

DP HEAD CONSTABLE – 05 (SOLUTION)

1. (D) As, currency is related to mint. Similarly, brick is related to **kiln**.

2. (C) As,

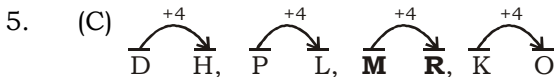
$$(12)^2 = 144 \xrightarrow{\text{Opposite}} 441$$

Similarly,

$$(16)^2 = 256 \xrightarrow{\text{Opposite}} \mathbf{652}$$

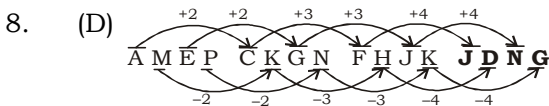
3. (A) As,
 TABLE $\rightarrow 20 + 1 + 2 + 12 + 5 = 40$
 Similarly,
 CHAIR $\rightarrow 3 + 8 + 1 + 9 + 18 = \mathbf{39}$

4. (B) **Moon** is a satellite and all others are plant.



6. (C) Except **87**, all others are prime numbers.

7. (B)



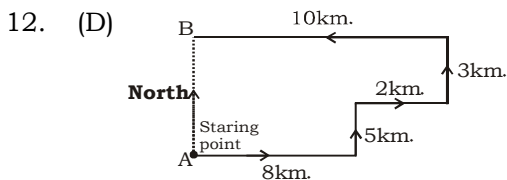
9. (A) $1^2 + 1 = 2, 2^2 - 2 = 2, 3^2 + 3 = 12, 4^2 - 4 = 12,$
 $5^2 + 5 = 30, 6^2 - 6 = 30, \mathbf{7^2 + 7 = 56}$

10. (C) $75 - 25 + 20 \times 30 \div 2$

ATQ,
 $\Rightarrow 75 \div 25 \times 20 - 30 \div 2$
 $\Rightarrow 3 \times 20 - 28$
 $\Rightarrow 60 - 28$
 $\Rightarrow \mathbf{32}$

11. (A) Right $\xrightarrow{\text{Geeta(24)}} \leftarrow$ A B $\xrightarrow{\text{Sita}} \leftarrow$ Left

$\xrightarrow{\text{Sita(15)}} \leftarrow \text{Geeta(18)} \leftarrow$
 Total girls = $15 + 13 = \mathbf{38}$



He is in **north** from starting point.

13. (A) As,
 $75 * 12 * 32 = (7 + 5) \times (1 + 2) \times (3 + 2)$
 $= 12 \times 3 \times 5 = 180$

And,
 $91 * 31 * 13 = (9 + 1) \times (3 + 1) \times (1 + 3)$
 $= 10 \times 4 \times 4 = 160$

Similarly,
 $48 * 11 * 42 = (4 + 8) \times (1 + 1) \times (4 + 2)$
 $= 12 \times 2 \times 6 = \mathbf{144}$

14. (D) $48 C 10 D 5 A 12 B 32$

ATQ,
 $= 48 \div 10 \times 5 - 12 + 32$
 $= \frac{48}{10} \times 5 + 20$
 $= 24 + 20$
 $= \mathbf{44}$

15. (B) H.D. Devegoda \rightarrow Inder Kumar Gujral \rightarrow Atal Bihari Vajpayee \rightarrow Manmohan Singh \rightarrow Narendra Modi

16. (D) $2 + 1^2 = 3, 3 + 2^2 = 7, 7 + 3^2 = \mathbf{16}$
 $16 + 4^2 = 32, 32 + 5^2 = 57, 57 + 6^2 = 93$
 $93 + 7^2 = 142$

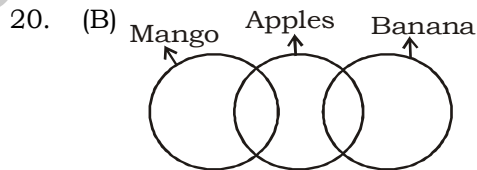
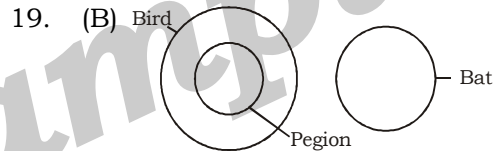
17. (C) $32 + 38 + 40 = 110$
 $28 + 50 + 32 = 110$
 $37 + \mathbf{44} + 29 = 110$

18. (D) As,

HOUSE $\xrightarrow{\text{Opposite}} \text{SLFHV}$

Similarly,

MOUSE $\xrightarrow{\text{Opposite}} \text{NLFHV}$



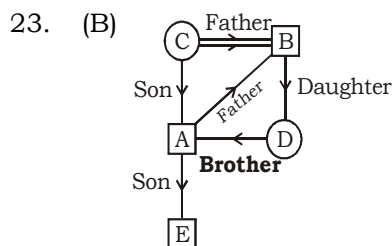
I. ✗

II. ✓

Hence, only conclusion II follows.

21. (A) Total number of triangle = **28**

22. (B)

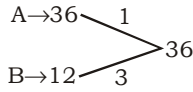


A is **brother** of D.

24. (C)

25. (D) 65, 13, 75, 43

56. (B) A.T.Q.,



$$A + B = \frac{36}{1+3} = 9 \text{ days}$$

57. (C) ATQ,

$$\text{Required remainder} = \frac{143}{43} = 14$$

58. (B) We know that

$$D = \frac{Pr^2}{(100)^2}$$

ATQ,

$$\Rightarrow 32 = \frac{P \times 8 \times 8}{100 \times 100}$$

$$\Rightarrow P = ₹5000$$

59. (A) A.T.Q.

$$\begin{aligned} \text{Simple interest of one year} \\ = 3327.5 - 3025 \\ = ₹302.5 \end{aligned}$$

Now

$$302.5 = \frac{3025 \times r \times 1}{100}$$

$$\Rightarrow r = 10\%$$

And, For two years

$$3025 = P \left(1 + \frac{10}{100} \right)^2$$

$$\Rightarrow 3025 = P \times \frac{11 \times 11}{10 \times 10}$$

$$\Rightarrow P = ₹2500$$

60. (C) ATQ,

$$\text{Cost price} = \frac{40 \times 20 + 60 \times 30}{40 + 60} = ₹26$$

$$\text{Selling price} = 26 \times \frac{125}{100} = ₹32.5$$

61. (C) Let two numbers = $3x$ and $7x$

ATQ,

$$\frac{3x+12}{7x+12} = \frac{5}{9}$$

$$\Rightarrow 27x + 108 = 35x + 60$$

$$\Rightarrow x = 6$$

Numbers = 18 and 42

62. (A) Loss on cost price = $\frac{20}{100+20} \times 100$

$$= \frac{20}{120} \times 100 = \frac{1}{6} \times 100 = 16\frac{2}{3}\%$$

63. (B) ATQ,

$$p^2 + \frac{1}{p^2} = 83$$

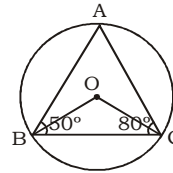
$$\Rightarrow p - \frac{1}{p} = 9$$

$$\Rightarrow p^3 - \frac{1}{p^3} = (9)^3 + 3 \times 9$$

$$\Rightarrow p^3 - \frac{1}{p^3} = 729 + 27$$

$$\Rightarrow p^3 - \frac{1}{p^3} = 756$$

64. (A)



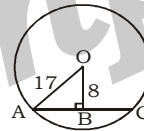
Given that $\angle B = 50^\circ$ and $\angle C = 80^\circ$
Then, $\angle A = 180^\circ - (50^\circ + 80^\circ) = 50^\circ$

Angle made an centre = $2 \times \angle A$

$$\Rightarrow \angle BOC = 2 \times 50$$

$$\Rightarrow \angle BOC = 100^\circ$$

65. (B)



$$AB = \sqrt{(17)^2 - (8)^2}$$

$$\Rightarrow AB = 15$$

Length of chord (AC) = $2 \times 15 = 30$ cm

66. (D) Required single discount

$$= 100 - 100 \times \frac{90}{100} \times \frac{80}{100} \times \frac{70}{100}$$

$$= 100 - 50.4 = 49.6\%$$

67. (B) A.T.Q.,

$$15\% \quad 10\%$$

$$5\% = 50$$

$$100\% = 1000$$

Marked price = ₹1000

68. (D) Number 3456744 is divisible by 12.

$$69. (A) \frac{19}{50} + \frac{1}{1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{5}}}}$$

$$= \frac{19}{50} + \frac{1}{1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{7}}}}$$

$$= \frac{19}{50} + \frac{1}{1 + \frac{1}{1 + \frac{12}{19}}}$$

$$= \frac{19}{50} + \frac{1}{1 + \frac{19}{31}} = \frac{19}{50} + \frac{31}{50} = 1$$

70. (B) $3 + 4 > 5$
 $6 + 8 < 15$
 $15 + 4 > 18$
 $15 + 8 > 17$

71. (C) A.T.Q.,

$$\frac{4}{3}\pi \times 6 \times 6 \times 6 = \frac{4}{3}\pi \times 3 \times 3 \times 3 + \pi \times 3 \times 3 \times h$$

$$\Rightarrow 4 \times 8 = 4 + h$$

$$\Rightarrow h = 28 \text{ cm}$$

72. (C) $(3)^{\frac{1}{3}}, (4)^{\frac{1}{4}}, (6)^{\frac{1}{6}}$

$$(3)^{\frac{4}{12}}, (4)^{\frac{3}{12}}, (6)^{\frac{2}{12}}$$

$$(3^4)^{\frac{1}{12}}, (4^3)^{\frac{1}{12}}, (6^2)^{\frac{1}{12}}$$

$$(81)^{\frac{1}{12}}, (64)^{\frac{1}{12}}, (36)^{\frac{1}{12}}$$

$$36 < 64 < 81$$

Then, $(6)^{\frac{1}{6}} < (4)^{\frac{1}{4}} < (3)^{\frac{1}{3}}$

$$\sqrt[6]{6} < \sqrt[4]{4} < \sqrt[3]{3}$$

73. (B) A.T.Q.

Let the speed of stream = x km/hr

$$\frac{64}{20+x} + \frac{64}{20-x} = \frac{20}{3}$$

$$\Rightarrow \frac{2 \times 64 \times 20}{400 - x^2} = \frac{20}{3}$$

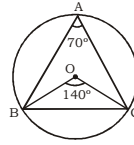
$$\Rightarrow 400 - x^2 = 384$$

$$\Rightarrow x^2 = 16$$

$$x = 4$$

Speed of stream = 4 km/hr

74. (A) A.T.Q.,



$\angle BAC = 70^\circ$
 Then, $\angle BOC = 2 \times \angle BAC$
 $= 2 \times 70 = 140^\circ$

75. (C) A.T.Q.

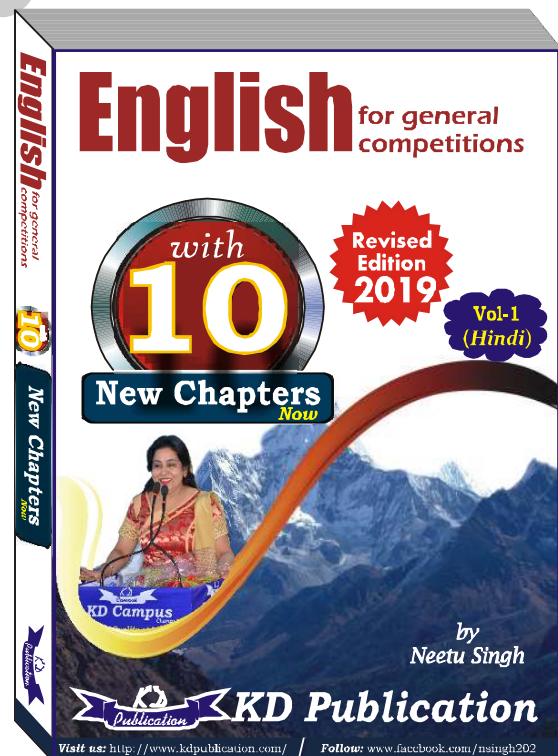
$$\frac{\sqrt{3}}{2} a = \sqrt{24}$$

$$\Rightarrow a = 4\sqrt{2}$$

Area of equilateral triangle = $\frac{\sqrt{3}}{4} a^2$

$$= \frac{\sqrt{3}}{4} \times 4\sqrt{2} \times 4\sqrt{2}$$

$$= 8\sqrt{3} \text{ sq cm}$$



MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Devise	Plan or invent by careful thought	योजना बनाना
Incumbent	Currently holding office	पदाधिकारी
Tether	Tie with a rope or a chain	रस्सी से बांधना
Dethrone	Remove from power	राज-गद्दी से उतारना
Dwindle	Diminish gradually in size, amount	कम हो जाना
Ambidextrous	Able to use both hands equally well	उभयहस्त
Connoisseur	An expert judge in matters of art	कला का पारखी
Cacographer	One who has bad handwriting or spelling	बुरी लिखावट वाला
Demagogue	A person, especially a political leader, who wins support by exciting the emotions of ordinary people	नेता जो जनता को भावविमोर कर अपना काम चलाये
Epicure	A person who enjoys high quality food and drink	स्वादलोलुप
Egotist	Self-seeker, selfish	स्वार्थी

DP HEAD CONSTABLE - 05 (ANSWER KEY)

- | | | | | |
|---------|---------|---------|----------|--|
| 1. (D) | 26. (C) | 51. (A) | 76. (D) | 76. (D) There is no error in the sentence. |
| 2. (C) | 27. (A) | 52. (D) | 77. (C) | 77. (C) When we talk about result or consequence of something, we use effect. Effect is used as both noun and verb. |
| 3. (A) | 28. (A) | 53. (C) | 78. (B) | 78. (B) Pronoun for farmers in the sentence is not himself as it is singular and goes after he. Themselves is the correct pronoun. |
| 4. (B) | 29. (A) | 54. (A) | 79. (A) | |
| 5. (C) | 30. (C) | 55. (B) | 80. (C) | |
| 6. (C) | 31. (C) | 56. (B) | 81. (D) | |
| 7. (B) | 32. (B) | 57. (C) | 82. (A) | |
| 8. (D) | 33. (A) | 58. (B) | 83. (C) | |
| 9. (A) | 34. (C) | 59. (A) | 84. (C) | |
| 10. (C) | 35. (C) | 60. (C) | 85. (D) | |
| 11. (A) | 36. (C) | 61. (C) | 86. (C) | |
| 12. (D) | 37. (A) | 62. (A) | 87. (A) | |
| 13. (A) | 38. (B) | 63. (B) | 88. (B) | |
| 14. (D) | 39. (B) | 64. (A) | 89. (D) | |
| 15. (B) | 40. (A) | 65. (B) | 90. (D) | |
| 16. (D) | 41. (B) | 66. (D) | 91. (C) | |
| 17. (C) | 42. (D) | 67. (B) | 92. (A) | |
| 18. (D) | 43. (A) | 68. (D) | 93. (D) | |
| 19. (B) | 44. (D) | 69. (A) | 94. (C) | |
| 20. (B) | 45. (D) | 70. (B) | 95. (B) | |
| 21. (A) | 46. (A) | 71. (C) | 96. (A) | |
| 22. (B) | 47. (C) | 72. (C) | 97. (D) | |
| 23. (B) | 48. (A) | 73. (B) | 98. (A) | |
| 24. (C) | 49. (C) | 74. (A) | 99. (C) | |
| 25. (D) | 50. (A) | 75. (C) | 100. (A) | |

