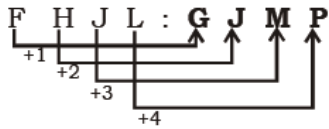
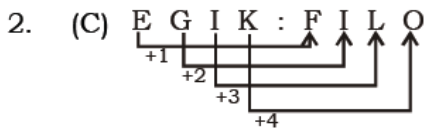


# SSC PRE MOCK TEST – 32 (ANSWER)

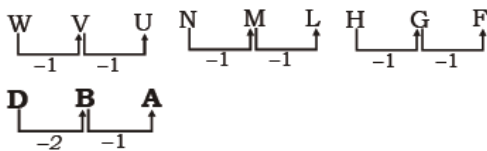
1. (B) Actor plays in a play and musician plays in a concert.



3. (B)  $583 : 295 :: 486 : 378$

$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $5+8+3 \quad 2+9+5 \quad 4+8+6 \quad 3+7+8$   
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $16 \quad 16 \quad 18 \quad 18$

4. (A) Clearly, the answer is option (i). In all other pairs, the second one is the place to stay for the first one.



6. (D)  $1629 \Rightarrow 1 + 6 + 2 = 9$   
 $3418 \Rightarrow 3 + 4 + 1 = 8$   
 $2349 \Rightarrow 2 + 3 + 4 = 9$

**1834  $\Rightarrow 1 + 8 + 3 \neq 4$**

7. (B) Exploit  $\rightarrow$  Explore  $\rightarrow$  Explosive  $\rightarrow$  Exponent  $\rightarrow$  Exposition

8. (C) SECULAR

9. (C)

Letter	A	X	R	A	Y	W	H	T
Position in opposite As per Alphabet Letters	26	3	9	26	2	4	19	7

$\Rightarrow XRAY = 3 + 9 + 26 + 2 = 40$

$\Rightarrow WHAT = 4 + 19 + 26 + 7 = 56$

10. (B)  $(10C_4)A (4C_4)B 6$   
 After taking the signs as per the given instruction,  
 $(10 \times 4) + (4 \times 4) - 6$   
 $= 40 + 16 - 6$   
 $= 50$

11. (D)  $324 \oplus 289 = \sqrt{324} + \sqrt{289} = 18 + 17 = 35$

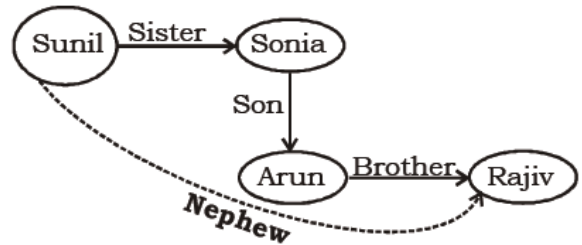
$441 \oplus 484 = \sqrt{441} + \sqrt{484} = 21 + 22 = 43$

$625 \oplus 400 = \sqrt{625} + \sqrt{400} = 25 + 20 = 45$

12. (B)

$63 \quad 72, \quad 81, \quad 90, \quad 99, \quad 108$   
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $9 \times 7 \quad 9 \times 8 \quad 9 \times 9 \quad 9 \times 10 \quad 9 \times 11 \quad 9 \times 12$   
 $\quad \quad \quad \uparrow \quad \quad \uparrow \quad \quad \uparrow \quad \quad \uparrow \quad \quad \uparrow$   
 $\quad \quad \quad +1 \quad \quad +1 \quad \quad +1 \quad \quad +1 \quad \quad +1$

13. (A)



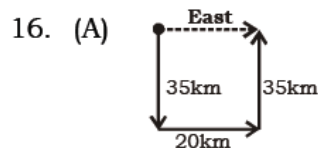
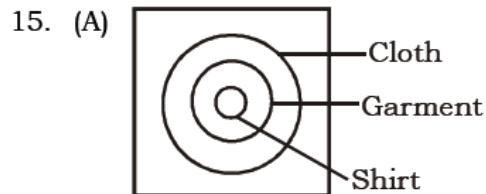
14. (C)

	M	D
Present age	$5x$	$x$
Age after 5 years	$5x + 5$	$x + 5$

ATQ,  
 $3(x + 5) = 5x + 5 \Rightarrow 3x + 15 = 5x + 5$   
 $\Rightarrow x = 5$

and  $5x = 25$

$\therefore$  Present age of mother = 25 yrs.



So, she is in the east from starting point.

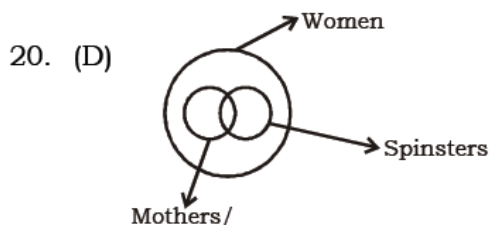
17. (B) Only conclusion II follows.

18. (B) Total number of triangles = 18

19. (C)  $7 \times 8 = 56$

$9 \times 5 = 45$

$11 \times 9 = 99$



21. (D)      22. (B)      23. (D)      24. (A)

25. (C)    G A T E  
          22 96 34 78

51. (B) If we take one number is 1 and other number should be anything else then we find-

$$(1,2) \Rightarrow 1 \times 2 = 2 \\ 1 + 2 = 3$$

$$(1,3) \Rightarrow 1 \times 3 = 3 \\ 1 + 3 = 4$$

$$(1,5) \Rightarrow 1 \times 5 = 5 \\ 1 + 5 = 6$$

So, one of the numbers must be 1.

52.(B) Let rate and quantity of petrol ₹100/litre and 100 litre respectively.

So, Rate  $\times$  Quantity = Consumption

$$+25\% \left( \frac{100}{125} \times \left( \frac{100}{x} = 10000 \right) \right) + 15\%$$

$$\text{Now, } x = \frac{11500}{125}$$

$$\Rightarrow x = 92 \text{ litres}$$

Percentage change in quantity of petrol

$$= \frac{100 - 92}{100} \times 100\% = 8\%$$

53.(D) Let the length of the race be 'd'

When B finished the race. A & C would have run (d - 36) and (d - 24) metres.

So, speed of A and C in ratio

$$= (d - 36) : (d - 24) \text{ -----(1)}$$

Now, when C finished the race, 'A' would have run (d - 16)

$$A : C = (d - 16) : d \text{ -----(2)}$$

from (1) & (2) we get,

$$\frac{d - 36}{d - 24} = \frac{d - 16}{d}$$

$$\Rightarrow d^2 - 36d = d^2 - 40d + 384$$

$$\Rightarrow 4d = 384$$

$$\Rightarrow d = 96 \text{ m}$$

54.(A)  $(\operatorname{cosec} \theta + \sin \theta)(\operatorname{cosec} \theta - \sin \theta)$

$$= \operatorname{cosec}^2 \theta - \sin^2 \theta$$

$$= 1 + \cot^2 \theta - (1 - \cos^2 \theta)$$

$$= 1 + \cot^2 \theta - 1 + \cos^2 \theta$$

$$= \cot^2 \theta + \cos^2 \theta$$

55.(D)  $1 : \frac{1}{3} : \frac{1}{6} = 6 : 2 : 1$

According to question,

$$9 \text{ unit} \rightarrow 729$$

$$1 \text{ unit} \rightarrow 81$$

$$\therefore \text{Middle part} = 2 \times 81 = 162$$

56.(B) Given,

$$x = 5 - 2\sqrt{6}$$

$$\Rightarrow x - 5 = -2\sqrt{6}$$

$$\Rightarrow (x - 5)^2 = (-2\sqrt{6})^2$$

$$\Rightarrow x^2 + 25 - 10x = 24$$

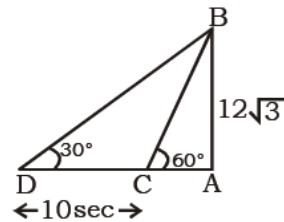
$$\Rightarrow x + \frac{1}{x} = 10$$

$$\Rightarrow x + \frac{1}{x} + 2 = 10 + 2$$

$$\Rightarrow \left( \sqrt{x} + \frac{1}{\sqrt{x}} \right)^2 = 12$$

$$\Rightarrow \sqrt{x} + \frac{1}{\sqrt{x}} = 2\sqrt{3}$$

57.(C)



Let AB is a tower of height  $12\sqrt{3}$  m.

$$\text{In } \triangle BCA - AB : CA = \sqrt{3} : 1$$

$$\text{In } \triangle ADB - AB : AD = 1 : \sqrt{3}$$

$$\text{So, } AB : CA : AD$$

$$\sqrt{3} : 1 : 3$$

$$\text{So, } DC = 3 - 1 = 2 \text{ units}$$

$$\therefore DC = 2 \text{ units distance covers in 10 sec}$$

$$\text{So, } AD = 3 \text{ units distance covers in } = \frac{10}{2} \times 3 \\ = 15 \text{ sec}$$

58.(A) Percentage of candidates who passed in the examination =  $(72 + 75 - 60)\%$   
= 87%

Then, percentage of candidates who failed in examination =  $(100 - 87)\% = 13\%$

ATQ,

$$13\% \rightarrow 5200$$

$$1\% \rightarrow 400$$

Then, total number of candidates,

$$= 100\%$$

$$= 400 \times 100$$

$$= 40000$$

59.(C) C.P. of 1 pen =  $\frac{1}{8}$

$$\text{S.P.} = \frac{1}{8} \times \frac{160}{100}$$

$$\text{S.P (1pen)} = \frac{1}{5} /-$$

$\therefore$  Number of pen sold in 1 rupee = 5

60. (C) Area of a square playground = 992.25 m<sup>2</sup>

$$\Rightarrow (\text{side of ground})^2 = 992.25$$

$$\Rightarrow \text{Side} = 31.5 \text{ m}$$

Perimeter of this playground

$$= 4 \times 31.5 \text{ m}$$

$$= 126 \text{ m}$$

Time to walk one round around the ground

$$= \frac{126}{29/10} = \frac{126 \times 10}{29} = 43.45 \text{ min}$$

61. (D) Work done by A and B together in 5 days  
 $= \frac{5}{12}$  part

$$\text{Rest work} = 1 - \frac{5}{12} = \frac{7}{12}$$

$\frac{7}{12}$  work by A in 21 days

$$\text{A will do the whole work in} = \frac{21 \times 12}{7} = 36 \text{ days}$$

62. (C) In an equilateral triangle, the ratio of inradius and Circumradius is 1 : 2

63. (B) Let second discount is  $x\%$ .  
 According to question,

$$1800 \times \frac{(100-15)}{100} \times \frac{(100-x)}{100} = 1178.1$$

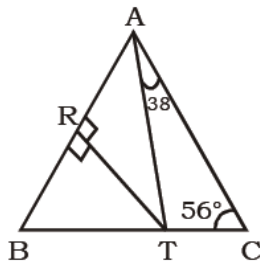
$$\Rightarrow 100 - x = \frac{117810}{18 \times 85}$$

$$\Rightarrow 100 - x = 77$$

$$\Rightarrow x = 100 - 77$$

$$\Rightarrow x = 23\%$$

64. (A)



We know that the sum of two interior angles is equal to the other external angle.

$$\text{So, } \angle ATB = 56^\circ + 38^\circ = 94^\circ$$

In  $\triangle ABT$ ,

RT is perpendicular bisector of AB. So,  $\triangle ABT$  is an isosceles triangle.

$$\text{So, } \angle BTR = \frac{94^\circ}{2} = 47^\circ$$

In  $\triangle BRT$ ,  $\angle BRT = 90^\circ$

$$\text{So, } \angle ABT = 90^\circ - 47^\circ = 43^\circ$$

65. (B) Let average runs till 14 innings be  $x$ .

According to question,

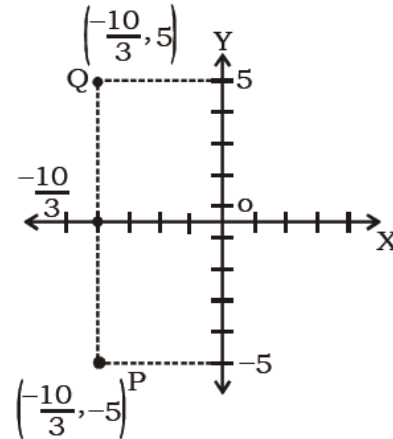
$$14x + 126 = 15(x + 6)$$

$$\Rightarrow 14x + 126 = 90 + 15x$$

$$\Rightarrow x = 36$$

$$\text{Average after 15th innings} = 36 + 6 = 42$$

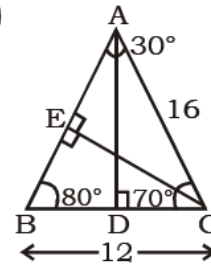
66. (C)



Reflection of the point  $P \left( -\frac{10}{3}, -5 \right)$

is  $Q \left( -\frac{10}{3}, 5 \right)$

67. (D)



In given triangle, we find  $\angle A = 180^\circ - (80^\circ + 70^\circ)$

$$\Rightarrow \angle A = 30^\circ$$

We draw a perpendicular EC to side AB.

$$\text{Now, in } \triangle EAC, \cos 30^\circ = \frac{AE}{AC}$$

$$\Rightarrow \frac{\sqrt{3}}{2} = \frac{AE}{16}$$

$$\Rightarrow AE = 8\sqrt{3} \text{ cm}$$

$$\text{And again, } \sin 30^\circ = \frac{EC}{AC}$$

$$\Rightarrow \frac{1}{2} = \frac{EC}{16}$$

$$\Rightarrow EC = 8 \text{ cm}$$

$$\text{Now, in } \triangle BEC, BE^2 = BC^2 - EC^2$$

$$\Rightarrow BE^2 = 12^2 - 8^2$$

$$\Rightarrow BE = 4\sqrt{5} \text{ cm}$$

$$\text{So, } AB = (8\sqrt{3} + 4\sqrt{5}) \text{ cm}$$

$$\text{Area of } \triangle ABC = \frac{1}{2} \times AB \times EC \text{ -----(1)}$$

$$\text{And Area of } \triangle ABC = \frac{1}{2} \times BC \times AD \text{ -----(2)}$$

From (1) and (2), we get

$$AB \times EC = BC \times AD$$

$$\Rightarrow (8\sqrt{3} + 4\sqrt{5}) \times 8 = 12 \times AD$$

$$\Rightarrow AD = \frac{2 \times 4(2\sqrt{3} + \sqrt{5})}{3}$$

$$\Rightarrow AD = \frac{8}{3} (2\sqrt{3} + \sqrt{5}) \text{ cm}$$

68. (D) Given that

$$\tan \theta = \frac{9}{40}$$

$$\text{Hypotenuse} = \sqrt{\text{Base}^2 + \text{height}^2}$$

$$= \sqrt{9^2 + 40^2}$$

$$= 41$$

$$\therefore \sec \theta = \frac{41}{40}$$

69. (C) Amount after 2<sup>nd</sup> year and 3<sup>rd</sup> year is ₹1650 and ₹1815.

$$\begin{aligned} \text{Interest when amount ₹1650 to ₹1815} \\ &= 1815 - 1650 \\ &= ₹165 \end{aligned}$$

$$\begin{aligned} \therefore \text{Rate of interest} &= \frac{165}{1650} \times 100\% \\ &= 10\% \text{ (per annum)} \end{aligned}$$

70. (A) Let the two number be  $5x$  and  $5y$ .

$$\begin{aligned} \text{Then, LCM, } 5xy &= 100 \\ \Rightarrow xy &= 20 \end{aligned}$$

$$\begin{aligned} \text{ATQ, } 5x + 5y &= 45 \\ x + y &= 9 \end{aligned}$$

So, we take  $x = 5, y = 4$   
we get numbers are 25 and 20  
Their difference =  $25 - 20 = 5$

71. (B) Given expression

$$x^2 + \frac{1}{x^2} - 11$$

$$= x^2 + \frac{1}{x^2} - 2 - 9$$

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

$$= \left(x - \frac{1}{x} + 3\right) \left(x - \frac{1}{x} - 3\right)$$

So, The difference between these two

$$\text{Factors} = x - \frac{1}{x} + 3 - \left(x - \frac{1}{x}\right) + 3 = 6$$

72. (C) Marks obtain by student 1 in all subjects

$$\begin{aligned} &= 82 + 95 + 91 + 80 \\ &= 348 \end{aligned}$$

$$\begin{aligned} \text{Marks by student 2 in all subjects} \\ &= 73 + 98 + 93 + 88 \\ &= 352 \end{aligned}$$

$$\begin{aligned} \text{Marks by student 3 in all subjects} \\ &= 90 + 99 + 99 + 93 \\ &= 381 \end{aligned}$$

$$\begin{aligned} \text{Marks by student 4 in all subjects} \\ &= 63 + 90 + 95 + 94 \\ &= 342 \end{aligned}$$

So, Maximum marks obtain by student 3.

73. (C) Average marks in Hindi

$$= \frac{80 + 88 + 93 + 94 + 86}{5}$$

$$= 88.2$$

Average marks in Science

$$= \frac{91 + 93 + 99 + 95 + 90}{5}$$

$$= 93.6$$

$$\therefore \text{Required percentage} = \frac{88.2}{93.6} \times 100\%$$

$$= 94.23\%$$

74. (D) Marks by all students in Hindi

$$\begin{aligned} &= 80 + 88 + 93 + 94 + 86 \\ &= 441 \end{aligned}$$

Marks by all students in Science

$$\begin{aligned} &= 91 + 93 + 99 + 95 + 90 \\ &= 468 \end{aligned}$$

Marks by all students in Maths

$$\begin{aligned} &= 95 + 98 + 99 + 90 + 91 \\ &= 473 \end{aligned}$$

Marks by all students in English

$$\begin{aligned} &= 82 + 73 + 90 + 63 + 84 \\ &= 392 \end{aligned}$$

So, the Marks of all students in English is minimum.

$$75. (B) \text{ Required percentage} = \frac{90 - 80}{80} \times 100\%$$

$$= \frac{100}{8} \% = 12\frac{1}{2} \%$$

## SSC PRE MOCK TEST – 32 (ANSWER)

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