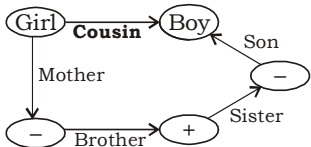


RRB ALP CBT-1
Answers with Explanation-12

- (C) As, C A R \Rightarrow R A C
1 2 3 3 2 1
Similarly,
T Y R E \Rightarrow **E R Y T**
1 2 3 4 4 3 2 1
- (D) As, 12 \Rightarrow 12 \times 5 = 60
Similarly,
28 \Rightarrow 28 \times 5 = **140**
- (B) $\frac{30}{+2+1} \quad \frac{16}{+2+1} \quad \frac{24}{+2+1} \quad \frac{13}{+2+1}$
- (D) Except NTR, others have a vowel in middle.
- (D) Except 144, others are not perfect square number.
- (C) As,
D O M A I N and, T I R E D
5 6 3 4 7 1 2 7 8 9 5
Similarly,
T E N D E R
2 9 1 5 9 8
- (D) $108 \times 12 + 3 - 6 \div 4$
After changing the signs as per the given detail,
 $108 \div 12 - 3 \times 6 + 4$
 $= 9 - 18 + 4 = -5$
- (A) 
- (B) Clearly, nothing is mentioned about the professional nature of the job. So I is not implicit. The statement hints that one rejects a thing that is easy to achieve. So II is implicit.
- (A) Clearly the assumption (II) is not mentioned in the statement although it may be right.
 \therefore Only assumption (I) is implicit.
- (D) If the data in both the statements I and II together are necessary to answer the question.

- यदि कथन I और कथन II दोनों को आंकड़े मिलकर प्रश्न का उत्तर देने के लिए आवश्यक है।
- (B) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
यदि केवल कथन II में दिये गये आंकड़े प्रश्न का उत्तर देने के लिए पर्याप्त है, जबकि केवल कथन I में दिये गये आंकड़े प्रश्न का उत्तर देने के लिए पर्याप्त नहीं है।
 - (C) If the data in both the statements I and II together are not sufficient to answer the question.
यदि कथन I और कथन II दोनों को आंकड़े मिलाकर भी प्रश्न का उत्तर देने के लिए पर्याप्त नहीं है।
 - (D) Both conclusions I and II follow. / यदि दोनों निष्कर्ष I तथा II अनुसरण करते हैं।
 - (B) Only conclusion II follows. / यदि केवल निष्कर्ष II अनुसरण करता है।

(16-17):



- (D) I. True II. True
- (A) I. True II. False
- (A) P lives on the top floor of the building.
- (A) Q lives on the second floor of the building.
- (B) RSP is the odd group out of the building.
- (D) Side of the square = $\sqrt{1024} = 32$ cm.
 \therefore Length of rectangle = $2 \times 32 = 64$ cm.
Breadth of rectangle = $32 - 16 = 16$ cm.
 \therefore Required ratio = $64 : 16 = 4 : 1$
- (A) Let the cost price of one marble is x
ATQ, $\frac{4}{5}x = \frac{1}{15}$
 $or, x = \frac{1}{12}$
To gain 20% , selling price is $\frac{6}{5}x = \frac{1}{10}$
He should sell 10 marbles for a rupee.

23. (D) Let the original value of fridge be ₹ x .

$$\text{Then, Cost price} = ₹ \frac{15}{16}x$$

$$\text{Selling price} = \frac{110}{100} \times x = ₹ \frac{110x}{100}$$

$$\therefore \text{Gain per cent} = \left(\frac{\frac{110}{100}x - \frac{15}{16}x}{\frac{15}{16}x} \times 100 \right) \%$$

$$= 17.33\%$$

24. (B) $\frac{A \times 90}{100} = \frac{30 \times B}{100}$
 $\Rightarrow B = 3A$

$$\Rightarrow \frac{A \times x}{100} = 3A$$

$$\Rightarrow x = 3 \times 100 = 300$$

25. (B) \therefore Distance between 21 posts

$$= (21 - 1) \times 50 = 1000 \text{ m}$$

$$\therefore \text{Speed of train} = 1 \text{ km/min} = 60 \text{ km/h}$$

26. (B) $SI = \frac{15000 \times 9 \times 2}{100} = ₹ 2700$

$$CI = 12000 \left[\left(1 + \frac{8}{100} \right)^2 - 1 \right]$$

$$= 12000 \left[\left(\frac{27}{25} \right)^2 - 1 \right]$$

$$= 12000 \left[\frac{729 - 625}{625} \right]$$

$$= 12000 \times \frac{104}{625} = ₹ 1996.8$$

\therefore Total interest earned

$$= ₹ (2700 + 1996.8) = ₹ 4696.8$$

27. (A) $\text{Rate} = \frac{SI \times 100}{\text{Principal} \times \text{Time}}$

$$= \frac{10230 \times 100}{27500 \times 3} = 12.4\%$$

$$\therefore C.I = P \left[\left(1 + \frac{R}{100} \right)^T - 1 \right]$$

$$= 27500 \left[\left(1 + \frac{12.4}{100} \right)^3 - 1 \right]$$

$$\approx 27500 (1.42 - 1)$$

$$= 27500 \times 0.42$$

$$= ₹ 11550$$

28. (B) Let the number of boys be x and that of girls be y .

$$\text{Then, total score of boys} = 71x$$

$$\text{and total score of girls} = 73y$$

$$\therefore \frac{71x + 73y}{(x + y)} = 71.8$$

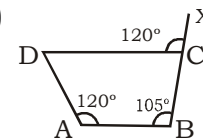
$$\Rightarrow 71x + 73y = 71.8x + 71.8y$$

$$\Rightarrow 0.8x = 1.2y \Rightarrow \frac{x}{y} = \frac{1.2}{0.8} = \frac{3}{2}$$

\therefore Percentage of girls in the class

$$= \frac{2}{5} \times 100 = 40\%$$

29. (D)



$$\angle ADC = 360 - (120 + 105 + 60) = 75^\circ$$

30. (D) $\sin^6 60^\circ + \cos^6 60^\circ = \left(\frac{\sqrt{3}}{2} \right)^6 + \left(\frac{1}{2} \right)^6$

$$= \frac{27}{64} + \frac{1}{64} = \frac{27 + 1}{64} = \frac{28}{64} = \frac{7}{16}$$

31. (B) $8B + 5P = ₹ 92$

$$\underline{5B + 8P = ₹ 77}$$

$$13B + 13P = 169$$

$$B + P = 13 \dots (i)$$

$$8B + 5P = 92$$

$$\underline{5B + 8P = 77}$$

$$3B - 3P = 15$$

$$B - P = 5 \dots (ii)$$

\therefore From (i) and (ii) $B + P = 13$

$$\underline{B - P = 15}$$

$$2B = 18$$

$$B = 9, P = 4$$

$$\text{then, } 3 \times 9 + 2 \times 4 = 35$$

32. (D) Number of male teachers.

$$= 1800 \times \frac{12}{100} \times \frac{20}{100} + 1800 \times \frac{8}{100} \times \frac{60}{100}$$

$$= \frac{18 \times 12}{5} + \frac{18 \times 24}{5}$$

$$= \frac{216 + 432}{5} = \frac{648}{5}$$

$$= 129.6$$

$$= 130 \text{ (approx.)}$$

33. (C) Let the work is completed in x days.

$$\text{Work done by (P + Q) in 1 day} = \frac{1}{10} \text{ work}$$

$$\text{Work done by (Q + R) in 1 day} = \frac{1}{18} \text{ work}$$

$$\text{P's 5 day's work + Q's 10 day's work + R's 15 day's work} = 1$$

$$\text{(P + Q)'s 5 day's work + (Q + R)'s 5 day's work + R's 10 day's work} = 1$$

$$\frac{5}{10} + \frac{5}{18} - \frac{10}{x} = 1$$

$$\Rightarrow x = 45$$

34. (A) Required number

$$1800 \times \frac{13}{100} \times \frac{150}{100} + 1800 \times \frac{8}{100} \times \frac{75}{100}$$

$$= \frac{18 \times 13 \times 3}{2} + \frac{18 \times 8 \times 3}{4}$$

$$= 9 \times 13 \times 3 + 108 = 459$$

35. (B) Ratio of teachers of Mathematics and Hindi

$$= 1800 \times \frac{13}{100} : 1800 \times \frac{8}{100}$$

$$= 13 : 8$$

36. (C) $a + \frac{1}{a} = \sqrt{5}$

$$a^3 + \frac{1}{a^3} = (\sqrt{5})^3 - 3\sqrt{5}$$

$$= 5\sqrt{5} - 3\sqrt{5} = 2\sqrt{5}$$

37. (A) Let the amount invested by A and B is $3x$ and $5x$ respectively and after 6 month, C joined with amount equal to B. Then, Ratio of A, B and C in profit

$$= 3x \times 12 : 5x \times 12 : 5x \times 6 = 6 : 10 : 5$$

38. (A) English + Chemistry + Physics
= 27 + 23 + 17 = 67

$$\text{Required number} = 67\% \text{ of } 1800 = 1206$$

39. (A) $a^2 + b^2 + c^2 - ab - bc - ca$

$$= \frac{1}{2} [(a-b)^2 + (b-c)^2 + (c-a)^2]$$

$$= \frac{1}{2} [(-1)^2 + (-1)^2 + (-2)^2]$$

$$= \frac{1}{2} \times 6 = 3$$

Note:- If a, b & c are in continuous form then answer will be always 3.

40. (A) Let the number be x .

$$x \times \frac{80}{100} + 80 = x$$

$$\Rightarrow x - \frac{4}{5}x = 80$$

$$\Rightarrow \frac{x}{5} = 80 \Rightarrow x = 400$$

RRB ALP - 12 (ANSWER KEY)

- | | | | |
|---------|---------|---------|---------|
| 1. (C) | 21. (D) | 41. (A) | 61. (D) |
| 2. (D) | 22. (A) | 42. (C) | 62. (A) |
| 3. (B) | 23. (D) | 43. (C) | 63. (A) |
| 4. (D) | 24. (B) | 44. (D) | 64. (B) |
| 5. (D) | 25. (B) | 45. (A) | 65. (C) |
| 6. (C) | 26. (B) | 46. (A) | 66. (D) |
| 7. (D) | 27. (A) | 47. (A) | 67. (B) |
| 8. (A) | 28. (B) | 48. (C) | 68. (A) |
| 9. (B) | 29. (D) | 49. (A) | 69. (B) |
| 10. (A) | 30. (D) | 50. (B) | 70. (D) |
| 11. (D) | 31. (B) | 51. (A) | 71. (C) |
| 12. (B) | 32. (D) | 52. (A) | 72. (D) |
| 13. (C) | 33. (C) | 53. (D) | 73. (B) |
| 14. (D) | 34. (A) | 54. (A) | 74. (A) |
| 15. (B) | 35. (B) | 55. (D) | 75. (C) |
| 16. (D) | 36. (C) | 56. (B) | |
| 17. (A) | 37. (A) | 57. (C) | |
| 18. (A) | 38. (A) | 58. (D) | |
| 19. (A) | 39. (A) | 59. (D) | |
| 20. (B) | 40. (A) | 60. (A) | |