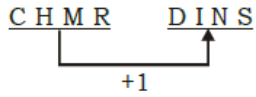


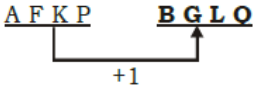
SSC PRE MOCK TEST – 10 (SOLUTION)

1. (D)

As,



Similarly,



2. (B)

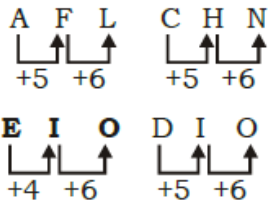
As, $\frac{(26)^2}{2} = 338$

Similarly, $\frac{(46)^2}{2} = 1058$

3. (B)

An Octagon has double number of sides in comparison to a rectangle. Similarly, **Hexagon** has double number of sides in comparison to a triangle.

4. (C)



5. (C)

Except **Cube**, others are two dimensional figures.

6. (D)

53 is a prime number.

7. (D)

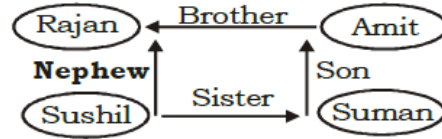
Euphasiid → Euphemism → Euphenics
→ Euphonic.

8. (B)

Imagine → Write → Proofread → Print → Publish

3 2 5 1
4

9. (A)



10. (B)

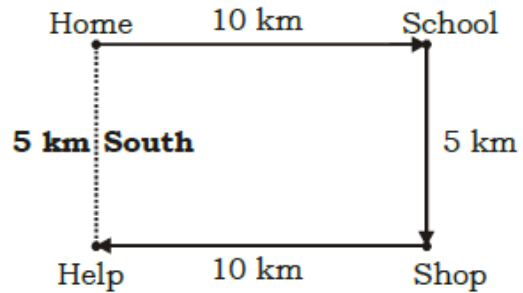
$$\begin{aligned} \text{Angle} &= \text{minute} \times \frac{11}{2} - 30 \times \text{hour} \\ &= 30 \times \frac{11}{2} - 30 \times 5 = 15^\circ \end{aligned}$$

11. (B)

The day = $\frac{61}{7} = 8 \text{ week} + 5 \text{ days} = 5 \text{ days}$

Required day = Monday + 5 = **Saturday**

12. (C)



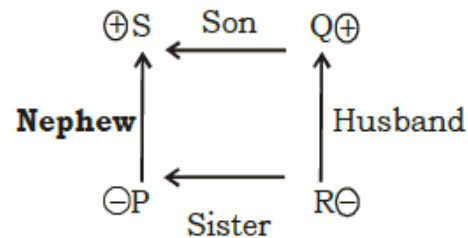
13. (D)

MOUTH

14. (D)

$$\begin{aligned} (31-1) \times 0 + (31-1) \div 2 &= 15 \\ (15-1) \times 1 + (15-1) \div 2 &= 21 \\ (21-1) \times 2 + (21-1) \div 2 &= 50 \\ (50-1) \times 3 + (50-1) \div 2 &= 171.5 \\ (171.5-1) \times 4 + (171.5-1) \div 2 &= \mathbf{767.25} \end{aligned}$$

15. (A)



16. (C)

$$16 - 12 + 3 \times 12 \div 48 = 16$$

After interchanging the sign as the given details

$$16 - 12 \div 3 \times 12 + 48 = 16$$

$$16 - 4 \times 12 + 48 = 16$$

$$16 - 48 + 48 = 16$$

$$16 = 16$$

17. (A)

$$12 \times 5 + 5 = 65$$

Reverse the digit of the number = 56

$$12 \times 2 + 5 = 29$$

Reverse the digit of the number = 92

$$14 \times 5 + 10 = 80$$

Reverse the digit of the number = **08**

18. (B)

$$9 \times 3 - 3^2 = 18$$

$$6 \times 4 - 4^2 = 8$$

$$5 \times 3 - 4^2 = -1$$

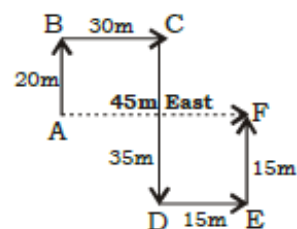
19. (A)

$$\begin{array}{r} 4 \quad 8 \quad 7 \\ + 3 \quad 7 \quad 5 \\ \hline 8 \quad 6 \quad 2 \end{array}$$

20. (D)

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| F | E | E | D | B | A | C | K |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 6 | 5 | 7 | 4 | 2 | 1 | 3 | 8 |

21. (A)



22. (D)

$$16 + 8 - 12 \div 4 \times 8$$

Change the sign as per the given details

$$16 \div 8 \times 12 - 4 + 8 = 28$$

23. (C)

24. (C)

25. (D)

51. (C)

Nitin : Neetu

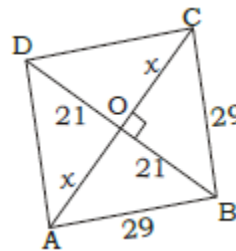
$$150000 \times 24 : 50000 \times 18$$

$$4 : 1$$

So, the ratio in profit = 4 : 1

$$\begin{aligned} \text{Hence, Neetu's share in Profit} &= \frac{1 \times 100000}{5} \\ &= \text{Rs. } 20000 \end{aligned}$$

52. (A) Let $2x$ be the other diagonal



In ΔBOC ,

$$x^2 = (29)^2 - (21)^2$$

$$\Rightarrow x = 20\text{m}$$

$$\text{Diagonal} = 2 \times 20 = 40\text{m}$$

$$\begin{aligned} \therefore \text{Area of rhombus} &= \frac{1}{2} \times 40 \times 42 \\ &= 840\text{m}^2 \end{aligned}$$

53. (B)

ATQ,

$$\frac{a}{b} = \frac{15}{23}$$

$$\Rightarrow a = \frac{15b}{23} \text{ -----(i)}$$

Put in equation i.e. given in question.

$$5a + 4b = 167$$

$$\Rightarrow 5 \times \frac{15b}{23} + 4b = 167$$

$$\Rightarrow b = 23$$

Put the value of (b) in equation (i)

then, $a = 15$

So, the difference between them

$$= b - a = 23 - 15 = 8$$

54. (C)

$$\begin{aligned} \text{Required average} &= \frac{(81 \times 9) - (93 + 72)}{9 - 2} \\ &= \frac{564}{7} = 80.57 \end{aligned}$$

55. (C)

Volume of wood used in box

$$= 15 \times 14 \times 13 - (15 - 2)(14 - 2)(13 - 2)$$

$$= 2730 - 1716 = \mathbf{1014 \text{ cm}^2}$$

56. (D)

$$\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 45^\circ \dots \tan 89^\circ$$

$$= \cot 89^\circ \cot 88^\circ \dots \cot 47^\circ \cot 46^\circ \tan 45^\circ$$

$$\tan 46^\circ \tan 47^\circ \dots \tan 89^\circ$$

$$= \mathbf{1} \quad [\because \cot \theta \tan \theta = 1]$$

57. (B)

$$\text{C.P. of one Pen} = \frac{700}{100} = \text{Rs. } 7$$

$$\text{Profit on one Pen} = 8 - 7 = 1$$

$$\text{and, Profit} = \frac{1}{7} \times 100 = \mathbf{14 \frac{2}{7} \%}$$

58. (B)

Let r be the rate of interest
ATQ,

$$P \left(1 + \frac{r}{100} \right)^n = \text{Amount}$$

$$\Rightarrow 2000 \left(1 + \frac{r}{100} \right)^3 = 2662$$

$$\Rightarrow \left(1 + \frac{r}{100} \right)^3 = \frac{2662}{2000} = \frac{1331}{1000} = \left(\frac{11}{10} \right)^3$$

$$\Rightarrow 1 + \frac{r}{100} = \frac{11}{10}$$

$$\Rightarrow r = \mathbf{10\%}$$

59. (C)

According to 1st condition,

$$\text{The quantity of water in mixture} = \frac{100 \times 60}{100}$$

60 litres

According to 2nd condition,

60 litres quantity of water remains as 40%

$$\text{So, total quantity of mixture} = \frac{100 \times 60}{40}$$

$$= 150 \text{ litres.}$$

The quantity of milk in mixture

$$= 150 - 60 = 90 \text{ litres}$$

Required quantity of milk in mixture

$$= 90 - (100 - 60)$$

$$= \mathbf{50 \text{ litres}}$$

60. (B)

Central Angle for Royalty

$$= \frac{14 \times 360^\circ}{100} = \mathbf{50.4^\circ}$$

61. (A)

Required difference

$$= 20\% \text{ of } 800 - 14\% \text{ of } 600$$

$$= 160 - 84 = \mathbf{76}$$

62. (C)

$$\text{Required Percentage} = \frac{16\% \text{ of } 600}{10\% \text{ of } 800}$$

$$= \frac{96}{80} \times 100 = \mathbf{120}$$

63. (B)

Ratio at shop B

$$\text{Mango} : \text{Apple} : \text{Orange}$$

$$\frac{40 \times 600 \times 25}{100} : \frac{60 \times 16 \times 600}{100} : \frac{25 \times 14 \times 600}{100}$$

$$\mathbf{100} : \mathbf{96} : \mathbf{35}$$

64. (C)

Required average =

$$\frac{61 + 67 + 71 + 73 + 79 + 83 + 89 + 97}{8} = \frac{620}{8}$$

$$= \mathbf{77.5}$$

65. (D)

ATQ,

$$\sqrt{2100 - 731} = \sqrt{1369} = 37$$

$$\sqrt{525 + 499} = \sqrt{1024} = 32$$

$$\sqrt{756 + 688} = \sqrt{1444} = 38$$

$$\sqrt{2177 - 656} = \sqrt{1521} = \mathbf{39}$$

66. (D)

ATQ,

$$x^3 - \frac{1}{x^3} = 140$$

$$\Rightarrow x - \frac{1}{x} = 5 \text{----- (i)}$$

and,

$$x^2 + \frac{1}{x^2} = 62$$

$$\Rightarrow x + \frac{1}{x} = 8 \text{----- (ii)}$$

From equation (i) and (ii),

$$x = \frac{13}{2} \text{ and } \frac{1}{x} = \frac{3}{2}$$

then,

$$x : \frac{1}{x}$$

$$\Rightarrow \frac{13}{2} : \frac{3}{2} = \mathbf{13 : 3}$$

67. (A)

Let cost price = x

ATQ,

$$x \times \frac{115}{100} \times \frac{120}{100} \times \frac{350}{3 \times 100} = 80500$$

$$\Rightarrow x = \text{Rs. } 50000$$

68. (B)

Let the numbers = $13x$ and $27x$

ATQ,

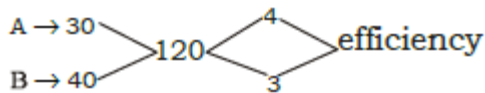
$$\frac{13x + 27}{27x + 13} = \frac{3}{5}$$

$$\Rightarrow x = 6$$

Hence, the numbers are **78** and **162**

69. (C)

ATQ,



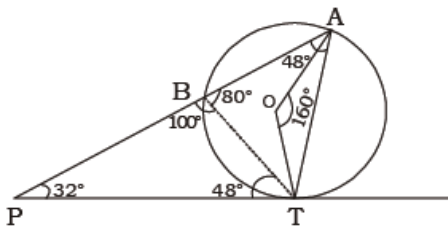
Hence, Required number of days

$$= \frac{120 - 12 \times 3}{7}$$

$$= \mathbf{12 \text{ days}}$$

70. (A)

ATQ,



$$\angle PAT = \angle BTP = 48^\circ$$

(Alternate Segment Theorem)

Now, In ΔPTA

$$\angle TPA = \angle TBA - \angle BTP = 80^\circ - 48^\circ = \mathbf{32^\circ}$$

71. (A)

$$\text{Required average speed} = \frac{2 \times 25 \times 37}{25 + 37}$$

$$= \mathbf{29 \frac{26}{31} \text{ kmph}}$$

72. (D) Let rate (for annually) = $2r$

then, rate (for half yearly) = r

ATQ,

$$1000 \left(1 + \frac{r}{100}\right)^3 = 1331$$

$$\Rightarrow \left(1 + \frac{r}{100}\right)^3 = \frac{1331}{1000} = \left(\frac{11}{10}\right)^3$$

$$\Rightarrow r = 10$$

Hence, the rate = $2 \times 10 = \mathbf{20\%}$

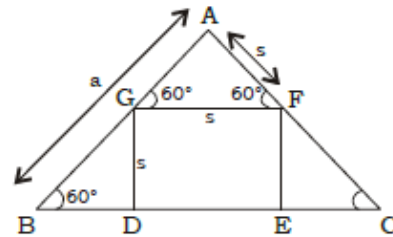
73. (D) For formation of triangle

Sum of two sides > third side

But, $\mathbf{10 + 15 < 28}$

\therefore This does not make any Δ .

74. (C) ATQ,



In ΔBDG

$$BG = \text{cosec } 60^\circ \times GD$$

$$BG = \frac{2}{\sqrt{3}} s \text{ and } \Delta AGF, \Delta ABC \text{ are similar.}$$

[$\therefore DE \parallel GF$]

Now,

$$\Rightarrow a = BG + GA = \frac{2}{\sqrt{3}} s + s$$

$$\Rightarrow a = \frac{2 + \sqrt{3}}{\sqrt{3}} s$$

$$\Rightarrow \frac{s}{a} = \frac{\sqrt{3}}{2 + \sqrt{3}}$$

75. (A)

$$\tan \theta + \cot \theta = \frac{\sin^2 \theta + \cos^2 \theta}{\sin \theta \cos \theta}$$

$$= \text{cosec } \theta \sec \theta = \sqrt{1 + \cot^2 \theta} \sqrt{1 + \tan^2 \theta}$$

SSC PRE MOCK TEST – 10 (ANSWER)

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