IBPS RRB Officer Scale-I Preliminary Grand Test –IRP-180821

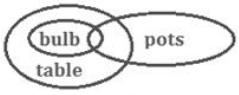
HINTS & SOLUTIONS

ANSWER KEY

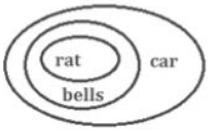
1. (3)	21. (5)	41. (3)	61. (3)
2. (5)	22. (4)	42. (1)	62. (4)
3. (5)	23. (3)	43. (4)	63. (1)
4. (4)	24. (5)	44. (2)	64. (2)
5. (4)	25. (5)	45. (3)	65. (2)
6. (3)	26. (2)	46. (2)	66. (1)
7. (2)	27. (3)	47. (1)	67. (5)
8. (3)	28. (1)	48. (2)	68. (4)
9. (1)	29. (4)	49. (3)	69. (2)
10. (3)	30. (4)	50. (3)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

HINTS & SOLUTIONS

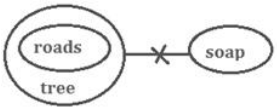
1. (3)



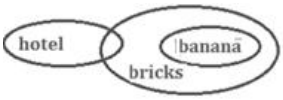
2. (5)



3. (5)



4. (4)



5. (4)

6-10. The machine rearranges one number and one word in each step. It picks even numbers and odd numbers alternately, starting with even numbers, and arranges even numbers in ascending order and odd numbers in descending order from left to right, while words are arranged in reverse alphabetical order from right to left.

Input: **vote 13 inn 54 16 air know 49 wonder 24 quick 39 60 lucky**

Step I. 16 vote 13 inn 54 air know 49 24 quick 39 60 lucky wonder

Step II. 16 49 13 inn 54 air know 24 quick 39 60 lucky vote wonder

Step III. 16 49 24 13 inn 54 air know 39 60 lucky quick vote wonder

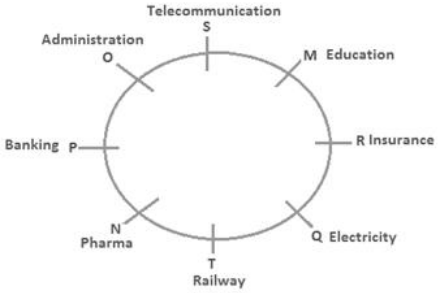
Step IV. 16 49 24 39 13 inn 54 air 60 know lucky quick vote wonder

Step V. 16 49 24 39 54 13 air 60 inn know lucky quick vote wonder

Step VI. 16 49 24 39 54 13 60 air inn know lucky quick vote wonder

6. (3) 7. (2)
8. (3) 9. (1) 10. (3)

11-15.



11. (3) 12. (5)
13. (2) 14. (4) 15. (1)

16-20.

Person	Car	Company
A	Nano	Tata Docomo
B	Swift	Idea
C	Alto	MTNL
D	BMW	Airtel
E	WagonR	Reliance
F	Audi	Vodafone
G	Fiat	Aircel

16. (4) 17. (3)
18. (2) 19. (1) 20. (4)

21. (5) I. $B \le M = D$(FALSE)
II. $B \le M = D$(FALSE)
III. $T < R > B \le M$(FALSE)

22. (4) I. $K > D = F \ge W$(TRUE)
II. $D = F \ge W$(TRUE)
III. $F = D < K$(TRUE)

23. (3) I. $J \le T < M$(TRUE)
II. $R < K \le M$(TRUE)
III. $K \le M > T \ge J$(FALSE)

24. (5) I. $W > M \le T \le K$(FALSE)
II. $M \le T \le K = R$(TRUE)
III. $T \le K = R$(TRUE)

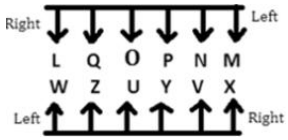
25. (5) I. $K \le W = B$(FALSE)
II. $K \le W = B < N \le T$(FALSE)
III. $B < N \le T$(TRUE)

26-30.

FLOOR	PERSONS	UNIVERSITY
8	E	DU
7	A	SMU
6	F	CCSU
5	H	AGVPU
4	B	IPU
3	D	BPTU
2	C	PTU
1	G	BHU

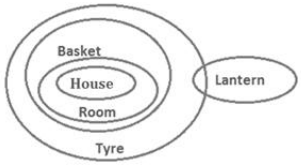
26. (2) 27. (3)
28. (1) 29. (4) 30. (4)

31-35.

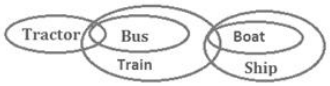


31.(4) 32.(2)
33.(2) 34.(3) 35.(2)

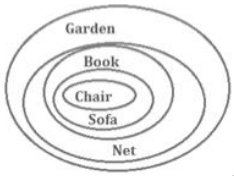
36. (2)



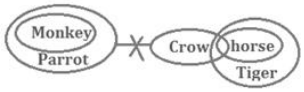
37. (5)



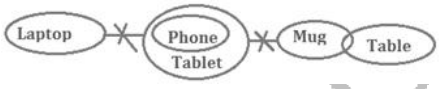
38. (2)



39. (3)



40. (5)



41. (3) $-11^2, -9^2, 7^2, -5^2$
$\therefore 584 - 3^2 = 584 - 9 = 575$

42. (1) $\times 2 - 1, \quad \times 3 - 1, \quad \times 4 - 1, \quad \times 5 - 1, \quad \times 6 - 1$
$2363 \times 7 - 1 = 16540$

43. (4) $\times 1.5, \times 2, \times 2.5, \times 3, \times 3.5$
$\therefore 21 \times 2.5 = 52.5$

44. (2) $+2.8, +4, +5.2, +6.4, +7.6$
$105 + 6.4 = 111.4$

45. (3)

34	36	41	51	68	94	131
2	5	10	17	26	37	
	3	5	7	9	11	

46. (2) $\text{Required population} = 100000 \times \frac{1006}{1000} \times \frac{1005}{1000} = 101103$

47. (1) $\text{Required ratio} = \frac{17 \times 101.8 \times 101.6}{21 \times 102.8 \times 103.1} = 0.79$

48. (2) $418600 \times \frac{1000}{1020} \times \frac{1000}{1026} \approx 400 \text{ thousand}$

49. (3) Average % growth of Gorakhpur =12.7/5%
Average % growth of Chandigarh =21.9/5%, required percentage=12.7/21.9×100=58%

50. (3) $\frac{204.8 \times \frac{100}{102.4}}{400} = 1:2$

51. (1) $P = \frac{{}^3C_1 \times {}^5C_1}{{}^{12}C_2} = \frac{5}{22}$

52. (5) Let the sum be 'x' Rs.
$x \times \frac{8 \times 2}{100} + \frac{x \times 10 \times 3}{100} + \frac{x \times 6 \times 3}{100} = 12800$
$\frac{64x}{100} = 12800$
$\text{Sum} = x = 12800 \times \frac{100}{64}$
$= 20000$ Rs.

53. (3) Compounded money after 2 years
$= 27000 \times \left(1 + \frac{15}{100}\right)^2 = 35707.5$ Rs.
Amount received on selling items
$= (15000 + 13000 + 35000) \times \frac{80}{100} = 50400$ Rs.
Total amount = 50400 + 35707.5 = 86107.5
$\text{Change in asset} = -\frac{(90000 - 86107.5)}{90000} \times 100$
$= -4.32\%$

54. (1) Since, after first round, the price decreased by Rs. 441
Let original price = P
$\text{Original price} - \text{Original price} \frac{(1+x)}{100} \times \frac{(1-x)}{100} = 441$
$P - P\frac{(1-x^2)}{100 \times 100} = 441 \Rightarrow \frac{1-x^2}{100 \times 100} = \frac{P-441}{P}$
Now, for second cycle
$(P - 441) \times \frac{(1+x)}{100}\frac{(1-x)}{100} = 1944.81$
$(P - 441)\frac{(1-x^2)}{100 \times 100} = 1944.81$
$(P - 441)\left(\frac{P-441}{P}\right) = 1944.81$
$P^2 - 2826.81P + 194481 = 0$
$P = 2756.25$ Rs.

55. (1) Let amounts be x,y and z
$104x = 108y = 112z$
$x : y : z = 27 \times 28 : 26 \times 28 : 26 \times 27$
required amount = $2186 \times 26 \times 28/(27 \times 28 + 26 \times 28 + 26 \times 27)$
$= 728$ Rs.

56. (4) Production of company C in 1999 = 45
Production of company A in 2004 = 50
i.e Required difference = 50-45 = 5 lakh tones

57. (1) Required percentage increase = {(55-40) X100}/40 =37.5

58. (5) In 2001 maximum percentage of decrease in production

59. (4) Total production of company C in 2001 & 2002 = (60+60) =120
Total production of company A in 1999 & 2000 = (50+40) =90
Required Percentage = {120 X100}/90 = 400/3 = $133\frac{1}{3}\%$

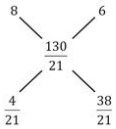
60. (3) Average production of company A = 1/6 (50+40 +55 + 45 +60+ 50) = 300/6
Average production of company B = 1/6 (55+60 +50 + 55 +50+ 55) = 325/6
Average production of company C = 1/6 (45+50 +60 + 60 +45+ 40) = 300/6
Required difference = 25/6 = 4.17

61. (3) Let B invested x Rs.
Investment of A = $x + 280$ Rs.
Share of A = Rs. 150
$\frac{4(x + 280)}{3(x) + (x + 280)4} = \frac{150}{245}, x = 1520$ Rs.
Total capital invested = 1520 + 1800 = 3320 Rs.

62. (4) Let student appeared in school A = 100
Student appeared in school B = 125
Student qualified in school A = 80
Student qualified in school B = 112
$\text{Required percentage} = \frac{112}{125} \times 100 = 89.6\%$

63. (1) Let CP = $100x$
SP = $122.5x$
New CP = $100x + 40$
New SP = $122.5x + 35$
$\frac{22.5x - 5}{100x + 40} = \frac{15}{100}, x = \frac{22}{15}$
$\text{CP} = \frac{22}{15} \times 100 = \text{Rs. } 146\frac{2}{3}$

64. (2) $\text{Net rate} = \frac{3900 \times 100}{9000 \times 7} = \frac{130}{21}\%$



$\text{Sum lent at } 8\% = \frac{2}{21} \times 9000 = \text{Rs.}\frac{6000}{7}$

65. (2) $\text{Required ratio} = \frac{\frac{2}{3} \times 3 + \frac{5}{8} \times 4 + \frac{6}{9} \times 6 + \frac{9}{14} \times 7}{\frac{1}{3} \times 3 + \frac{3}{8} \times 4 + \frac{3}{9} \times 6 + \frac{5}{14} \times 7} = 13 : 7$

66. (1) $x_1 = 9, x_2 = 8.4$
$y_1 = 8, y_2 = 8.3$
$\therefore x > y$

67. (5) $x_1 = 1.6, x_2 = -1.5$
$y_1 = 0, y_2 = 2$
$\therefore$ No relation can be established.

68. (4) $x_1 = 3, x_2 = 2$
$y_1 = 3, y_2 = 4.5$
$\therefore x \leq y$

69. (2) $x = 57, y = 65$
$\therefore x < y$

70. (3) $x_1 = \frac{3}{2}, x_2 = \frac{8}{7}$
$y_1 = \frac{3}{4}, y_2 = \frac{8}{7}$
$\therefore x \geq y$

71. (1) $\text{required average} = \frac{595}{6} = 99.16$

72. (2) Total marks = 550
Obtained marks = 407
$\text{Required average} = \frac{407}{550} \times 100 = 74\%$

73. (1) $\text{Required average} = \frac{309}{6} = 51.5$

74. (4) Required ratio = 435 : 445
= 87 : 89

75. (3) $\text{Average marks in mathematics} = \frac{733}{6} = 122.16$

76. (5) $(2^3)^{0.601} \times (2^6)^{1.7}$
$= (2)^{1.803} \times (2)^{10.2}$
$= (2)^{12} = 4096$

77. (2) $756.25 + 174.4$
$= 930.65 \approx 931$

78. (4) 2418 + 37.18 = 2455

79. (1) 146

80. (3) 84