian Army and Arunachal Pradesh border to push out militants of the NDFB.</p> <p>109. (C) List of books written by A.P.J. Abdul Kalam are, Development in Fluid Mechanics and Space Technology 1988, India 2020: A vision for the new Millennium 1998, Envisioning and empowered Nation, You are born to Blossom, Target 3 Billion 2011, The family and the Nation 2008, A Manifesto for Change: A Sequel to India 2020, Reignited: Scientific Pathways to a Brighter Future 2015, Transcendence My Spiritual experiences with Pramukh Swamiji 2015, My Journey; Transforming Dreams into Actions 2013, Indomitable Spirit, Ignited Minds: Unleashing the Power within India 2002, The Luminous Sparks. 2004, Mission India, 2005, Inspiring Thoughts 2007, Forge your future: Candid, Fortright, Inspiring 2014, Turing point: A journey through Challenges 2012.</p> <ul style="list-style-type: none"> • Two Years at months and Twenty at Night by Salman Rushdie • My country My life by L.K Advani <p>110. (B) The teachings of Buddha are preserved in the Pali Canon. The sources of Pali are the Tipitaka, the sub commentaries called the Atthakatha, Tika and others such as Anu- tika, Madhu-Tika etc.</p> <p>111. (B) Deepavali Declaration (31 Oct, 1929): Sir John Simon recommended a conference of Representatives of both British India & the Indian states to take a final decision on the question of Constitutional reforms for India. The suggestion was accepted by the British Cabinet and subsequently Lord Irwin made this statement. According to this declaration, the objective of British policy was to grant dominion status to India and a Round Table conference would be held in London after the Simon commission had reported.</p> | <p>112. (B) The early Rig Vedic Arya tribes were predominantly pastoral. The importance of cattle to these people can be gauged from one hymn, 28 Mandala V1 of the Rig Veda. The is a hymn composed in praise of cows.</p> <p>113. (D) In 1944 'Gandhian Plan' was given by Shriman Narayan Agarwal. Also known as Gandhian Plan of economic development it allowed limited role for modern Industry.</p> <ul style="list-style-type: none"> • In 1945, 'People plan' was given by M.N Roy. • In 1950, 'Sarvodaya Plan' was given by J.P Narayan. <p>114. (D) The nick name of Korea in English is "The land of the Morning calm". This was coined by Percival Lowell in his book, "chosen the land of the Morning Calm" published in 1885.</p> <p>115. (B) The Eleventh Schedule of the Constitution of India contains matters on which the Panchayats may be devolved with powers and responsibility by the State Legislatures by law. The Eleventh Schedule was added to the Constitution by the 73rd Amendment Act which came into force on 24th April 1992. Currently, there are 29 entries in the Eleventh Schedule.</p> <p>117. (B) The Indian subcontinent has a history of devastating earthquakes. The major reason for high frequency and intensity of the earthquakes is that the Indian plate is driving into Asia. The earthquake zoning map of India divides India into 4 seismic Zones; Zone II, III, IV and V. Zone V expects the highest level of seismicity whereas zone II is associated with the lowest level of seismicity.</p> <ul style="list-style-type: none"> • Hyderabad comes under zone II and not I. <p>118. (C) Satyamev Jayate literal meaning "Truth Alone triumphs" is taken from Mundak Upanishad. Upon Independence of India, it was adopted as the national motto of India. It is inscribed in Devanagari script at the base of the National Emblem. The emblem and the words " Satyameva Jayate" are inscribed on one side of all Indian currencies. The emblem is an adaptation of the Lion Capital of Ashoka which was created around 250 BC at Sarnath, near Varanasi in north Indian state of UP.</p> <p>119. (D) Light appears to travel in a straight line because of reflection, which is a process in which light enters a prism and bends.</p> <p>120. (C) In 1969, the Indian Government nationalised 14 major private banks.</p> <p>121. (B) Fundamental Rights is a charter of rights contained in the Constitution of</p> |
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| <p>India. Total 8 Fundamental Rights have been recognised by the Constitution. Right to equality is an important right provided under articles 14 to 18 of the Constitution.</p> <p>122. (C) The most important factor contributing to the loss of vulture population in India is due to Diclofenac drug which is an anti-inflammatory drug administered to livestock. It is used to treat the symptoms of inflammations, fever or pain associated with disease or wounds. The drug is fatal to vultures. They are exposed to this drug if they eat carcass of an animal.</p> <p>123. (C) NDP = GDP- Depreciation
If the net factor income from abroad is positive then NNP will be more than NDP, If the net factor income from abroad is negative then NNP will be less than NDP and it would be equal when net factor income from abroad is zero.
Therefore, NNP= NDP + NFIA
NNP = Net National Product
NDP = Net Domestic Product
NFIA = Net factor Income from abroad</p> <p>126. (A) Special economic zone (SEZ) was announced in April 2000 with the objective of making the SEZ an engine for economic growth supported by quality infrastructure and an attractive fiscal package both at the Central and State level.</p> <p>127. (B) Semiconductors are the elements which lie in between metals and non-metal. Semi-Conductors act as non-metals at low temperature where the electrons are trapped within the atom. As the temperature of the semi-conductor increases, the electrons in the valence band gain sufficient energy to escape from the confines of their atom. As a result, in higher temperature, a semi-conductor valence electrons become free and equal to the conduction. As a result resistivity decreases.</p> <p>129. (C) Sunn hemp originated in India where it has been grown since the dawn of agriculture. It has been utilized as a green manure, livestock feed, and as a non-wood fiber crop. It has also been grown in Brazil and Bangladesh as a soil-improving crop.</p> <p>131. (D) Teeth - Calcium Phosphate
Bhopal Gas Tragedy-Methyl Isocyanate
Acid Rain - Sulphur dioxide and Nitrogen Oxide</p> <p>132. (B) Cholecalciferol (toxiferol) or Vitamin D3 is one of the five forms of Vitamin D.</p> <p>136. (B) The Shadow Banking system is a term for the collection of non-bank financial</p> | <p>intermediaries that provide services similar to traditional commercial banks.</p> <p>138. (B) Xeric condition refers to dry environment i.e containing little moisture.</p> <p>137. (A) Orobanche are aggressive root parasitic weeds, which attack strategic food crops such as legumes and vegetables and threaten the livelihood of many nations. Plants that it parasitizes are tomato, eggplant, potato, cabbage, sunflower, beans etc.</p> <p>142. (A) An Ice Core is a core sample that is typically removed from an ice sheet most commonly from the polar ice caps of Antarctica, Greenland or from high mountain glaciers elsewhere. As the ice forms from the incremental buildup of annual layer of snow, lower layer are older than upper, and an ice core contains ice which is formed over a range of year. The properties of the ice and the recrystallized clarification needed inclusions within the ice and can then be used to reconstruct a climate record over the age range of the core normally through isotopic analysis. This enables the reconstruction of local temperature records and the history of atmospheric compositions</p> <p>145. (D) Sarkaria Commission was set up in June 1983 by the Central Government of India. The Sarkaria Commissions charter was to examine the relationship and balance of power between state and central government in the country and suggest changes within the framework of Constitution of India. The commission was so named as it was headed by Justice Rajinder Singh Sarkaria a retired Judge of the Supreme Court of India. The other two members of the committee were Dr. S.R. Sen and B. Sivaraman.</p> <p>146. (C) Nitrogen gas is used for inflating the tyres of Aeroplanes because ordinary air contains a small amount of water vapour, which in cold weather condenses out slightly reducing the tire pressure. So due to the nitrogen tires will last longer.</p> <p>149. (D) Ultimate Frisbee is a limited contact team field sport played with a flying disc usually called the disc or Frisbee.</p> |
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MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Proliferation	the sudden increase in the number or amount of something; a large number of a particular thing	प्रसार/ संख्या में बढ़ना
Sublime	of very high quality and causing great admiration	उदात्त
Attributive	(of adjectives or nouns) used before a noun to describe it.	उहराव
Evocative	making you think of or remember a strong image or feeling, in a pleasant way.	विचारोत्तेजक
Conspicuous	easy to see or notice, likely to attract attention	विशिष्ट
Augment	to increase the amount, value, size, etc. of something.	बढ़ाना
Ignominious	that makes you feel ashamed of something.	निन्द्य
Garrulous	talking a lot, especially about unimportant things.	बातूनी
Adhere	to stick firmly to something.	पालन
Repress	to try not to have or show an emotion, a feeling, etc.	रोकना
Vindictive	trying to harm or upset somebody, or showing that you want to, because you think that they have harmed you.	प्रतिशोधी
Puissant	powerful, having strength.	शक्तिशाली
Playwright	a person who writes plays.	नाटककार
Entrepreneur	a person who starts a business and is willing to risk loss in order to make money.	व्यवसायी
Thaw	(of ice and snow) to turn back into water after being frozen.	बर्फ का पिघलना, गर्म होना
Sludge	Thick, soft, wet mud of a substance	कीचड़
Slush	Partly melted snow that is usually dirty	गली हुई बर्फ का कीचड़
Slash	To reduce something by a large amount	कटौती करना, कम करना
Slosh	(of liquid in a container) move irregularly with a splashing sound	छप-छप की आवाज
Infringement	An act of breaking a law or rule	अतिक्रमण, उल्लंघन
Irreverence	The quality of not showing respect to somebody/something that other people usually respect	अनादर, अपमान
Sacrilege	An act of treating a holy thing or place without respect	किसी पवित्र वस्तु का अपवित्रीकरण
Transgression	An act that goes beyond the limits of what is morally or legally acceptable	उल्लंघन, अतिक्रमण
Reciprocity	A situation in which two people, countries, etc. provide the same help or advantages to each other	पारस्परिकता, आदान-प्रदान
Entreaty	A serious and often emotional request	निवेदन, प्रार्थना
Animosity	A strong feeling of opposition, anger or hatred	कटुता, दुश्मनी
Malice	a feeling of hatred for somebody that causes a desire to harm them	ईर्ष्या, कपट
Taxidermy	The art of stuffing dead animals, birds and fish with a special material so that they look like living ones and can be displayed	चर्म प्रसाधन, चर्मसंस्कार



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Taxonomy	The scientific process of classifying things (arranging them into groups).	वर्गीकरण
Toxicology	The scientific study of poisons	विष विद्या
Infantry	Soldiers who fight on foot	पैदल सेना
Artillery	The section of an army trained to use large, heavy guns which are often moved on wheels	तोपखाना, तोपची सैनिक
Cavalry	The part of the army that fought on horses; the part of the modern army that uses armoured vehicles	अश्वारोही सेना, घुड़सवार फौज
Armoured	(especially of a military vehicle) protected by metal covers	बख्तरबंद, कवचधारी
Intrusion	The act of entering a place which is private or where you may not be wanted	अनाधिकार प्रवेश
Ambiguous	Not clearly stated or defined	अस्पष्ट, संदिग्ध
Indecisive	Not providing a clear and definite answer or result	अनिर्णायक
Consequential	Happening as a result or an effect of something	आनुषांगिक, परिणामी
Totemic	Having belief in kinship with or a mystical relationship between a group or an individual and a totem	तंत्र-मंत्र, टोटका
Doom	Death or destruction; any terrible event that you cannot avoid	क्यामत, दुर्भाग्य



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SSC MOCK TEST - 12 (ANSWER KEY)

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|---------|---------|---------|----------|----------|----------|----------|----------|
| 1. (B) | 26. (B) | 51. (A) | 76. (A) | 101. (C) | 126. (A) | 151. (C) | 176. (D) |
| 2. (A) | 27. (D) | 52. (B) | 77. (C) | 102. (C) | 127. (B) | 152. (B) | 177. (B) |
| 3. (B) | 28. (D) | 53. (A) | 78. (A) | 103. (C) | 128. (C) | 153. (C) | 178. (A) |
| 4. (B) | 29. (D) | 54. (C) | 79. (C) | 104. (A) | 129. (C) | 154. (C) | 179. (B) |
| 5. (A) | 30. (B) | 55. (D) | 80. (D) | 105. (B) | 130. (D) | 155. (C) | 180. (D) |
| 6. (A) | 31. (D) | 56. (A) | 81. (B) | 106. (C) | 131. (D) | 156. (B) | 181. (B) |
| 7. (B) | 32. (B) | 57. (D) | 82. (C) | 107. (B) | 132. (B) | 157. (D) | 182. (C) |
| 8. (C) | 33. (C) | 58. (A) | 83. (C) | 108. (B) | 133. (D) | 158. (D) | 183. (C) |
| 9. (B) | 34. (D) | 59. (B) | 84. (D) | 109. (C) | 134. (B) | 159. (A) | 184. (B) |
| 10. (C) | 35. (B) | 60. (C) | 85. (A) | 110. (B) | 135. (A) | 160. (C) | 185. (C) |
| 11. (C) | 36. (B) | 61. (A) | 86. (C) | 111. (B) | 136. (B) | 161. (D) | 186. (B) |
| 12. (A) | 37. (A) | 62. (C) | 87. (C) | 112. (B) | 137. (A) | 162. (B) | 187. (C) |
| 13. (A) | 38. (A) | 63. (B) | 88. (B) | 113. (D) | 138. (B) | 163. (B) | 188. (A) |
| 14. (D) | 39. (A) | 64. (A) | 89. (B) | 114. (D) | 139. (A) | 164. (D) | 189. (D) |
| 15. (D) | 40. (A) | 65. (D) | 90. (A) | 115. (B) | 140. (C) | 165. (A) | 190. (B) |
| 16. (B) | 41. (A) | 66. (B) | 91. (C) | 116. (B) | 141. (D) | 166. (D) | 191. (C) |
| 17. (B) | 42. (D) | 67. (C) | 92. (A) | 117. (B) | 142. (A) | 167. (C) | 192. (A) |
| 18. (B) | 43. (B) | 68. (B) | 93. (A) | 118. (C) | 143. (B) | 168. (A) | 193. (B) |
| 19. (C) | 44. (B) | 69. (A) | 94. (C) | 119. (D) | 144. (B) | 169. (B) | 194. (C) |
| 20. (C) | 45. (A) | 70. (B) | 95. (B) | 120. (C) | 145. (D) | 170. (C) | 195. (B) |
| 21. (C) | 46. (D) | 71. (D) | 96. (D) | 121. (B) | 146. (C) | 171. (C) | 196. (C) |
| 22. (A) | 47. (B) | 72. (A) | 97. (A) | 122. (C) | 147. (B) | 172. (D) | 197. (D) |
| 23. (C) | 48. (C) | 73. (C) | 98. (A) | 123. (C) | 148. (C) | 173. (D) | 198. (A) |
| 24. (C) | 49. (D) | 74. (B) | 99. (B) | 124. (D) | 149. (D) | 174. (B) | 199. (A) |
| 25. (B) | 50. (C) | 75. (C) | 100. (D) | 125. (D) | 150. (C) | 175. (A) | 200. (A) |

151. (C); Change 'pick' into 'be picked'. The sentence must be in passive voice.
152. (B); Put 'were' before 'you'. The sentence is interrogative. Helping verb must come before the subject.
153. (C); Change 'by' into 'with'.
By someone, with something
Eg:- He was beaten by his teacher with a stick.
154. (C); Remove 'back'.
155. (C); Change 'are' into 'am'. 'I' takes verb 'am' and when two subjects are joined by 'either or', the verb agrees with the nearest subject.

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003