IBPS RRB Office Asst. Preliminary Grand Test –IRP-180704

HINTS & SOLUTIONS

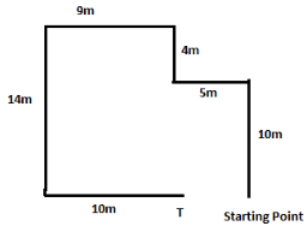
ANSWER KEY

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

HINTS & SOLUTIONS

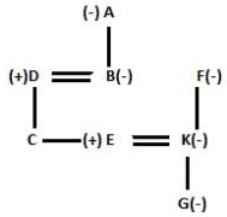
1. (3) I. A > Z (False) II. Z = A (False)
2. (2) I. D < J (False) II. G < D (True)
3. (5) I. T > D (True) II. N < F(True)
4. (4) I. N < G (False) II. F < O (False)
5. (1) I. W > T (True) II. N $\leq$ Y (False)

6-7.



6. (3) ((9+5) – 10) = 4m
7. (1) West

8-10.

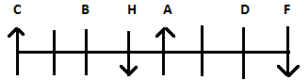


8. (2) 9. (5) 10. (5)

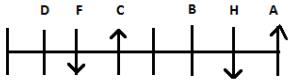
11. (4) By using condition (i) the code of D9UPS4 will be ^^£&+^.
12. (2) The code of 9W0JX7 will be^®∞≠*@ .
13. (3) By using condition (iii) the code of U47LJ0 will be ∞%@$≠£
14. (4) By using condition (iv) the code of 4MD0W2 will be µ®∞#©%
15. (1) By using condition (ii) the code of 7PU49M will be ©&£%^© .

16-20. C faces opposite direction of H. H faces south. A sits fourth to the right of C and one of them sits at the extreme end of the row. Both A and C face same direction (i.e. both faces north). Three persons sit between H and F. D sits to the immediate right of F.B is an immediate neighbor of H. There are two possible cases

Case I

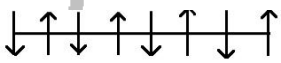


Case II



Neither E nor G is an immediate neighbor of A. This will eliminate Case I.

Three persons sit between E and G. G is not at an extreme end of the row. E and G face same direction as F. B and D face same direction as C. So final arrangement will be



16. (3) 17. (5)
18. (2) 19. (4) 20. (4)

21-25. E lives on floor number 4. F lives immediately below E. There is a gap of more than three floors between D and B. D lives above B but not on top floor. C lives immediately above B.

Case1		Case2	
Floor	Person	Floor	Person
8		8	
7	D	7	
6		6	D
5		5	
4	E	4	E
3	F	3	F
2	C	2	C
1	B	1	B

A lives above G, who lives on an even numbered floor. So case 2 will be eliminated.

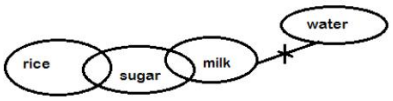
8	A
7	D
6	G
5	Vacant
4	E
3	F
2	C
1	B

21. (1) 22. (3)
23. (2) 24. (1) 25. (5)
26. (5) POT
27. (3) FOUR letters between I and N i.e. J, K, L, M
28. (3) TWO i.e. TUB and TOP

29. (2) One i.e. IUA

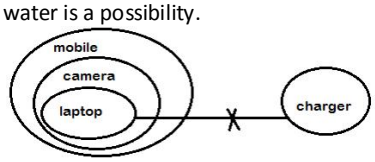
30. (5) All words will have at least one vowel. i.e. ITC, HOL, XHO, CTU, QNU

31. (1)



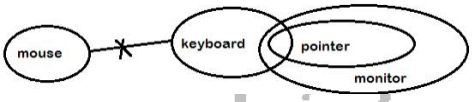
For I- From the venn diagram it is clear that some sugar is milk and no milk is water. So, some sugar which is milk will not be water. Hence, conclusion I can be concluded.
For II- Since there is no direct relation between the elements rice and water. So, possibility case will hold true. Therefore, we can conclude that some rice being water is a possibility.

32. (3)



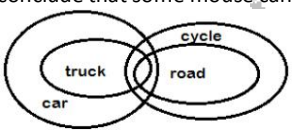
For I- From the venn diagram it is clear that some camera is laptop, So, possibility case will not hold true. Therefore, we cannot conclude that some camera being laptop is a possibility.
For II- From the venn diagram some mobile is laptop and since no laptop is charger. Therefore, some mobile is not charger can be concluded.

33. (5)



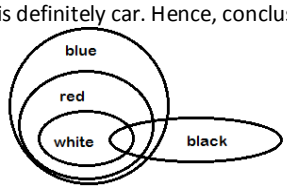
For I- From the venn diagram it is clear that some keyboard is definitely monitor. Therefore, we cannot conclude that no keyboard is Monitor.
For II- Since there is no direct relation between the elements mouse and pointer. Therefore, we cannot conclude that some mouse can never be pointer.

34. (3)



For I- From the venn diagram it is clear that some road is car. So, possibility case will not hold true. Therefore, we cannot conclude conclusion I.
For II- From the venn diagram it is clear that some cycle is definitely car. Hence, conclusion II follows.

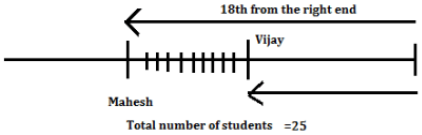
35. (4)



For I- From the venn diagram it is clear that some blue is black. Therefore, we can conclude conclusion I.
For II- From the venn diagram it is clear that some red is definitely white. Hence, conclusion II does not follows.

36. (4)

37. (3)

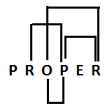


Mahesh's position from right end is 18th
So Vijay's position from the right end is (18 – 10) = 8th from the right end.

38. (1) 9 1 8 2 7 3 6 4 0 5

1 9 2 8 3 7 4 6 5 0 (New Arrangement)

39. (5) **Four**



40. (3) $4 + 80 \div 4 \times 2 - 1 = 43$

41. (2) $\frac{56}{100} \times 350 + \frac{48}{100} \times 550 - 15 \times 2.4 = ?$
$? = 196 + 264 - 36 = 424$

42. (3) $\Rightarrow (64)^{\frac{1}{2}} \times (32)^{\frac{7}{5}} - \frac{?}{100} \times 15 = 28^2$
$\Rightarrow 8 \times 128 - 784 = 15 \times ?$
$? = 16$

43. (5) $? \times \frac{69}{11} \times \frac{55}{23} = \frac{18}{100} \times 1500$
$? = \frac{18 \times 1500 \times 11 \times 23}{69 \times 55 \times 100}$
$? = 18$

44. (2) $?\%$ of $960 = 36^2 - \frac{576}{18} - 32^2$
$?\%$ of $960 = 1296 - 32 - 1024$
$? = \frac{240 \times 100}{960} = 25$

45. (4) $?^3 = 11.2 \times 15 + 6.4 \times 7.5$
$?^3 = 168 + 48$
$? = \sqrt[3]{216} = 6$

46. (1) Let principle be P
$6500 = \frac{P \times 8 \times 13}{100}$
$\Rightarrow P = 6250$
Now,
$CI = 6250 \left[\left(1 + \frac{8}{100}\right)^2 - 1\right] = 6250\left[\frac{27 \times 27}{25 \times 25} - 1\right]$
$= Rs\ 1040$

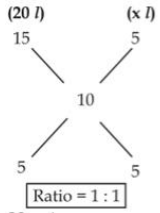
47. (3) Probability of choosing either of the bags $= \frac{1}{2}$
Required Probability $= \frac{1}{2} \times \frac{3}{11} + \frac{1}{2} \times \frac{5}{12}$
$= \frac{1}{2}\left(\frac{3}{11} + \frac{5}{12}\right)$
$= \frac{1}{2}\left(\frac{36+55}{132}\right)$
$= \frac{91}{264}$

48. (3) Vol. of water flow in one minute $= 20 \times 60 \times 5 = 6000\ cm^3$
$\because 1000\ cm^3 = 1l$
$\therefore$ Required value of water flow out $= \frac{6000}{1000} = 6$ litres

49. (4)

Distance = D
$S_U = 9 - 3 = 6$
$S_D = 9 + 3 = 12$
$\frac{D}{6} + \frac{D}{12} = 3$
$D = 12\ km$

50. (4) Let x liters second solution mixed in first solution
By allegation



Ratio = 1 : 1
$\frac{20}{x} = \frac{1}{1}$
$x = 20\ l$

51. (2) Total rooms booked in Oberai on Tuesday and Thursday = 280 + 520 = 800
Total rooms books in Grand on Monday and Thursday = 280 + 720 = 1000
Required percentage $= \frac{1000-800}{1000} \times 100 = 20\%$

52. (4) Total rooms booked in Oberai, Lodhi and Taj on Monday
= 360 + 260 + 640 = 1260
Total rooms booked in Taj, Grand and Eros on Thursday
= 375 + 720 + 275 = 1370
Required difference = 1370 – 1260 = 110

53. (1) Total room booked in Eros on Wednesday and Thursday = 265 + 275 = 540
Total rooms booked in Lodhi on Thursday and Friday = 215 + 305 = 520
Required ratio = 540 : 520
= 27 : 26

54. (3) Average of room booked in Eros on Monday, Wednesday and Friday
$= \frac{155+265+315}{3}$
= 245
Average of room booked in 'Grand' on Monday & Friday
$= \frac{280+220}{2}$
= 250
Required sum = 245 + 250 = 495

55. (5) Required percent $= \frac{480-360}{360} \times 100 = 33\frac{1}{3}\%$

56. (3) Principle = Rs. 2000
Amount $= 2000\left(1+\frac{20}{2\times100}\right)^{\frac{5}{2}\times2}$
$= 2000\left(1+\frac{1}{10}\right)^{3}$
= Rs. 2662
So interest = 2662-2000= Rs. 662

57. (4) Let the full marks of exam = x
ATQ
222 + 8% of x = 204 + 11% of x
18 = 3% of x
x = 600
So full marks = 600
So passing marks = 222 + 8% of 600 = 270 marks

58. (1) Speed of train $= \frac{\text{Length}}{\text{Time}}$
Speed $= \frac{570}{38}$ = 15 m/sec
Time required in crossing $= \frac{570+660}{15}$ = 82 sec

59. (2) Tank P can fill tank in 12 hours
So P's one hour work $= \frac{1}{12}$
Tank Q can fill tank in 15 hours
So Q's one hour work $= \frac{1}{15}$
(P + Q)'s one hour work $= \frac{1}{12}+\frac{1}{15}=\frac{9}{60}$
So both together can fill tank in $\frac{60}{9} = 6\frac{2}{3}$ hours

60. (4) The letter NOUUEAV has 7 letter
In these 7 letters V occurs twice
So no. of ways of arrangement $= \frac{7!}{2!}$ = 2520

61. (3) Pattern is
36, 57, [99], 162, 246, 351
+21, +42, +63, +84, +105

62. (5) Pattern is
26, 104, [52], 208, 104, 416
×4, ÷2, ×4, ÷2, ×4

63. (1) Pattern is
3, 732, 781, 906, [915], 916
$+9^3$, $+7^2$, $+5^3$, $+3^2$, $+1^3$

64. (1)
13, 15, 26, 30, [39], 45
+15, +15
+13, +13

65. (4)
[6], 14, 48, 204, 1040, 6270
+1×2, +2×3, +3×4, +4×5, +5×6

66. (3) $\frac{40}{100}\times ? - \frac{50}{100}\times 36 \simeq \frac{40}{100}\times 260$
$\Rightarrow ? \simeq \frac{284}{40}\times 100$
$\Rightarrow ? \simeq 710$

67. (1) $? = \frac{3}{4}\times\frac{7}{5}\times 100 + \frac{3}{4}\times 432$
$? \simeq 105 + 324$
$? \simeq 429$

68. (4) $? \simeq 224 + 369 + 460 - 381$
$? \simeq 1053 - 381$
$? \simeq 672$

69. (1) $? \simeq \sqrt{\frac{30}{100}\times 450 + \frac{20}{100}\times 170}$
$? \simeq \sqrt{135+34}$
$? \simeq \sqrt{169}$
$? \simeq 13$

70. (2) $? \simeq 110 \div 22 \times 60 + 315 - 220$
$? \simeq 615 - 220$
$? \simeq 395$

71. (2) Discount R_1 =25%
R_2 = 24%
$\therefore$ Equivalent discount $= -R_1 - R_2 + \frac{R_1R_2}{100}$
$= -25 - 24 + \frac{25\times24}{100}$
= - 43
i.e discount = 43%

72. (3) Let even numbers are x-4, x- 2, x, x+2, x +4
$\therefore \frac{x-4+x-2+x+x+2+x+4}{5} = 32$
$\Rightarrow$ x = 32
$\therefore$ largest even number = 32 + 4 = 36
Least even number = 32 – 4 = 28
$\therefore$ required difference = 36 – 28 = 8

73. (1) Since,
40% → 360
$\Rightarrow 100\% \rightarrow \frac{360}{40}\times 100 = 900$
$\therefore$ Number of boys $= \frac{60}{100}\times 900 = 540$

74. (2) Let three years before,
Ravi's age = 5x
Shusma's age = 3x
A/q,
$\frac{5x+5}{3x+5} = \frac{4}{3}$
$\Rightarrow$ 15x + 15 = 12x + 20
$\Rightarrow x = \frac{5}{3}$
$\therefore$ Present age of Ravi $= 5\times\frac{5}{3}+3$
$= \frac{34}{3} yrs$
= 11 yrs 4 months

75. (3) (A's profit) : (B's profit)
= 50,000 × 12 : 40,000 × 8
= 15 : 8
$\therefore$ profit share of A $= \frac{15}{23}\times 6900$
= 4500

76. (3) $2524\times\frac{1}{4} - 331 = 25\times ?$
631 – 331 = 25 × ?
$? = \frac{300}{25}$
?= 12

77. (2) $\frac{91\times7}{13} = \frac{6\times7\times ?}{6}$
? = 7

78. (4) $(961)^{\frac{1}{2}} \div (20+11) + 15 = (?)^2$
$31\times\frac{1}{31} + 15 = (?)^2$
$16 = (?)^2$
? = 4

79. (1) $\frac{1}{3}\times 669 + \frac{7}{8}\times 56 = ? + 11\times 5$
223 + 49 = ? + 55
? = 272 – 55
? =217

80. (3) $\frac{64}{100}\times 7250 - \frac{5120}{8} + (10)^3 = ?\% \text{ of } 2000$
4640 – 640 + 1000 = ? ×20
5000 = ? ×20
? = 250