

**RRB ALP CBT -1**  
**Answers with Explanation-10**

1. (A) Let their initial investments be Rs.  $x$ , Rs.  $3x$  and Rs.  $5x$  respectively.

Then, A : B : C

$$= (x \times 4 + 2x \times 8) : (3x \times 4 + \frac{3x}{2} \times 8)$$

$$: (5x \times 4 + \frac{5x}{2} \times 8)$$

$$= (4x + 16x) : (12x + 12x) : (20x + 20x)$$

$$= 20x : 24x : 40x = 5 : 6 : 10$$

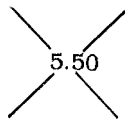
2. (B) Using Alligation Method,

**Rice I**

5.75

**Rice II**

4.50



$$5.50 - 4.50 \quad 5.75 - 5.50$$

$$= 1.00$$

$$= 0.25$$

i.e., 4 : 1

Hence, the required quantity of Rice I

$$= \frac{75}{1} \times 4 = 300 \text{ kg}$$

3. (A) Let investment time of B was for  $x$  months

Ratio of their investment = Ratio of profit distribution

$$5 \times 8 : 6 \times x = 5 : 9$$

$$\therefore x = \frac{40 \times 9}{6 \times 5} = 12 \text{ months} = 1 \text{ year}$$

4. (B) Let the length of train be  $L$  meters  
its speed be  $S$  m/s

$$\therefore \text{time taken to cross a pole} = \frac{L}{S}$$

$$= 10 \text{ sec}$$

$$\therefore \text{time taken to cross a 200 m long platform} = \left( \frac{L + 200}{S} \right)$$

ATQ,

$$\Rightarrow 20 = \frac{L}{S} + \frac{200}{S}$$

$$\Rightarrow 20 = 10 + \frac{200}{S}$$

$$\Rightarrow \frac{200}{S} = 10$$

$$\therefore S = 20 \text{ m/s}$$

Now length of train  $L = 20 \times 10 = 200 \text{ m}$

5. (C) Let the sum of Money be ₹  $x$  and rate of interest be  $r$  % per annum interest

$$\text{earned originally} = \frac{x \times r \times 4}{100} = \frac{xr}{25}$$

S.I earned on a sum of money increases by is 600 when the rate of interest increase by 2% annum.

$$\Rightarrow \frac{xr}{25} + \frac{2x}{25} = \frac{xr}{25} + 600$$

$$x = \frac{15000}{2} = ₹ 7500$$

6. (A)  $\therefore \text{S.I} = \frac{\text{Principal} \times \text{Time} \times \text{Rate}}{100}$

$$= \frac{12400 \times 3 \times 8.5}{100} = ₹ 2856$$

$\therefore$  Required amount

$$= ₹ (12400 + 2856) = ₹ 15,562$$

7. (C) Let speed of motorboat in still water be  $x$  km/h and speed of stream be  $y$  km/h.  
Now, according to the question,

$$\frac{25}{x - y} + \frac{39}{x + y} = 8 \quad \dots\dots (A)$$

$$\frac{35}{x - y} + \frac{52}{x + y} = 11 \quad \dots\dots (B)$$

By equation (A)  $\times 4 -$  (B)  $\times 3$ ,

$$\text{We have } \frac{100}{x - y} - \frac{105}{x - y} = 32 - 33$$

$$\Rightarrow \frac{-5}{x-y} = 1 \Rightarrow x-y = 5 \dots\dots (C)$$

From equation (A)

$$\frac{25}{5} + \frac{39}{x+y} = 8$$

$$\Rightarrow \frac{39}{x+y} = 8 - 5 = 3$$

$$\Rightarrow x + y = 13 \dots\dots\dots (D)$$

By equation (D) - (C)

$$x + y - x + y = 13 - 5 = 8$$

$$\Rightarrow 2y = 8$$

$$\Rightarrow y = \frac{8}{2} = 4 \text{ km/h}$$

8. (C) Let the age A and B is  $7x$  and  $x$  respectively.

ATQ,

$$\frac{7x-4}{x-4} = \frac{19}{1}$$

$$\Rightarrow 7x - 4 = 19x - 76$$

$$\Rightarrow 12x = 72$$

$$\Rightarrow x = 6$$

So, present age of A = 42 years

After 4 years age of B = 46 years

9. (A) Total Cost Price = ₹ (1000 × 10 + 2000)  
= ₹ 12000

$$\text{Total Selling Price} = ₹(5 \times 1500 + 5 \times 1100) = ₹13000$$

$$\therefore \text{Profit\%} = \left( \frac{1000}{12000} \times 100 \right) \% = 8 \frac{1}{3} \%$$

10. (B) Total age of all players along with the captain →  $25 \times (11 + 1) = 300$  years

Total age of all players excluding

The captain =  $24(12 - 1) = 264$  years

$$\therefore \text{The age of the captain} = 300 - 264 = 36 \text{ years}$$

11. (A) Let the number be  $(765x + 42)$ .

When this number is divided by 17, then quotient will be  $(45x + 2)$  and remainder will be 8.

12. (B) Required number  $\frac{61.2}{360} \times 48600 + \frac{28.8}{360}$   
=  $862500 = 8262 + 5000 = 13262$

13. (D)  $M_{2008} = \frac{64.8}{360} \times 48600 = 8748$

$$M_{2009} = \frac{54}{360} \times 62500 = 9375$$

$$\therefore \text{Required\%} = \left( \frac{8748}{9375} \right) \times 100 = 93.312\% \approx 93\%$$

14. (B) Required number

$$= 48600 \times \left( \frac{61.2 + 64.8 + 61.2}{360} \right) + 62500$$

$$\times \left( \frac{64.8 + 54 + 28.8}{360} \right)$$

$$= 25272 + 25625 = 50897$$

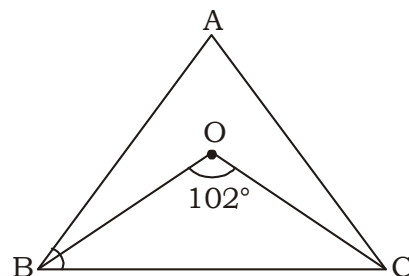
15. (C) Required value =  $\frac{\sqrt{7} + \sqrt{5}}{\sqrt{7} - \sqrt{5}} + \frac{\sqrt{7} - \sqrt{5}}{\sqrt{7} + \sqrt{5}}$

$$= \frac{(\sqrt{7} + \sqrt{5})^2 + (\sqrt{7} - \sqrt{5})^2}{(\sqrt{7} - \sqrt{5})(\sqrt{7} + \sqrt{5})}$$

$$= \frac{12 + 2\sqrt{35} + 12 - 2\sqrt{35}}{7 - 5}$$

$$= \frac{24}{2} = 12$$

16. (B)



$$\angle BOC = 90^\circ + \frac{\angle A}{2}$$

$$\therefore \frac{\angle A}{2} = \angle BOC - 90^\circ \Rightarrow \frac{\angle A}{2} = 102 - 90^\circ$$

$$\angle A = 24^\circ$$



III. True

Only III follows.

30. (A) Dancer Doctor Professor Writer

I. True                      II. True

III. True

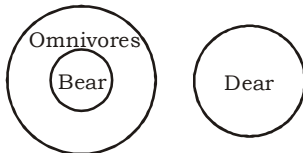
All follow.

31. (C) As,  $\frac{B}{2} + \frac{E}{5} = \frac{G}{7}$

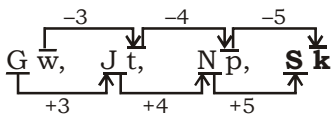
$\frac{J}{10} + \frac{K}{11} = \frac{U}{21}$

Similarly,  $\frac{I}{9} + \frac{B}{2} = \frac{K}{11}$

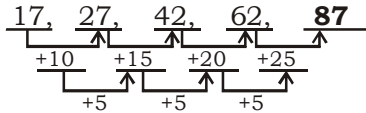
32. (A)



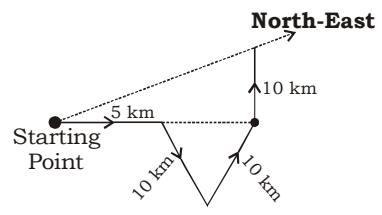
33. (B)



34. (B)



35. (C)



36. (A) p q r / p p q q r r / p q r

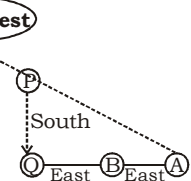
37. (A) Temerity → Temperature → Tempered → Temporary

38. (A) Son, Father, **Grandmother**, Mother, Daughter

39. (A) As, MOBILE                      OQDKNG

Similarly, RANGER                      TCPIGT

40. (B) North-west



Hence, Required direction = North-west

## RRB ALP - 10 (ANSWER KEY)

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