IBPS RRB Office Asst. Preliminary Grand Test –IRP-180822

HINTS & SOLUTIONS

ANSWER KEY

1. (4)	21. (3)	41. (4)	61. (5)
2. (1)	22. (2)	42. (4)	62. (1)
3. (3)	23. (2)	43. (2)	63. (2)
4. (2)	24. (2)	44. (5)	64. (3)
5. (2)	25. (3)	45. (3)	65. (4)
6. (2)	26. (2)	46. (2)	66. (2)
7. (2)	27. (3)	47. (4)	67. (3)
8. (4)	28. (4)	48. (1)	68. (3)
9. (3)	29. (1)	49. (4)	69. (4)
10. (1)	30. (3)	50. (3)	70. (2)
11. (4)	31. (3)	51. (1)	71. (1)
12. (5)	32. (1)	52. (2)	72. (2)
13. (2)	33. (3)	53. (5)	73. (3)
14. (4)	34. (4)	54. (3)	74. (4)
15. (2)	35. (3)	55. (2)	75. (2)
16. (2)	36. (2)	56. (2)	76. (2)
17. (5)	37. (3)	57. (2)	77. (3)
18. (3)	38. (2)	58. (3)	78. (1)
19. (4)	39. (1)	59. (4)	79. (2)
20. (3)	40. (3)	60. (5)	80. (3)

HINTS & SOLUTIONS

1. (4) **I.** $J \leq A$ (False)

II. $B \geq K$ (False)

2. (1) **I.** $L < J$ (True)

II. $B < P$ (False)

3. (3) **I.** $U = I$ (False)

II. $I > U$ (False)

4. (2) **I.** $Z < W$ (False)

II. $U > X$ (True)

5. (2) **I.** $T < N$ (False)

II. $T \leq P$ (True)

6-10. In the arrangement words are arranged along with a number in each step. As for words, they are arranged in reverse alphabetical order on the left end while the numbers are arranged in such a manner that the number of letters present in the word comes after the word.

Input: **5 follow 8 actor 6 relation 2 complaint 9 to**

Step I: actor 5 follow 8 6 relation 2 complaint 9 to

Step II: complaint 9 actor 5 follow 8 6 relation 2 to

Step III: follow 6 complaint 9 actor 5 8 relation 2 to

Step IV: relation 8 follow 6 complaint 9 actor 5 2 to

Step V: to 2 relation 8 follow 6 complaint 9 actor 5

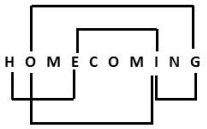
6. (2) 7. (2)

8. (4) 9. (3) 10. (1)

11. (4)

P	U	L	S	E
4	@	2	7	3

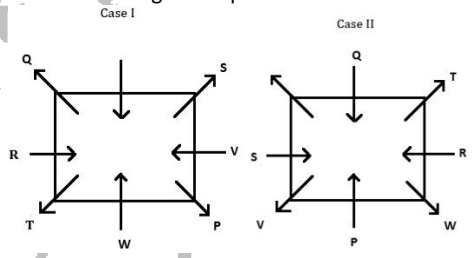
12. (5) **Five**



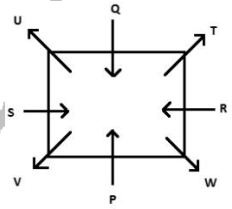
13. (2) 14. (4)

15. (2) $22 \div 11 \times 2 + 14 - 3 = 15$

16-20. Q sits third to the left of W. Two persons sits between S and W. P sits second to the right of S. V is an immediate neighbor of P. T sits to the immediate right of R. T does not face inside. We got two possibilities



Now, U face outside. This will eliminate Case I. So, the final arrangement will be –



16. (2) 17. (5)

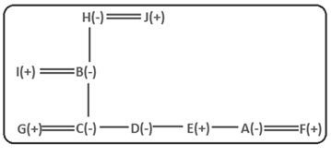
18. (3) 19. (4) 20. (3)

21. (3) 22. (2)

23. (2) 24. (2) 25. (3)

26-30.

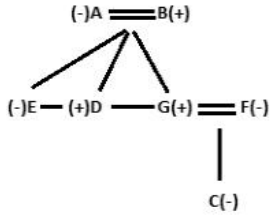
MEMBERS	ITALIAN FOOD
A	Raspberry Coulis
B	Bruschetta
C	Pasta Basilico
D	Panzenella
E	Pasta Carbonara
F	Tiramisu
G	Mushroom Risotto
H	Panna Cotta
I	Margherita Pizza
J	Focaccia Bread



26. (2) 27. (3)

28. (4) 29. (1) 30. (3)

31-33.



31. (3)

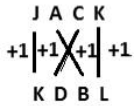
32. (1)

33. (3)

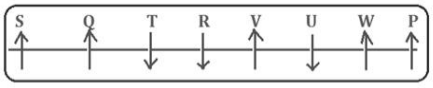
34. (4)

B	R	A	T
3	8	6	2

35. (3)



36-40.



36. (2)

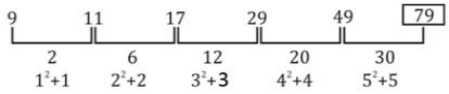
37. (3)

38. (2)

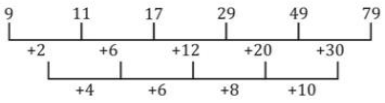
39. (1)

40. (3)

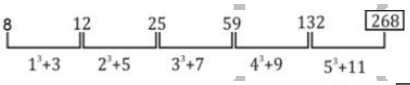
41. (4)



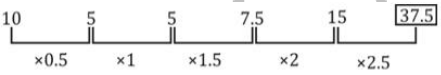
Or



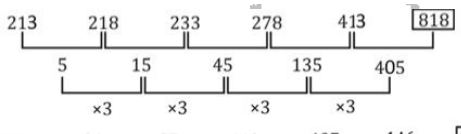
42. (4)



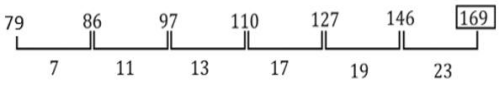
43. (2)



44. (5)

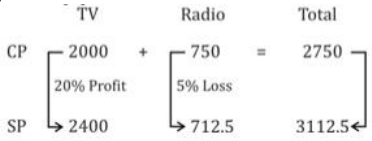


45. (3)



In the given series prime nos. are getting added to the previous number.

46. (2)



⇒ Gain = 362.5 Rs.

47. (4) Decrease in total weight = 55 – 45 = 10 kg.
Decrease in average weight = $\frac{10}{45} = \frac{2}{9} = 0.22$
∴ Real average weight = 67 + 0.22 = 67.22 kg.

48. (1)

	A	:	B	:	C
Capital	→	5	:	6	: 8
Time	→	x	:	y	: z
Profit	→	5	:	3	: 12

$\Rightarrow x = 1\ , y = \frac{1}{2}\ , z = \frac{3}{2}$
$\Rightarrow x : y : z = 2 : 1 : 3$

49. (4) Candidates failed in English = 40%
Candidates failed in Mathematics = 30%
Total failed = 40 + 30 - 20 = 50%
Hence, Passed in both = 50%
⇒ total Desired students = $\frac{2500}{50} \times 100 = 5000$

50. (3) Diff. of C.I. & S.I. for 3 years. = $\frac{Pr^2(300+r)}{100^3}$
$\Rightarrow P$ = Rs. 500
⇒ Compound Interest of 500 for $1\frac{1}{2}$ years at 40% half yearly compounded.
$A = 500\left[1 + \frac{20}{100}\right]^3 = 864$
⇒ Interest = 864 − 500 = 364

51. (1) $9 + \frac{3}{8} \times \frac{16}{3} = ? + 2$
$9 + 2 = ? + 2$
$? = 9$

52. (2) $? \times \frac{65}{72} = \frac{195 \times 352}{192}$
$? = \frac{195 \times 352 \times 72}{192 \times 65}$
$? = 396$

53. (5) $111 + 25 + 997 = ?$
$1133 = ?$

54. (3) $2.5 + \frac{26}{5} \times \frac{95}{13} + ? = 72$
$40.5 + ? = 72$
$? = 72 - 40.5$
$? = 31.5$

55. (2) $[89 - 13] \times \frac{1}{4} = ?$
$76 \times \frac{1}{4} = ?$
$? = 19$

56. (2) C.P.=150+50=200
S.P.= $\frac{110}{100} \times 200 = 220$

57. (2) S.P. of x = 200+20+5=225
C.P. of w = 90 +10=100
Req. %= $\frac{225}{100} \times 100 = 225\%$

58. (3) Loss on y= $400 - 400 \times \frac{100}{75} = \frac{400}{3}$
Loss on w =10
Ratio= $\frac{400}{3} : 10 = 40 : 3$

59. (4) S.P. of z= $440 \times \frac{106}{100} = 466.4$
S.P. of x=225
Difference=466.4-225=241.4

60. (5) S.P. of v=95% of 200 = 190
S.P. of z=466.4
Req.% = $\frac{466.4-190}{466.4} \times 100 = 59.26\%$

61. (5) Vol. of wooden block =$7 \times 3 \times 3 = 63\ cm^2$
Vol. of pyramid = $\frac{1}{3} \times 3^2 \times 7 = 21\ cm^3$
Wood wasted = 63 – 21 = 42 cm^3
∴ % of wood wasted = $\frac{42}{63} \times 100 = 66\frac{2}{3}\%$

62. (1) Let the total distance = x km
$\frac{x}{12-4} + \frac{x}{12+4} = \frac{90}{60}$
$\frac{x}{8} + \frac{x}{16} = 1.5$
$3x = 1.5 \times 16$
$x = 8km$

63. (2)

Let the total population of city A and B is 5x and 6x respectively.

	Total		literate people	Illiterate people
A	5x	$\xrightarrow{40\%}$	2x	3x
B	6x	$\xrightarrow{66\frac{2}{3}\%}$	4x	2x

Given 3x – 2x = 600

x = 600

hence, total population of city A = 5x

= 5 × 600

= 3000

64. (3) No. of desired outcome = 6

Total no. of outcomes = 11

$\text{Probability} = \frac{6}{11}$

65. (4) Let the quantity of wine & water is 7x and 5x.

ATQ,

$\frac{7x}{5x+58} = \frac{5}{7}$

49x = 25x + 290

24 x = 290

$x = \frac{290}{24}$ litre

Total volume of original solution

$= (7 + 5)x = 12 \times \frac{290}{24} = 145$

66. (2) $\frac{8400 \times 15}{375} + \sqrt{16} \approx ?$

$\frac{84 \times 100}{25} + 4 \approx ?$

336 + 4 ≈ ?

340 ≈ ?

67. (3) $\sqrt{2500} + \frac{15}{100} \times 14 \approx ?$

50 + 2.1 ≈ ?

52 ≈ ?

68. (3) ? ≈ 25% × 640 + 45% of 360

? ≈ 160 + 162 ≈ 322

69. (4) 33.33% of 510 ≈ ?

$\frac{510}{3} \approx ?$

? ≈ 170

70. (2) 75% of 1344 + 12.5% of 128 ≈ ?

$\frac{3}{4} \times 1344 + \frac{1}{8} \times 128 \approx ?$

1008 + 16 ≈ ?

1024 ≈ ?

71. (1) Let the milkman buy = y litre of milk.

At the rate of = x Rs./litre

xy – 5y = 300 -------- (i)

6y – xy = 250 ---------(ii)

from solving equation (i) & (ii)

y = 550 litre

72. (2) Let the Total No. of voters = 100 x

Total No. of voters casted vote = 100x – 8x = 92x

Winner has received = 48x

Another candidate received = 92x – 48x

= 44x

Given, 48x – 44x = 1200

x = 300

Total no. of voters = 300 × 100 = 30000

73. (3) Let Amount invested by Bhavya in Scheme 'B'= Rs x

Amount invested by Bhavya in Scheme 'A'= Rs (10000 – x)

ATQ,

$\frac{(10000-x) \times 2 \times 15}{100} - x\left[\left(1 + \frac{20}{100}\right)^2 - 1\right] = 780$

$\frac{(10000-x) \times 3}{10} - x\left[\left(\frac{144}{100} - 1\right)\right] = 780$

$\frac{30000}{10} - \frac{3x}{10} - \frac{44x}{100} = 780$

On Solving x = 3000 Rs.

74. (4) let the speed of train = 160x km/hr

Let the speed of car = 100x km/hr

$\frac{160}{160x} + \frac{20}{60} = \frac{160}{100x}$

$\frac{1}{x} + \frac{1}{3} = \frac{8}{5x}$

$\frac{1}{3} = \frac{8-5}{5x}$

$x = \frac{9}{5}$

Speed of the train = $160 \times \frac{9}{5}$

= 32 × 9

= 288 km/hr

75. (2) $\frac{3}{A} = \frac{1}{B} + \frac{1}{C}$ .....(i)

$\frac{4}{B} = \frac{1}{A} + \frac{1}{C}$ .....(ii)

$\frac{1}{A} + \frac{1}{B} + \frac{1}{C} = \frac{1}{24}$ .....(iii)

From eqn (i) and (iii)

$\frac{4}{A} = \frac{1}{24}$

A= 96 Days

76. (2) 32 + 468 = ? × 4 – 92

32 + 468 + 92 = ? × 4

$\frac{592}{4} = ?$

? = 148

77. (3) $\frac{3}{8} \times 600 + \frac{1}{7} \times 210$

= 225 + 30

= 255

78. (1) $21 + \frac{1}{4} + \frac{1}{8} + \frac{1}{6} = 10 + \frac{1}{2} + \frac{1}{6} + ?$

$21 + \frac{13}{24} = 10 + \frac{2}{3} + ?$

$11 + \frac{13}{24} - \frac{2}{3} = ?$

$11 - \frac{1}{8} = ?$

$\frac{87}{8} = ?$

$? = 10\frac{7}{8}$

79. (2) $15552 + 81 \times 2^{(?)} = 16200$

$81 \times 2^{(?)} = 648$

$2^? = \frac{648}{81}$

$2^? = 8$

? = 3

80. (3) $3^{14} \times 3^{12} = 9 \times 3^? \times 3^7$

$\frac{3^{14} \times 3^{12}}{3^2 \times 3^7} = 3^?$

$3^{17} = 3^?$

? = 17