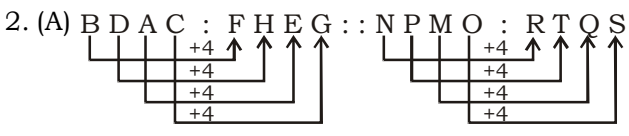
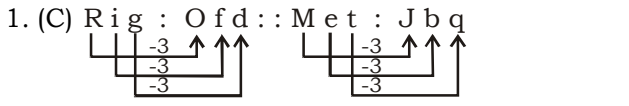
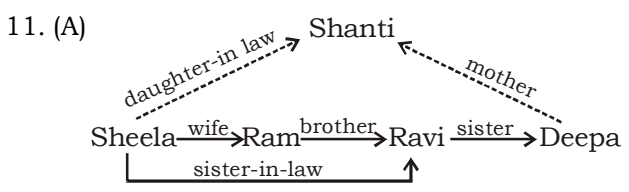
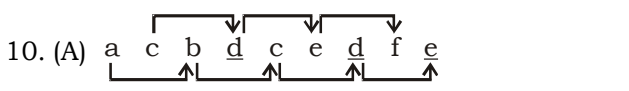
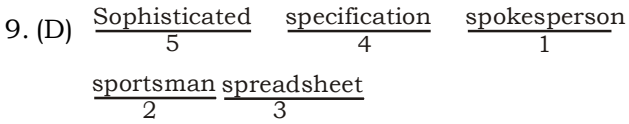
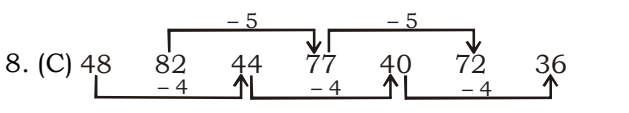
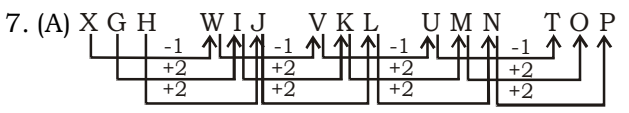


HARYANA SSC MOCK TEST-21 (Solutions)



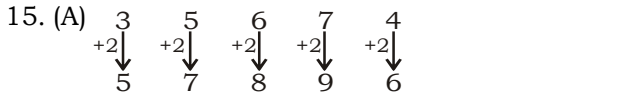
- 3. (B)
- 4. (B)
- 5. (C)
- 6. (D)



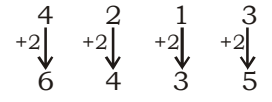
Sheela is daughter-in-law

12. (A) I. Nareen = Naveen
 II. Nakul < Nareen
 III. Balaji > Priyanka > Naveen
 From equation I, II & III
Balaji > Priyanka > Naveen = Nareen >
 ↓
 eldest
 Nakul

- 13. (D)
- 14. (B) G R A M



Similarly,



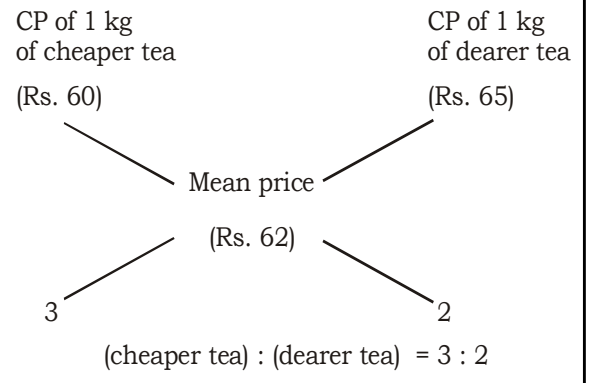
16. (B) Shortcut method:

$$\begin{aligned} \text{Distance} &= \frac{75}{60} \times \frac{((5)^2 - (1)^2)}{2 \times 5} \\ &= \frac{75}{60} \times \frac{24}{10} \\ &= 3 \text{ km} \end{aligned}$$

17. (A) S.P. of 1 kg mix = Rs. 68.20, gain = 10%

$$\text{C.P. of 1 kg mix} = \text{Rs. } \left(\frac{100}{110} \times 68.20 \right)$$

Rs. 62



18. (C) Let the income of A and B be Rs. 3x and Rs. 2x respectively, then

$$\begin{aligned} \frac{3x - 1000}{2x - 1000} &= \frac{5}{3} \\ \Rightarrow 9x - 3000 &= 10x - 5000 \\ \Rightarrow -x &= -2000 \\ \text{A's income} &= \text{Rs. } (3 \times 2000) = \text{Rs. } 6000. \end{aligned}$$

19. (C) Let the number be a and b.
 then, $a^2 + b^2 = 100$ & $a^2 - b^2 = 28$
 On solving, we get $a^2 = 64$ & $b^2 = 36$
 $a = 8, b = 6$
 $\Rightarrow (a + b) = 14$

20. (D) Ratio of time taken = $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = 6 : 4 : 3$

21. (A) $2x - \frac{1}{2x} = 6$

$$2\left(x - \frac{1}{4x}\right) = 6$$

$$x - \frac{1}{4x} = 3 \quad \text{squaring}$$

$$x^2 + \frac{1}{16x^2} - 2 \times x \times \frac{1}{4x} = 9$$

$$x^2 + \frac{1}{16x^2} = 9 + \frac{1}{2}$$

$$x^2 + \frac{1}{16x^2} = \frac{19}{2}$$

22. (B)
$$\frac{4600 \times 100}{100 \times 4 + [(4-1) + (4-2) + (4-3)] \times 10}$$

$$\Rightarrow \frac{4600 \times 100}{400 + [3+2+1] \times 10} = \frac{4600 \times 100}{460} = 1000$$

23. (B) Let the number be $(a - d)$, a and $(a + d)$, then

$$(a - d) + a + (a + d) = 15$$

$$3a = 15 \Rightarrow a = 5$$

$$(a - d) \times a \times (a + d) = 80$$

$$(5 - d) \times 5 \times (5 + d) = 80$$

$$\Rightarrow (25 - d^2) = 16 \Rightarrow d^2 = 9$$

$$d = \pm 3$$

Number 2, 5, 8 or 8, 5, 2

24. (C) Let the number of one-rupee, 50-paise and 25-paise coins be $2x$, $3x$ and $4x$ respectively. then

$$2x + \frac{3x}{2} + \frac{4x}{4} = 180$$

$$\Rightarrow \frac{8x + 6x + 4x}{4} = 180$$

$$\Rightarrow 18x = 720$$

$$\Rightarrow x = 40$$

$$\begin{aligned} \text{Number of 50-paise coins} &= 3 \times 40 \\ &= 120 \end{aligned}$$

25. (D) $(21 - 15)$ m i.e. 6 m is covered in 1 min.

$$114 \text{ m will be covered in } \left(\frac{1}{6} \times 114\right) \text{ m} = 19 \text{ min}$$

26. (C) $\therefore x + y + z = 0$

$$\Downarrow x^3, y^3, z^3 = 3xyz$$

$$\Downarrow a + 2b + 3c = 0$$

$$\Downarrow (a)^3 + (2b)^3 + (3c)^3 = 3 \times a \times 2b \times 3c$$

$$\Downarrow a^3 + 8b^3 + 27c^3 = 18abc$$

27. (A) $x, \frac{1}{x} > \sqrt{3}$

$$\Downarrow x^3, \frac{1}{x^3} > (\sqrt{3}) - 3\sqrt{3}$$

$$> 3\sqrt{3} - 3\sqrt{3} > 0$$

Now,

$$x^{18}, x^{12}, x^6, 1 = x^{15} \left(x^3, \frac{1}{x^3}\right), x^3 \left(x^3, \frac{1}{x^3}\right)$$

$$x^{15} \times 0 + x^3 \times 0 = 0 + 0 = 0$$

28. (D) $(ad - bc)^2 + (ac + bd)^2$

$$= a^2d^2 + b^2c^2 - 2abcd + a^2c^2 + b^2d^2 + 2abcd$$

$$= a^2d^2 + a^2c^2 + b^2d^2$$

$$= a^2(c^2 + d^2) + b^2(c^2 + d^2)$$

$$= (a^2 + b^2)(c^2 + d^2) = 2 \times 1 = 2$$

29. (D) HCF of the given number

$$= 2^2 \times 3^3 \times 5^5$$

$$= 4 \times 9 \times 25$$

$$= 180$$

30. (C)



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HARYANA SSC MOCK TEST - 21 (ANSWER KEY)

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