

**IBPS RRB Office Asst. Preliminary Grand Test –IRP-180718**

**HINTS & SOLUTIONS**

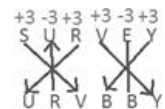
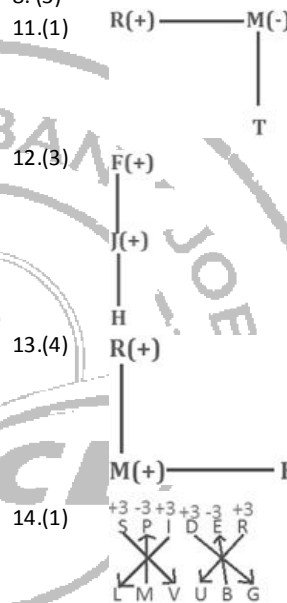
**ANSWER KEY**

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

So the final arrangement is-

Person	Movie	Channel
M	Dabangg	Colors
N	Ram-Leela	HBO
O	Dangal	Sony
P	Veer-Zara	Zee
Q	Gangajal	MTV
R	Airlift	UTV
S	Barfi	Star plus

- 6. (2)
- 8. (3)
- 11. (1)
- 7. (4)
- 9. (3)
- 10. (5)



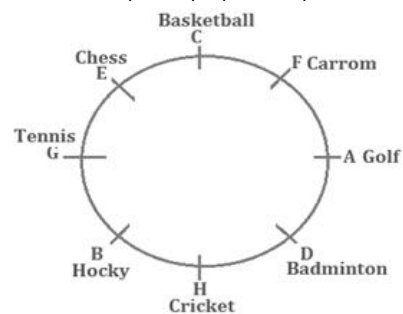
**HINTS & SOLUTIONS**

- 1. (4) I. J > C (False)  
II. M < E (False)
- 2. (1) I. U > O (True)  
II. V < W (False)
- 3. (2) I. Z ≥ P (False)  
II. S ≤ C (True)
- 4. (3) I. B < C (False)  
II. C = B (False)
- 5. (5) I. P < I (True)  
II. S ≥ O (True)
- 6-10. P likes Veer-Zara and channel Zee. O likes Sony Channel. Q likes Gangajal movie but does not likes Colors or Star plus. S likes Barfi but does not like Colors channel. R likes UTV but does not like Dangal. M likes movie Dabangg.

Person	Movie	Channel
M	Dabangg	
N		
O		Sony
P	Veer-Zara	Zee
Q	Gangajal	Colors, Star plus
R	Dangal	UTV
S	Barfi	Colors

Now, the one who likes Ram-Leela likes HBO.

- 15. (2) X > Y > W > Z > V > U  
'Y' scores the second highest mark.
- 16. (4) PIN
- 17. (3) Three letters between E and I
- 18. (3) Two, i.e. QPW and GVB
- 19. (4) Three, i.e. RNX, TDB, HTC
- 20. (4) Three, i.e. IFS, OJM, GVA
- 21. (3) T > P(36 coins) > Q > S > R > U
- 22. (1) T > P(36 coins) > Q > S > R > U
- 23. (2) T > P(36 coins) > Q > S > R > U  
Coins of R = (59 - P) = (59 - 36) = 23 coins
- 24-28.



- 24. (5)
- 26. (2)
- 25. (2)
- 27. (5)
- 28. (3)

29. (4) Three



30. (2)

31. (3)

32. (2) From I, First quarter of the year i.e. Jan, Feb, March. Hence I alone is not sufficient.

From II, It is clear that Abhay went for meeting in Feb. Hence II alone is sufficient.

33. (3) From I,  $F > B > D > C > E/A > A/E$

Hence B is second heaviest

From II,  $F > B > A > C > D > E$

Hence B is the second heaviest

34. (5) From I, Sumit scores 16, 25, 36, 49

From II, Sumit scores 26 to 44

So From I and II Sumit scores 36 marks.

35. (5) From I,  $A > B$ , E is not the tallest

From II,  $C > A$ , D is not the tallest

From I and II  $C > A > B$  and neither E & D is tallest. So C is the tallest.

36. (2) L

37. (3) \$

38. (4) Five – R\$, #L, @N, ©V, ®F

39. (3) Three – 1Q, M8, 1S

40. (2) E®9

41. (5) I.  $x^2 - 7x + 6 = 0$

$$x^2 - 6x - x + 6 = 0$$

$$(x - 6)(x - 1) = 0$$

$$x = 1, 6$$

$$\text{II. } 2y^2 - 8y + 6 = 0$$

$$\Rightarrow y^2 - 4y + 3 = 0$$

$$\Rightarrow y^2 - 3y - y + 3 = 0$$

$$\Rightarrow (y - 1)(y - 3) = 0$$

$$\Rightarrow y = 1, 3$$

No relation

42. (4)

$$\text{I. } 3x^2 + 13x - 16 = 0$$

$$\Rightarrow 3x^2 + 16x - 3x - 16 = 0$$

$$\Rightarrow (3x + 16)(x - 1) = 0$$

$$\Rightarrow x = 1, -\frac{16}{3}$$

$$\text{II. } y^2 - 5y + 4 = 0$$

$$\Rightarrow y^2 - 4y - y + 4 = 0$$

$$\Rightarrow (y - 4)(y - 1) = 0$$

$$\Rightarrow y = 4, 1$$

$$y \geq x$$

43. (1)

$$\text{I. } x^2 + 11x + 30 = 0$$

$$\Rightarrow x^2 + 5x + 6x + 30 = 0$$

$$\Rightarrow (x + 5)(x + 6) = 0$$

$$\Rightarrow x = -5, -6$$

$$\text{II. } y^2 + 17y + 72 = 0$$

$$\Rightarrow y^2 + 8y + 9y + 72 = 0$$

$$\Rightarrow (y + 8)(y + 9) = 0$$

$$\Rightarrow y = -8, -9$$

$$x > y$$

44. (5)

$$\text{I. } x + 3y = 8$$

$$\text{II. } 2x + y = 6$$

Multiplying equation (i) by 2 and then subtracting (ii) from (i) we get

$$x = 2, y = 2$$

45. (5)

$$\text{I. } 2x^2 - 9x + 10 = 0$$

$$\Rightarrow 2x^2 - 4x - 5x + 10 = 0$$

$$\Rightarrow 2x(x - 2) - 5(x - 2) = 0$$

$$\Rightarrow (x - 2)(2x - 5) = 0$$

$$x = 2, \frac{5}{2}$$

$$\text{II. } 3y^2 - 14y + 16 = 0$$

$$\Rightarrow 3y^2 - 6y - 8y + 16 = 0$$

$$\Rightarrow 3y(y - 2) - 8(y - 2) = 0$$

$$\Rightarrow (y - 2)(3y - 8) = 0$$

$$\Rightarrow y = 2, \frac{8}{3}$$

No relation

46. (1)

Let the breadth of field be  $x$  m and that of length will be  $3x$  m.

$$\text{Area} = 3x^2 \text{ m}^2$$

$$\therefore 3x^2 \times 2.5 = 480$$

$$x^2 = 64$$

$$x = 8$$

$$\therefore \text{Required difference} = 2 \times 8 = 16 \text{ m}$$

47. (3)

S.P. of two articles =  $4800 + 4800$

$$= \text{Rs } 9600$$

$$\text{CP of first article} = \frac{100}{120} \times 4800$$

$$= 4000$$

$$\text{CP of second article} = 9600 - 4000 = 5600$$

$$\text{Required \% loss} = \frac{5600 - 4800}{5600} \times 100$$

$$= \frac{800}{5600} \times 100$$

$$= \frac{1}{7} \times 100$$

$$= 14\frac{2}{7}\%$$

48. (2)

Manufacturer  $\xrightarrow{10\%}$  wholesaler  $\xrightarrow{15\%}$  retailer  $\xrightarrow{25\%}$  Rs. 1265

Let cost price be  $x$ . Then,

$$\therefore \text{Final price of the table} = \frac{110}{100} \times \frac{115}{100} \times \frac{125}{100} \times x = 1265$$

$$\therefore \text{Cost of production of the table} = \frac{1265 \times 100 \times 100 \times 100}{110 \times 115 \times 125} = \text{Rs. } 800$$

49. (5)

$$\text{One day's work of 1 man} = \frac{1}{12 \times 15}$$

$$\therefore \text{One day's work of 9 men} = \frac{9}{12 \times 15} = \frac{1}{20}$$

and one day's work of 12 women

$$= \frac{12}{10 \times 24} = \frac{1}{20}$$

Let the time required by 12 women to complete the remaining work be  $x$  days.

$$\therefore \frac{6}{20} + \frac{x}{20} = 1$$

$$\Rightarrow x = 14 \text{ days}$$

50. (3)

Let Arjun's speed =  $x$  depressions per hr.

$\therefore$  Suman's speed =  $0.6x$  depressions per hr.

ATQ,

$$(x + 0.6x) \times 12 \times 6 = 5,76,000$$

$$\Rightarrow x = 5000 \text{ depressions per hour}$$

51. (1)

$$? = \frac{25}{100} \times 480 + \frac{2}{3} \times 420 - \frac{25}{200} \times 640$$

$$= 120 + 280 - 80$$

$$= 320$$

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52. (2)  $? = 28 + 7 \times 25 - 12$   
 $= 100 - 12$   
 $= 88$

53. (5)  $? \times 5 = 361 + 1156 + 32 - 729$   
 $\Rightarrow ? = \frac{820}{5}$   
 $\Rightarrow ? = 164$

54. (4)  $\frac{?}{10} = 15.48 + 4.484 - 11.81$   
 $\Rightarrow ? = 8.154 \times 10 = 81.54$

55. (2)  $? = 7018 + 7.07$   
 $= 7025.07$

56. (2) Probability that both balls are red =

$$\frac{x}{4+x} \times \frac{(x-1)}{(3+x)}$$

$$\frac{x^2-x}{x^2+7x+12} = \frac{1}{3}$$

$$3x^2 - 3x = x^2 + 7x + 12$$

$$2x^2 - 10x - 12 = 0$$

$$x^2 - 5x - 6 = 0$$

$$x^2 - 6x + x - 6 = 0$$

$$x(x-6) + 1(x+6) = 0$$

$$x = 6, -1$$

57. (2) Sum of profit and discount offered on one bicycle =  $\frac{2560}{4} = 640$

And  
 Cost price + Profit = Marked price - Discount  
 Profit + Discount = Marked price - cost price = 640

58. (4) Let pipe A and B can fill 5x unit per hour and 7x unit per hour respectively  
 Let total capacity of tank be y  
 So,  
 $5x \times 5 + (5x + 7x) \times 2 = \frac{70}{100}y$   
 $25x + 24x = \frac{70}{100}y$   
 $490x = 7y$   
 $y = 70x$   
 Remaining part =  $70x - 49x = 21x$   
 Required time =  $\frac{21x}{7x} = 3$  hours

59. (3) Let speed of first and second train in m/second be 2x and 3x respectively.  
 Sum of the length of first train and second train  $\Rightarrow 180 + 270 = 450$  m  
 Sum of their speeds  $\Rightarrow 2x + 3x = \frac{450}{10.8}$   
 $5x = \frac{125}{3}$  m/s  
 $x = \frac{25}{3}$  m/s  
 Time taken by second train =  $\frac{450}{3x-2x}$   
 $= \frac{450}{25} \times 3 = 54$  seconds

60. (1) Capital invested by Veer and Subham in the ratio of  
 $= (3x \times 4 + 5x \times 6) : (1800 \times 12)$   
 $= 42x : 21600$   
 ATQ—  
 $\frac{42x}{21600} = \frac{7}{9}$   
 $x = \frac{2400}{6}$   
 $x = 400$   
 value of '5x' =  $400 \times 5$   
 $= 2000$  Rs.

61. (3) Population of city Y =  $\frac{3000}{0.15}$   
 $= 20,000$

Population city of Z =  $\frac{8000}{0.5} = 16,000$   
 Required percentage =  $\frac{20,000-16,000}{20,000} \times 100$

$= \frac{4000}{20,000} \times 100$   
 $= 20\%$

62. (5) Required difference  
 $= \frac{(11-7)}{18} \times 0.45 \times \frac{3600}{0.3}$   
 $= 1200$

63. (2) Female population in city Z =  $\frac{8000}{0.5} \times 0.35$

$= 5600$

Male & transgender population in

city A =  $\frac{3600}{0.3} \times [0.7]$

$= 8400$

Required percentage

$= \frac{8400 - 5600}{8400} \times 100$

$= \frac{2800}{84} \% = \frac{100}{3} \%$

$= 33\frac{1}{3} \%$

64. (4) Male population in city B =  $\frac{4200}{0.3} \times 0.38$

$= 5320$

Female population in city X =  $\frac{2000}{0.25} \times 0.3$

$= 2400$

Required difference =  $5320 - 2400$

$= 2920$

65. (1) Required ratio =  $\frac{\frac{8000}{0.5} \times 0.15}{\frac{3600}{0.3} \times 0.25}$

$= \frac{2400}{3000} = \frac{4}{5}$

66. (2) 
$$\begin{array}{cccccc} 90 & 55 & 75 & 142.5 & 325 & 862.5 \\ \times 0.5 + 10 & \times 1 + 20 & \times 1.5 + 30 & \times 2 + 40 & \times 2.5 + 50 & \end{array}$$

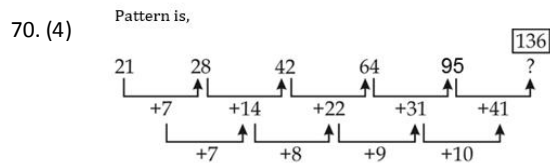
67. (4) 
$$\begin{array}{cccccc} 5 & 12 & 39 & 160 & 805 & 4836 \\ \times 2 + 2 & \times 3 + 3 & \times 4 + 4 & \times 5 + 5 & \times 6 + 6 & \end{array}$$

68. (5) 
$$\begin{array}{cccccc} 26 & 36 & 54 & 80 & 114 & 156 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 10 & 18 & 26 & 34 & 42 & \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \\ 8 & 8 & 8 & 8 & & \end{array}$$

69. (1) Pattern is,  

$$\begin{array}{cccccc} 17 & 25 & 49 & 97 & 177 & ? \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ +(3^2-1) & +(5^2-1) & +(7^2-1) & +(9^2-1) & +(11^2-1) & \end{array}$$

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71. (3) Let side of triangle = a

Side of square = b

$$\therefore a^2 = \frac{800}{100} \times 8 \times 4$$

$$a = 16 \text{ m}$$

$$\therefore \text{perimeter of triangle} = \frac{3}{8} \times 64$$

$$= 24 \text{ m}$$

72. (2) In this case we need to select the probability of

choosing one bag out of two given bags which will be  $\frac{1}{2}$

So the required probability

$$= \frac{1}{2} (\text{Red ball from bag 1} + \text{Red ball from bag 2})$$

$$= \frac{1}{2} \left( \frac{7}{14} + \frac{5}{14} \right)$$

$$= \frac{12}{28} = \frac{6}{14} = \frac{3}{7}$$

73. (2) Let

$r_A \rightarrow$  radius of cylinders 'A'

$r_B \rightarrow$  radius of cylinders 'B'

$h_A \rightarrow$  height of cylinder 'A'

$h_B \rightarrow$  height of cylinder 'B'

ATQ,

$$\frac{r_A}{r_B} = \frac{1}{2} \quad \& \quad \frac{h_A}{h_B} = \frac{2}{1}$$

$$\text{Required ratio} = \frac{\pi r_A^2 h_A}{\pi r_B^2 h_B} = \left( \frac{1}{2} \right)^2 \times \frac{2}{1} = \frac{1}{2}$$

74. (5) In 6 min both pipes fill =  $(50 + 60) \times 6$

$$= 660 \text{ m}^3$$

$$\therefore \text{required time} = \frac{(1260 - 660)}{60}$$

$$= 10 \text{ min}$$

75. (2) CP of article =  $\frac{100}{260} \times 520$

$$= \text{Rs } 200$$

$$\therefore \text{S.p. of article} = \frac{156}{100} \times 200$$

$$= \text{Rs } 312$$

76. (3)  $\frac{?}{11} = \sqrt[3]{8} \times (3)^2 - \sqrt{81}$

$$? = (2 \times 9 - 9) \times 11$$

$$? = 99$$

77. (1)  $?^2 = 2080 - 1698 - 213$

$$? = 13$$

78. (5)  $\Rightarrow \frac{1}{7} \times (2 \times 6^2 - 8^2) = 2^2$

$$? = \frac{(72 - 64)}{4} = 2$$

79. (2)  $? = \frac{16}{100} \times 1300 + \frac{32}{100} \times 1500$

$$? = 208 + 480$$

$$? = 688$$

80. (4)  $? = (13)^2 - (16)^2 + (7)^2$

$$= 169 - 256 + 49$$

$$= -38$$

