

SSC PRE MOCK TEST – 5 (SOLUTION)

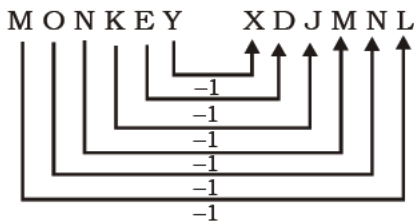
1. (C) First is the Antonym of second
2. (A) $2 \times 3 \times 4 = 24$, $3 \times 2 \times 5 = 30$
3. (A) $7 + 2 + 3 = 12 \Rightarrow 1 + 2 = 3$
 $8 + 2 + 4 = 14 \Rightarrow 1 + 4 = 5$
4. (B)

S	R	T	K	M	O	P	S
+1	+1	+1	+1	+1	+1	+1	+1
↓	↓	↓	↓	↓	↓	↓	↓
T	S	U	L	N	P	Q	T
5. (D) Temple, Mosque and Gurudwara are places to **Worship**.
6. (C) Except **(28,54)**, others are multiple of 8
7. (D)

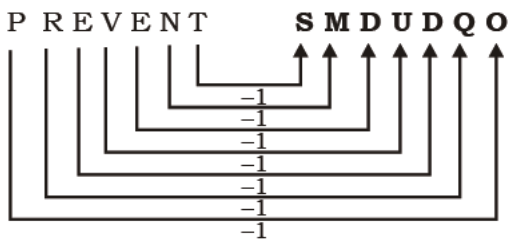
A	B	C	E	M	N	O	Q
+1	+1	+2	+2	+1	+1	+2	+2
↓	↓	↓	↓	↓	↓	↓	↓
D	E	F	H	P	Q	R	U
+1	+1	+2	+2	+1	+1	+3	+3
8. (B) Except 'O', all are vowels.
9. (C) **MINISTER** (letter E not present)
10. (C)

So, 'G' is the niece of 'A'.

11. (B) $4 \times 8 = 32$
 $6 \times 3 = 18$
 $5 \times 4 = 20$
12. (B) $4 \times 6 + 5 = 29$
 $3 \times 5 + 3 = 18$
 $2 \times 6 + 4 = 16$
13. (C) $12 + 24 + 36 = 18 + 30 + 24 = 19 + 13 + 40 = 72$
14. (D) As,

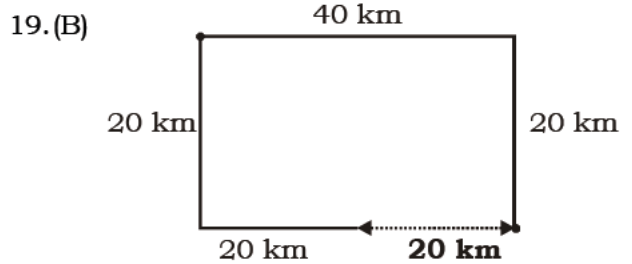


Similarly,

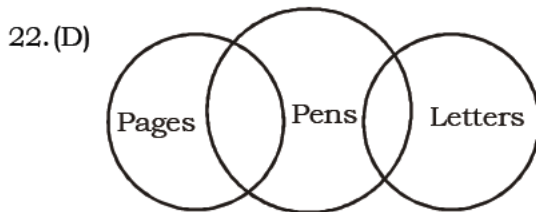


16. (D) E M P T Y
↓ ↓ ↓ ↓ ↓
2 5 4 3 1

17. (C) $60 = 3 \times (47 - 27)$
 $9 = 3 \times (8 - 5)$
27 = 3 \times (20 - 11)
18. (B) $47 = 5 \times 7 + (5 + 7)$
 $89 = 8 \times 9 + (8 + 9)$
53 = 5 \times 8 + (8 + 5)



20. (B)
21. (A) Rotate to clockwise from 1
 $\frac{3}{4}$, $\frac{2}{5}$, $\frac{1}{6}$



- I. False.**
II. False.

23. (A)
24. (C)
25. (A)

$$51. (C) \frac{1}{N} = \frac{7+6+2\sqrt{42}}{1}$$

$$\Rightarrow N = \frac{1}{13+2\sqrt{42}} = 13 - 2\sqrt{42}$$

52. (A) ATQ,

$$\text{Total time} = \frac{400+360}{(102-64) \times \frac{5}{18}} = \frac{760}{38 \times 5} \times 18$$

$$= 72 \text{ seconds}$$

53. (C) ATQ,

$$4^{12} + 4^{13} + 4^{14} + 4^{15}$$

$$= 4^{12} (1 + 4 + 4^2 + 4^3)$$

$$= 4^{12} (5 + 16 + 64) = 4^{12} \times 85$$

$$= 4^{12} \times 5 \times 17 = 4 \times 4 \times 5 \times 17 \times 4^{10}$$

$$= 80 \times 17 \times 4^{10}$$

54. (B) ATQ,

$$\frac{60}{x+y} + \frac{20}{x-y} = 4 \quad \left[\frac{1}{x+y} = u, \frac{1}{x-y} = v \right]$$

$$\Rightarrow 60u + 20v = 4 \text{-----(i)} \quad \text{and,}$$

$$\frac{40}{x+y} + \frac{40}{x-y} = 6$$

$$\Rightarrow 40u + 40v = 6 \text{-----(ii)}$$

from equation (i) and (ii),

$$u = \frac{1}{40} \text{ and } v = \frac{1}{8}$$

then $x + y = 40$ -----(iii) and

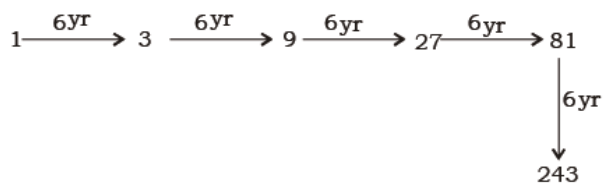
$$x - y = 8 \text{-----(iv),}$$

from equation (iii) and (iv),

$$y = 16 \text{ and } x = 24$$

Hence, the speed of stream = **16 kmph**

55. (B) ATQ,



$$\text{Hence, Required time} = 6 + 6 + 6 + 6 + 6$$

$$= 30 \text{ years}$$

56. (A) ATQ,

$$\frac{6000 \times 15}{100} + \frac{6000 \times (-18)}{100} = -180$$

negative means loss occurs.

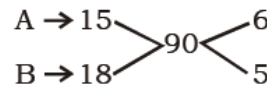
Then,

$$\text{Loss percent} = \frac{180}{12000} \times 100 = 1.5$$

57. (B) ATQ,

$$\text{New selling price} = \frac{3800}{76} \times 130 = \text{₹}6500$$

58. (B) ATQ,

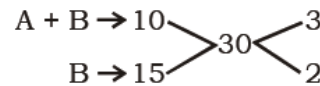


$$\text{Time take by A} = \frac{90 - (5 \times 12)}{6} = 5 \text{ hours}$$

59. (C) ATQ,

$$B = 12 \times \frac{5}{4} = 15$$

Then,



$$\text{Time taken by A} = \frac{30}{3-2} = 30 \text{ days}$$

60. (C) ATQ,

$$\left(x^{32} + \frac{1}{x^{32}}\right) \left(x + \frac{1}{x}\right) \left(x^{16} + \frac{1}{x^{16}}\right) \left(x - \frac{1}{x}\right)$$

$$\left(x^4 + \frac{1}{x^4}\right)$$

multiply and divided by $x^2 + \frac{1}{x^2}$

then,

$$\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^2 + \frac{1}{x^2}\right) \left(x^2 - \frac{1}{x^2}\right) \times$$

$$\left(x^4 + \frac{1}{x^4}\right) \left(x^8 + \frac{1}{x^8}\right) \left(x^{16} + \frac{1}{x^{16}}\right)$$

$$= \frac{\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^4 - \frac{1}{x^4}\right) \left(x^4 + \frac{1}{x^4}\right) \times$$

$$\left(x^8 + \frac{1}{x^8}\right) \left(x^{16} + \frac{1}{x^{16}}\right)}{x^2 + \frac{1}{x^2}}$$

$$\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^8 - \frac{1}{x^8}\right) \times$$

$$\left(x^8 + \frac{1}{x^8}\right) \left(x^{16} + \frac{1}{x^{16}}\right)$$

$$= \frac{\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^8 - \frac{1}{x^8}\right) \times$$

$$\left(x^8 + \frac{1}{x^8}\right) \left(x^{16} + \frac{1}{x^{16}}\right)}{x^2 + \frac{1}{x^2}}$$

$$\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^{16} - \frac{1}{x^{16}}\right) \left(x^{16} + \frac{1}{x^{16}}\right)$$

$$= \frac{\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^{16} - \frac{1}{x^{16}}\right) \left(x^{16} + \frac{1}{x^{16}}\right)}{x^2 + \frac{1}{x^2}}$$

$$\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^{32} - \frac{1}{x^{32}}\right) \left(x^{64} - \frac{1}{x^{64}}\right)$$

$$= \frac{\left(x^{32} + \frac{1}{x^{32}}\right) \left(x^{32} - \frac{1}{x^{32}}\right) \left(x^{64} - \frac{1}{x^{64}}\right)}{x^2 + \frac{1}{x^2}}$$

$$\left(x^{64} - \frac{1}{x^{64}}\right)$$

$$= \frac{\left(x^{64} - \frac{1}{x^{64}}\right)}{x^2 + \frac{1}{x^2}}$$

61. (C) ATQ,

$$\text{Required number} = \frac{77 \times 3}{(8+3)} \times 3 = \mathbf{63}$$

62. (C) ATQ,

$$8x + 5x = 6x + 35$$

$$\Rightarrow 7x = 35$$

$$\Rightarrow x = 5$$

Hence, the smallest number = $5 \times 5 = \mathbf{25}$

63. (B) ATQ,

$$\text{number of cows} = x$$

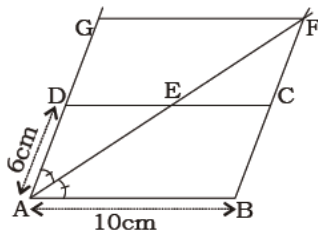
$$\text{then, } 4x + (50 - x) \times 2 = 158$$

$$\Rightarrow 4x + 100 - 2x = 158$$

$$\Rightarrow x = 29$$

Hence, Required number = $\mathbf{29}$

64. (A) ATQ,



Produce AD to G such that $AG \parallel BF$ and $GF \parallel CD$

then, In $\triangle AGF$ and $\triangle ABF$
 AF is common side and
 $\angle GAF = \angle BAF$

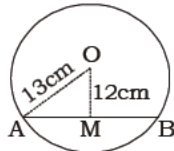
then, $\triangle AGF \cong \triangle ABF$
 now, $AG = AB$

$$\Rightarrow AG = CD + DG = 10$$

$$\Rightarrow DG = CF = 10 - 6 = 4 \quad [\because AG = BF]$$

Hence, $CF = \mathbf{4 \text{ cm}}$

65. (B) ATQ,



$OM \perp AB$

$$\text{Then, } AM^2 = OA^2 - OM^2$$

$$\Rightarrow AM^2 = 13^2 - 12^2 = 5^2$$

$$\Rightarrow AM = 5$$

Hence, $AB = 2AM = 5 \times 2 = \mathbf{10 \text{ cm}}$

66. (B) ATQ,

$$\sec^2 50^\circ + \operatorname{cosec}^2 56^\circ - \cot^2 40^\circ - \tan^2 34^\circ$$

$$= \sec^2 50^\circ + \operatorname{cosec}^2 56^\circ - \tan^2 50^\circ - \cot^2 56^\circ$$

$$= \sec^2 50^\circ - \tan^2 50^\circ + \operatorname{cosec}^2 56^\circ - \cot^2 56^\circ$$

$$= 1 + 1 = \mathbf{2}$$

67. (D) ATQ,

$$\tan 90^\circ = \infty$$

$$\text{Then, } \tan 1^\circ \times \tan 2^\circ \times \dots \times \tan 89^\circ \times \tan 90^\circ = \infty$$

68. (B) ATQ,

$$\frac{n \times (n-3)}{2} = 90$$

$$\Rightarrow n^2 - 3n - 180 = 0$$

$$\Rightarrow (n+12)(n-15) = 0$$

$$\Rightarrow n = -12 \quad \text{or}$$

$$n = 15$$

Number of sides cannot be -ve,
 So Required number = $\mathbf{15}$

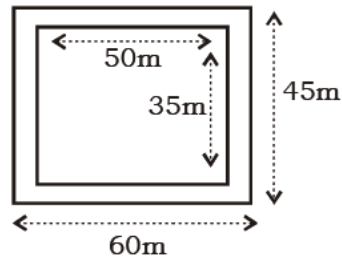
69. (D) ATQ,

$$\frac{1}{3} \pi \times 24 \times 6 \times 6 = \frac{4}{3} \pi \times r^3$$

$$\Rightarrow r = 6$$

Hence, the radius of sphere = $\mathbf{6 \text{ cm}}$

70. (B) ATQ,



Area of path	:	Area of lawn
$60 \times 45 - 50 \times 35$:	50×35
$2700 - 1750$:	1750
950	:	1750
$\mathbf{19}$:	$\mathbf{35}$

71. (A) ATQ,

$$a = 3 + 2\sqrt{2} = 2 + 1 + 2 \times 1 \times \sqrt{2}$$

$$a = (\sqrt{2} + 1)^2$$

Square root both sides,

$$\sqrt{a} = \sqrt{2} + 1 \dots\dots$$

$$\sqrt{a} - \frac{\sqrt{a}}{1} = \sqrt{2} + 1 - \frac{1}{\sqrt{2} + 1} = \sqrt{2} + 1 - \sqrt{2} + 1 = \mathbf{2}$$

72. (D) ATQ,

Maximum Profit = $\mathbf{₹4500}$

73. (B) ATQ,

Total loss = $1500 + 1000 = \mathbf{₹2500}$

74. (C) ATQ,

Max. Profit	:	Min. Loss
4500	:	1000
9	:	2

Hence, Required ratio = $\mathbf{9 : 2}$

75. (C) ATQ,

$$x = \frac{2500}{12500} \times 100 = 20$$

$$\Rightarrow x = 20$$

Hence, Required value = $\mathbf{20}$

SSC PRE MOCK TEST – 5 (ANSWER)

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