

IBPS RRB Office Asst. Preliminary Grand Test –IRP-180833

HINTS & SOLUTIONS

ANSWER KEY

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

6. (5) 7. (4)
8. (2) 9. (3) 10. (5)
11-15.

who is going to Mumbai does not going in February. This will eliminate case-2. Final arrangement will be----

Month	Person	Place
Feb	B	Delhi
March	E	Guwahati
April	A	Mumbai
June	F	Shimla
October	C	Chennai
December	D	Bhopal

J will attend the meeting on 5th of September. Three persons will attend the meeting between J and P. More than two persons will attend the meeting between P and M. Two persons will attend the meeting between M and Q. Three persons will attend the meeting between Q and L.

Therefore, there will be two possible cases----

Case-1					Case-2				
Date	1 st	5 th	15 th	17 th	Date	1 st	5 th	15 th	17 th
Month					Month				
August	L	P			August		P		Q
September	Q	J		M	September		J	M	L

K will not attend the meeting immediately before or immediately after the dates on which Q attend the meeting. K will not attend the meeting on 15th September. Two persons will attend the meeting between N and O. By this condition Case-2 will be cancelled. Also, N will attend the meeting in August month. Final arrangement will be---

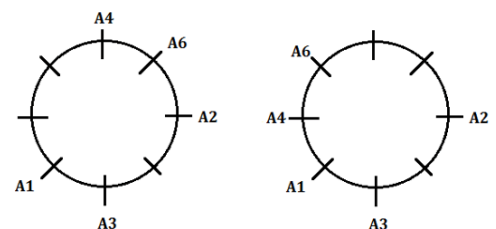
Date	1 st	5 th	15 th	17 th
Month				
August	L	P	K	N
September	Q	J	O	M

11. (2) 12. (5)
13. (5) 14. (4) 15. (1)
16. (3) 17. (3)

18. (3) Two i.e 0%W 2!H
19. (2) Two i.e 5A\$ 9U#
20. (5)

21-25. Two persons sit between A3 and A6. A4 sits to the immediate right of A6. A1, who is an immediate neighbor of A3, sits third to the left of A2. A3 does not sit opposite to A2. So, there will be two possible cases----

Case-1 Case-2



A7 is neither an immediate neighbor of A2 nor A1. A8 sits to the immediate right of A7. This will eliminate case 2. Final arrangement will be---

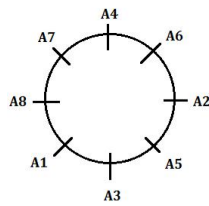
HINTS & SOLUTIONS

- 1. (4) I. M < J (False)
II. X > V (False)
- 2. (4) I. W < A (False)
II. W = E (False)
- 3. (5) I. U > R (True)
II. V > E (True)
- 4. (1) I. P ≤ R (True)
II. B ≤ L (False)
- 5. (1) I. U < Y (True)
II. T ≤ J (False)
- (6 – 10) E is going to Guwahati. C is going in October. Only two persons are going between B and F, who is going to Shimla. B goes just before E. A is going before D. There are two possible cases---

Case-1		
Month	Person	Place
February	B	
March	E	Guwahati
April	A	
June	F	Shimla
October	C	
December	D	

Case-2		
Month	Person	Place
February	A	
March	D	
April	B	
June	E	Guwahati
October	C	
December	F	Shimla

D or B is not going to Mumbai or Chennai. C is not going to Mumbai or Bhopal. A is not going to Chennai. The one who is going to Bhopal not going just before E. The one



21. (2)
23. (4)

22. (3)
24. (3)

25. (5)

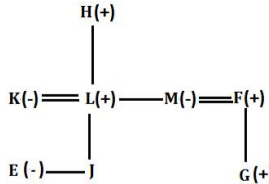
26-30.

WORD	CODE
Bank	Kal
Job	Lan
Is	Nas
Good	Suh
A	Ron
PSU	Kus
In	Bun
Each/worthy	Moc/jol

26. (2)
28. (4)

27. (1)
29. (5)

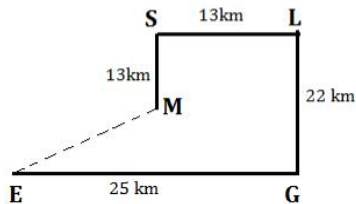
31-33.



31. (5)
32. (4)
33. (5)

Either son or daughter

34-35.



34. (1)
35. (4)

$$\sqrt{12^2 + 9^2} = 15\text{km}$$

36-39.

Temptation and Toblerone are not liked by B and D. A does not like M&M. A does not like Temptation. Neither S nor R likes M&M and Snickers. Toblerone is not liked by R. Temptation is not liked by S. D does not like M&M. Neither B nor D likes Snickers. Toblerone is not liked by A.

By the given conditions-----

Girls	A	B	D	R	S
Temptation	X	X	X		X
Toblerone	X	X	X	X	
Snickers		X	X	X	X
M&M	X		X	X	X

Bournville is liked by N. Since A, B, R, N and S are placed in their respective columns, therefore D likes silk.

So, Final arrangement will be---

Girls	Chocolates
D	Silk
R	Temptation
N	Bournville
S	Toblerone
A	Snickers
B	M&M

36. (1)
38. (5)
40. (2)
41. (1)

37. (3)
39. (4)

$$(30 + 3 \times 4 - 17 + 2) = 25$$

$$x = 11 + 12 - 13 - 4 \left(\frac{2}{9} + \frac{2}{9} - \frac{2}{9} - \frac{1}{4} \right)$$

$$x = 6 + \left(\frac{8+8-8-9}{36} \right)$$

$$x = 6 + \left(-\frac{1}{36} \right)$$

$$x = 5\frac{35}{36}$$

42. (2)

$$x = 10288 - 5220 - 1375 + 5364$$

$$x = 9057$$

43. (4)

$$? \times \frac{1350}{112.5} = \sqrt{5929} + \sqrt{8281}$$

$$? \times 12 = 77 + 91 = 168$$

$$\Rightarrow ? = 14$$

44. (2)

$$\frac{18750}{\sqrt{?}} = 36 \times 11 + 59 \times 6$$

$$\Rightarrow \frac{18750}{\sqrt{?}} = 396 + 354$$

$$\Rightarrow \sqrt{?} = \frac{18750}{750} = 25$$

$$? = 625$$

45. (5)

$$3^? = \frac{729}{243} \times \frac{216 \times 72}{576} = 81$$

$$3^? = 3^4 \Rightarrow ? = 4$$

46. (2)

Ratio of efficiency of A to B = 7 : 5

So ratio of time required to complete a work = 5 : 7

Now ATQ,

$$(7 - 5) \rightarrow 6 \text{ day}$$

$$2 \rightarrow 6$$

$$5 \rightarrow \frac{6}{2} \times 5 = 15 \text{ days}$$

So, 'A' can complete the work alone in 15 days

47. (4)

Ratio of investment of Anurag and Roshan

$$= (12,000 \times 12) : (14,000 \times 6 + 10,500 \times 6)$$

$$48 : 49$$

$$\text{So, profit share of Anurag} = \frac{9700}{(48+49)} \times 48 = \text{Rs. } 4800$$

Equivalent discount of two discount

$$= -20 + (-25) + \frac{(-20) \times (-25)}{100}$$

$$= -40$$

$$\text{So, marked price of mobile} = \frac{18,000}{(100-40)} \times 100 = \text{Rs. } 30,000$$

48. (1)

Let initial quantity of milk and water be x and y respectively

Now

$$\frac{x}{y} = \frac{3}{2}$$

$$x = \frac{3}{2}y \dots (i)$$

Again

$$\frac{x+4}{y} = \frac{2}{1}$$

$$x - 2y + 4 = 0 \dots (ii)$$

Put (i) in (ii)

$$\frac{3}{2}y - 2y = -4$$

$$y = 8$$

$$\text{So } x = 12 \text{ liter}$$

$$\text{So total quantity} = 12 + 8 = 20 \text{ liter}$$

50. (2)

$$\text{Probability of one red or one blue ball} = \frac{3}{12} + \frac{5}{12} = \frac{8}{12} = \frac{2}{3}$$

51-55.

Total number of girls in school B and E

$$\text{together} \rightarrow [100 - 20 - 15 - 24 - 9] \% = 462 + 594$$

$$\Rightarrow 32\% = 1056$$

$$\Rightarrow 100\% = 3300$$

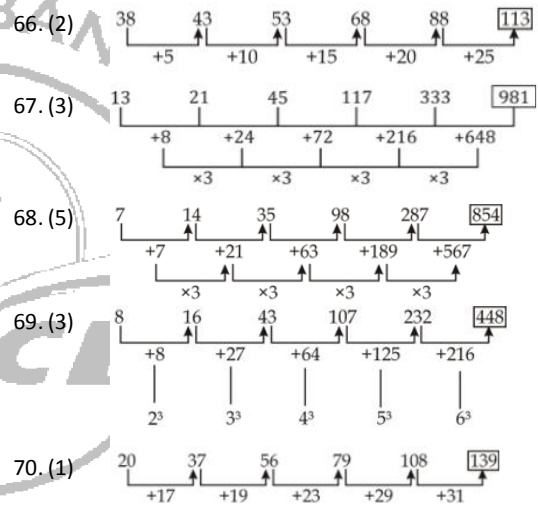
$$\text{Total number of girls in Six school together} = 3300$$

Grand Test – IRP-180833



51. (2) Required central angle = $\frac{594}{3300} \times 360 = 64.8^\circ$
52. (3) Total number of girls in school D = $\frac{24}{100} \times 3300 = 792$
Required difference = $792 - 462 = 330$
53. (5) Total number of girls in school A & D together = $\frac{(20+24)}{100} \times 3300$
 $= 44 \times 33 = 1452$
54. (1) Total number of students in school F
 $= \frac{9}{9} \times \frac{17}{100} \times 3300$
 $= 561$
55. (2) Required % = $\frac{20-15}{20} \times 100$
 $= \frac{5}{20} \times 100 = 25\%$
56. (2) $\Rightarrow ? \approx \frac{96 + 189}{19} = \frac{285}{19} = 15$
57. (5) $? \times 25 \approx \sqrt{900} + 120$
 $\Rightarrow ? \approx \frac{30 + 120}{25} = 6$
58. (1) $? \approx \frac{250}{165} \times \frac{180}{75} \times \frac{121}{20} = 22$
59. (4) $5^? \approx \frac{125 \times 500}{100 \times 25} = 25$
 $? = 2$
60. (4) $\frac{60}{100} \times 720 + \frac{45}{100} \times 960 \approx \frac{90}{100} \times ?$
 $\Rightarrow ? = \frac{(432 + 432)}{9} \times 10$
 $\Rightarrow ? = \frac{864}{9} \times 10 = 960$
61. (3) $\begin{matrix} 40 & & 35 \\ & \diagdown & / \\ & 38 & \\ & / & \diagdown \\ 3 & & 2 \end{matrix}$
ATQ, $5 \rightarrow 50$
 $1 \rightarrow 10$
 $2 \rightarrow 20$
Number of Girls = 20.
62. (3) Initial C.P. = Rs. 480
SP after selling it 12% loss
 $= 480 \times \frac{88}{100}$
New C.P. = 422.4 Rs
Final S.P. after selling new C.P. price at 25 % gain
 $= 422.4 \times \frac{125}{100} = 528$
Total profit = Final S.P. – Initial C.P.
 $= 528 - 480$
 $= 48$ Rs.
Required profit percentage = $\frac{48}{480} \times 100$
 $= 10\%$
63. (4) Principle invested by man
 $= \frac{5000 \times 100}{8 \times 5} = 12500$
 $CI = 12500 \left[\left(1 + \frac{8}{100} \right)^2 - 1 \right]$
 $= 2080$ Rs.

64. (2) Relative speed of two train = $(80 - 64)$
 $= 16$ km/hr
 $= 16 \times \frac{5}{18} = \frac{40}{9}$ m/s
Required time = $\frac{(60 + 80) \times 9}{40}$
 $= \frac{140}{40} \times 9$
 $= 31.5$ sec
65. (3) Let required time by Ram = t hours
 $\therefore s = \frac{d}{t}$... (i)
 $\frac{3}{4}s = \frac{d}{(t+2)}$... (ii)
 $\frac{S}{\frac{3}{4}s} = \frac{\frac{d}{t}}{\frac{d}{(t+2)}} \Rightarrow \frac{4}{3} = \frac{t+2}{t}$
 $4t - 3t = 6$
 $t = 6$ hr



71. (4) Let Present age of A and B be a and b respectively
ATQ,
 $b - 8 = 1.6(a - 8)$
 $5b - 40 = 8a - 64$
 $\Rightarrow 8a - 5b = 24$... (i)
while $\frac{a}{b} = \frac{3}{4}$... (ii)
On solving (i) & (ii)
 $a = 18, b = 24$
B's age four years hence = $24 + 4 = 28$ years
72. (2) Volume of cylinder = $\pi r^2 h$ (r-radius, h - height)
Volume of sphere = $\frac{4}{3} \pi r^3$
ATQ
 $\frac{\pi r^2 h}{\frac{4}{3} \pi r^3} = \frac{3}{1}$
 $\Rightarrow \frac{h}{r} = \frac{4}{1} \Rightarrow h = 4r$
T.S.A of cylinder = $2\pi r(r+h)$
T.S.A of sphere = $4\pi r^2$
Required Ratio = $\frac{2\pi r(r+h)}{4\pi r^2} = \frac{4r+r}{2r} = \frac{5}{2}$

Grand Test – IRP-180833



73. (2) Total work = (X) (X-2) = (X-10) (2X)
 $\Rightarrow X - 2 = 2X - 20 \Rightarrow X = 18$

Let (X-6) men can complete half of the work in 'y' days
 ATQ,

$$(X-6) \times y = \frac{X(X-2)}{2}$$

$$\Rightarrow y = \frac{18 \times 16}{2 \times 12} = 12 \text{ days}$$

74. (5) On selling mixture, retailer earns 150% profit
 \Rightarrow If container contains 5 l of mixture then quantity of milk is 2 l.

Let x l of water is added in container

ATQ

$$\frac{60}{40+x} = \frac{2}{3}$$

$$\Rightarrow 180 = 80 + 2x \Rightarrow x = 50 \text{ l}$$

75. (4) ATQ,

$$\frac{6}{12+6+x} = \frac{2}{9}$$

$$\Rightarrow x = \frac{18}{2} = 9$$

$$\text{Required probability} = \frac{9+12}{12+6+9} \cdot \frac{21}{27} = \frac{7}{9}$$

Alternate,

Required Probability = 1 - Probability
 of choosing one green ball

$$= 1 - \frac{2}{9} = \frac{7}{9}$$

76. (2) $\frac{45}{100} \times 80 + \sqrt{841 + x^2} = 2121 + 21$

$$36 + 29 + x^2 = 101$$

$$x^2 = 36$$

$$x = 6$$

77. (3) $\frac{36+3x}{23} + 1 = 52$

$$36 + 3x + 23 = 52 \times 23$$

$$3x + 59 = 1196$$

$$3x = 1196 - 59$$

$$3x = 1137$$

$$x = 379$$

78. (3) $\frac{343}{2^{1.5}} + \frac{175}{100} \times 350 = x^2$

$$x^2 = 171.5 + 612.5$$

$$x^2 = 784$$

$$x = 28$$

79. (4) $23(24 + 47 - 54) = x$

$$x = 23 \times 17$$

$$x = 391$$

80. (3) $\frac{6}{5} \times 650 + 320 + 51 = x$

$$780 + 320 + 51 = x$$

$$x = 1151$$

