IBPS RRB OFFICER PHASE - I - 157 (SOLUTION)

REASONING

(1-5) :

Floor	Person	Fruits
7	Vishnu	Banana
6	Akash	Mango
5	Sunil	Apple
4	Raghav	Grapes
3	Vivek	Guava
2	Shiva	Orange
1	Vishesh	Papaya

1. (3)   2. (1)   3. (3)
4. (5)   5. (2)

(6-10) :

% → >
$ → $\leq$
* → <
& → $\geq$
© → =

6. (2) R < A $\leq$ M $\leq$ P, M $\leq$ C
    I. P > R → True
    II. A $\leq$ P → True
    III. P > C → False
    Both conclusion I and II are true.

7. (2) Z $\geq$ X = A $\leq$ S = D < C
    I. S > Z → False
    II. D < C → True
    II. X < C → True
    Both conclusion II and III are true.

8. (1) V $\leq$ H < F = G, B $\leq$ H
    I. F > V → True
    II. G = H → False
    II. V < B → False
    Only conclusion I is true.

9. (3) E > J $\geq$ H = D $\leq$ C, D > F
    I. E > C → False
    II. F < E → True
    III. J > F → True
    Both conclusion II and III are true.

10. (3) Z = Y $\geq$ V < W $\leq$ R
    I. W $\geq$ Y → False
    II. R > V → True
    III. V $\leq$ Z → True
    Both conclusion II and III are true.

(11-15) :

Person	Floor	Shop
Madhuri	7	Titan
Kusum	6	Walmart
Mahima	5	Puma
Seema	4	Nike
Priya	3	Reebok
Rama	2	Liberty
Sita	1	Sonata

11. (4)   12. (3)   13. (1)
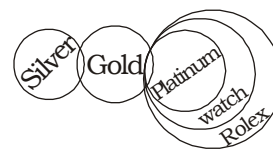14. (2)   15. (3)
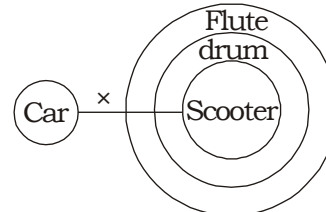
(16-20) :

16. (4)
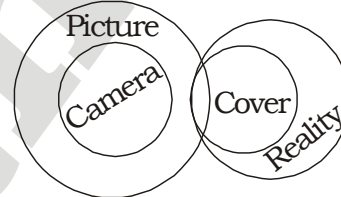
I. True   II. False
III. True   IV. False
Only I and III follows
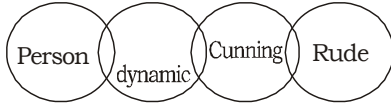
17. (4)

I. True   II. False
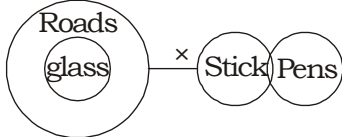III. True   IV. False
Only I and III follows

18. (5)

I. True   II. True
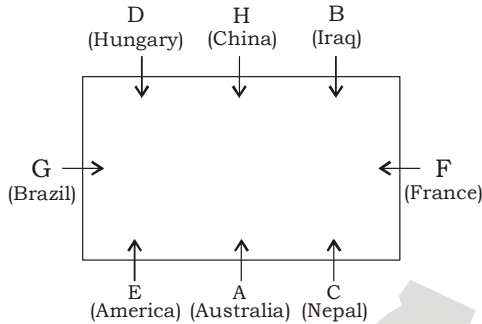III. True   IV. False
Only I, II and III follows

19. (2)

   I. False   II. True
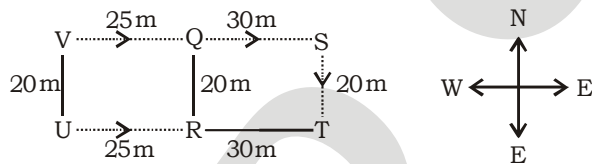   III. False   IV. False
   Only II follows

20. (5)

   I. False   II. True
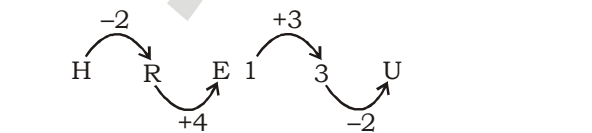   III. False   IV. True
   Only II and IV follows
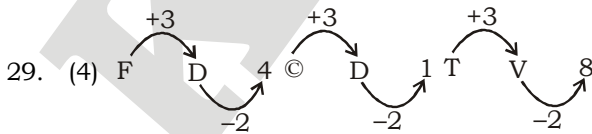
(21-25) :

21. (2)   22. (4)   23. (5)   24. (5)
25. (4)

(26 –27) :

26. (3) SV = VQ + SQ = 25 + 30 = 55m
27. (2) Northeast
28. (2) Twelfth to the left of the twenty second from the left end is (22–12=) 10th from the left, i.e @.

29. (4)

30. (1) New arrangement becomes:
    F % D A © I B @ R H E * N $ U W P T 9 V # Z Q.
    Hence sixteenth from the right end is @.

(31-35) :

Input :	32 proud girl beautiful 48 55 97 rich family 61 72 17 nice life
Step I :	beautiful 17 32 proud girl 48 55 97 rich family 61 72 nice life
Step II :	family 32 beautiful 17 proud girl 48 55 97 rich 61 72 nice life
Step III :	girl 48 family 32 beautiful 17 proud 55 97 rich 61 72 nice life
Step IV :	life 55 girl 48 family 32 beautiful 17 proud 97 rich 61 72 nice
Step V :	nice 61 life 55 girl 48 family 32 beautiful 17 proud 97 rich 72
Step VI :	proud 72 nice 61 life 55 girl 48 family 32 beautiful 17 97 rich
Step VII :	rich 97 proud 72 nice 61 life 55 girl 48 family 32 beautiful 17.

31. (3)   32. (4)   33. (3)
34. (1)   35. (2)

(36-40) :   **Family Tree**
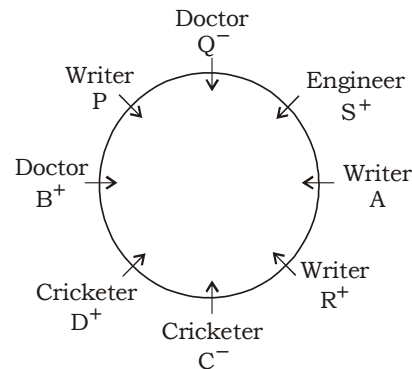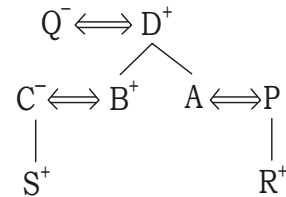
36. (4)   37. (1)   38. (5)
39. (4)   40. (3)

Maths

(41-45) :
41. (2) $217250 \div 1350 \div 120$
    $= 217250 \div 162000$
    $= 1.34 \approx 2$

42. (1) $\left(\dfrac{7}{4}\right)^{\frac{1}{2}} \times \dfrac{396}{11} \div \dfrac{588}{12}$

$= \left(\dfrac{7}{4}\right)^{\frac{1}{2}} \times \dfrac{396}{11} \times \dfrac{12}{588}$

$\approx (2)^{\frac{1}{2}} \times 36 \times \dfrac{1}{49} = 1.46 \approx 2$

43. (4) $9237.89 - 7629.01 + 5153.99 - 6205.10$
$\approx 9238 - 7629 + 5154 - 6205$
$= 14392 - 13834 = 558$

44. (5) $14.03 \times 23.96 + 14.98 \times \sqrt[3]{46656}$
$\approx 14 \times 24 + 15 \times 36$
$= 336 + 540 = 876$

45. (4) $(7256 + 1286) - 1234 + 189$
$= 8542 - 1234 + 189$
$= 8731 - 1234 = 7497$

(46-50) :

46. (2) Required Ratio $= \dfrac{(45 \times 925)}{(60 \times 650)} = \dfrac{111}{104}$
$= 111 : 104$

47. (2) Required sum = 25% of 880 + 56% of 1125 + 60% + 60% of 650

$= \dfrac{25}{100} \times 880 + \dfrac{56}{100} \times 1125 + \dfrac{60}{100} \times 650$
$= 220 + 630 + 390 = 1240$

48. (2) Number of females of village B = 40% of 1050 = 420

Required percentage $= \left(\dfrac{420}{1125} \times 100\right)\%$
$= 37.33\% \approx 37\%$

49. (5) Sum of total number of female in entire village = 55% of 925 + 40% of 1050 + 75% of 880 + 56% of 1125 + 60% of 650 + 35% of 985
$= 508.75 + 420 + 660 + 630 + 390 + 344.75$
$= 2953.5 \approx 2954$

50. (5) Total no. of males in entire village = 45% of 925 + 60% of 1050 + 25% of 880 + 44% of 1125 + 40% of 650 + 65% of 985
$= 416.25 + 630 + 220 + 495 + 260 + 640.25$
$= 2661.5$

$\therefore$ Required Average $= \dfrac{2661.5}{6}$
$= 443.58 \approx 444$

(51-55):

51. (2) The pattern of the number series is :
$9 \times 2 - 3 = 18 - 3 = 15$
$15 \times 2 - 3 = 30 - 3 = 27$
$27 \times 2 - 3 = 54 - 3 = 51$
$51 \times 2 - 3 = 102 - 3 = 99$
$99 \times 2 - 3 = 198 - 3 = \mathbf{195}$

52. (4) The pattern of the number series is :
$13 + 8 = 21$
$21 + 8 + 7 = 21 + 15 = 36$
$36 + 15 + 7 = 36 + 22 = 58$
$58 + 22 + 7 = 58 + 29 = 87$
$87 + 29 + 7 = 87 + 36 = \mathbf{123}$

53. (4) The pattern of the number series is :
$7 + (2 + 0) = 9$
$9 + (2 + 8) = 19$
$19 + (10 + 16) = 45$
$45 + (26 + 24) = 95$
$95 + (50 + 32) = \mathbf{177}$

54. (1) The pattern of the number series is :
$14 + 1^2 = 15$
$15 + 2^3 = 23$
$23 + 3^2 = 32$
$32 + 4^3 = 96$
$96 + 5^2 = 96 + 25 = \mathbf{121}$

55. (3) The pattern of the number series is :
$20 + 1 \times 4 = 20 + 4 = 24$
$24 + 3 \times 4 = 24 + 12 = 36$
$36 + 5 \times 4 = 36 + 20 = 56$
$56 + 7 \times 4 = 56 + 28 = 84$
$84 + 9 \times 4 = 84 + 36 = \mathbf{120}$

56. (2) Let the length of candles be 1 unit and after t hours, the ratio of their length be 3 : 4.
ATQ,

$\dfrac{1 - \dfrac{1}{7}t}{1 - \dfrac{1}{9}t} = \dfrac{3}{4} \Rightarrow \dfrac{7 - t}{9 - t} \times \dfrac{9}{7} = \dfrac{3}{4}$

$\Rightarrow t = 4\dfrac{1}{5}$ hr = 4 hr 12 minutes

57. (2) ATQ,
Let time = x minutes
1 page has 23 lines

$\therefore \dfrac{(100 - 8) \times 20}{10}$

$= \dfrac{\left(100 \times \dfrac{128}{100} \times 8\right) \times 23 \times 40}{x}$

$\Rightarrow x = 450$ min = 7 hr 30 min

58. (3) Required no. of way = $\dfrac{11!}{3! \times 4! \times 2! \times 2!}$

= 63900

59. (3) Let the speed of Car be x km/h and actual time taken is t hrs.

In first case, distance = $(x+6)(t-6)$ km .... (i)

In second case, distance = $(x-6)(t+6)$ .... (ii)

Also distance = xt from (i) and (ii)

$(x+6)(t-4) = (x-6)(t+6)$ .... (iii)

$\Rightarrow \dfrac{x+6}{x-6} = \dfrac{t+6}{t-4} \Rightarrow \dfrac{x}{6} = \dfrac{2t+2}{10} \Rightarrow \dfrac{x}{6} = \dfrac{t+1}{5}$

$\Rightarrow 5x = 6t+6 \Rightarrow 5x - 6t = 6 \Rightarrow t = \dfrac{5x-6}{6}$

Putting the value of 't' in eqn. (iii) we get, $x = 30$ km/hr

$\therefore t = 25$ hr

Thus, distance = $30 \times 24 = 720$

60. (1) Let the price per kg of Orange, Mangoes, Bananas and Grapes be ₹ O, ₹ M, ₹ B and ₹ G respectively.

Given that

5 O + 2 M = 310 .... (i)

3 M + 3.5B = 230 .... (ii)

1.5 B + 5 G = 610 .... (iii)

Now, (i), (ii), (iii) we get

5 O + 5 M + 5 B + 5 G = 700

$\therefore$ 10 O + 10 M + 10 B + 10 G = 2 × 700

= ₹ 1400

(61-65) :

61. (1) S.P of HCL Laptops

= 32000 + 4000 = ₹ 36000

and profit % = $\left(\dfrac{4000}{32000} \times 100 \right)\%$

= 12.5%

62. (3) C.P of Apple Laptop

= $\dfrac{33000}{110} \times 100$ = ₹ 30,000

$\therefore$ C.P of Dell Laptop

= $30000 \times \dfrac{3}{5}$ = ₹ 18,000

Now, Profit = 22000 – 18000 = ₹ 4,000

$\therefore$ Profit % = $\left(\dfrac{4000}{18000} \times 100 \right)\%$ = $22\dfrac{2}{9}\%$

63. (5) Profit of Lenovo Laptop

= 3500 + 500 = ₹ 4,000

$\therefore$ Profit % = $\left(\dfrac{4000}{28000} \times 100 \right)\%$ = $14\dfrac{2}{7}\%$

and SP = 28000 + 4000 = ₹ 32,000

64. (3) Profit earned on Acer Laptop

= $53000 \times \dfrac{14}{100}$ = ₹ 7,420

65. (2) S.P of HP Laptop

= 35000 + 3500 = ₹ 38,500

$\therefore$ Required ratio = 35000 : 38500

= 10 : 11

66. (3) P do the work for 3 days + 3 days = 6 days, Q work for 3 days and R work for 3 days.

$\dfrac{6}{18} + \dfrac{3}{12} + \dfrac{3}{R} = 1$

$\dfrac{3}{R} = 1 - \dfrac{1}{3} - \dfrac{1}{4}$

Three days work of R = $\dfrac{3}{R} = \dfrac{12-4-3}{12}$

$\therefore$ P : Q : R = $\dfrac{6}{18} : \dfrac{3}{12} : \dfrac{5}{12}$

Ratio of share = 12 : 9 : 15 = 4 : 3 : 5

Share of R = $\dfrac{5}{12} \times 24000$ = ₹ 10,000

67. (2) Labelled price = ₹ 1600

As, the reduction price is 10% lower than the labelled price,

Reduced price = 90% of 1600 = ₹ 1440

Now, the price at which Priti bought it is 20% lower than the reduced price, the selling price = 84% of 1440 = ₹ 1152

68. (2) $\dfrac{Ram}{Sohan} = \dfrac{100}{90}$ also $\dfrac{Sohan}{Sunil} = \dfrac{100}{75}$

then, $\dfrac{Ram}{Sunil} = \dfrac{40}{27}$

So in a race of 40m, Ram beats Sunil by 13m

In a race of 100m, Ram beats Sunil by 32.5 m

So, Sunil cover 32.5 m in 10 sec.

Speed of Sunil = 3.25 m/sec

Perimeter of circle = 3.25 × 100 = 325 m

Area = $\dfrac{325^2}{4\pi}$ = 8401 (approximately)

69. (5) $d = \dfrac{t_1 - t_2}{60} \times \dfrac{s_1 s_2}{(s_2 - s_1)}$

$= \dfrac{14 - 8}{60} \times \dfrac{45 \times 50}{50 - 45}$

$= \dfrac{6}{60} \times \dfrac{45 \times 50}{5} = 45$ km

70. (4) Total balls initially in the bag = 4 + 5 + 6
= 15

There are 4 red balls

If on first draw, red balls comes out then 6 more red balls are added

∴ The probability of red balls on first draw

$= \dfrac{4}{15}$

Due to withdraw of one red balls now there are only 3 red balls is left.

Also, there is no replacement done so, total number of balls becomes 14.

After adding 6 new red balls total number of balls becomes = 14 + 6 = 20

And total number of red balls = 3 + 6 = 9

Now, if on the 2nd draw, red balls is drawn, then,

∴ The probability of red balls on 2nd draw

$= \dfrac{9}{20}$

As there is no replacement done so, total number of balls becomes 19

And total number of red balls = 9 – 1 = 8

Now, if on the 3rd draw, red balls is drawn then

∴ The probability of red balls on 3rd draw

$= \dfrac{8}{19}$

∴ Final probability if on both the draws red

balls is drawn $= \dfrac{4}{15} \times \dfrac{9}{20} \times \dfrac{8}{19} = \dfrac{24}{475}$

Hence, $\dfrac{24}{475}$ is the probability of all the 3 balls drawn are of red ball.

(71-75) :

71. (2) I. $5x^2 - 87x - 378 = 0$
$\Rightarrow 5x^2 - 105x + 18x - 378 = 0$
$\Rightarrow 5x(x - 21) + 18(x - 21) = 0$
$\Rightarrow (5x + 18)(x - 21) = 0$

$\Rightarrow x = -\dfrac{18}{5}, 21$

II. $3y^2 - 49y + 200 = 0$
$\Rightarrow 3x^2 - 24y - 25y + 200 = 0$
$\Rightarrow 3y(y - 8) - 25(y - 8) = 0$
$\Rightarrow (3y - 25)(y - 8) = 0$

$\Rightarrow y = \dfrac{25}{3}, 8$

Clearly, $x < y$

72. (2) I. $(x + 1)(x + 18) = -66$
$\Rightarrow x^2 + 18x + x + 18 + 66 = 0$
$\Rightarrow x^2 + 19x + 84 = 0$
$\Rightarrow x^2 + 12x + 7x + 84 = 0$
$\Rightarrow x(x + 12) + 7(x + 12) = 0$
$\Rightarrow (x + 7)(x + 12) = 0$
$\Rightarrow x = -7, -12$

II. $\sqrt{(y - 3)(y - 27)} = 9$
$\Rightarrow (y - 3)(y - 27) = 81$
$\Rightarrow y^2 - 27y - 3y + 81 - 81 = 0$
$\Rightarrow y^2 - 30y = 0$
$\Rightarrow y(y - 30) = 0$
$\Rightarrow y = 0, 30$

Clearly, $x < y$

73. (1) I. $\dfrac{15}{x} + \dfrac{16}{y} = 1$ .... (i)

II. $\dfrac{3}{x} - \dfrac{7}{y} = 5$ .... (ii)

equation (i) – (ii) × 5, we let

$\dfrac{15}{x} + \dfrac{16}{y} - \dfrac{15}{x} + \dfrac{35}{y} = 1 - 25$

$\Rightarrow \dfrac{51}{y} = -24 \Rightarrow y = \dfrac{-51}{24}$

Put the value of y in equation (i), we get

$\dfrac{15}{x} + \dfrac{16}{-51} \times 24 = 1$

$\Rightarrow \dfrac{15}{x} = 1 + \dfrac{128}{17} \Rightarrow \dfrac{15}{x} = \dfrac{145}{17}$

$\Rightarrow x = \dfrac{15 \times 17}{145} = \dfrac{255}{145}$

Clearly, $x > y$

74. (2) I. $17x^2 + 48x = 9$
$\Rightarrow 17x^2 + 48x - 9 = 0$
$\Rightarrow 17x^2 + 51x - 3x - 9 = 0$
$\Rightarrow 17x(x + 3) - 3(x + 3) = 0$
$\Rightarrow (17x - 3)(x + 3) = 0$

$\Rightarrow x = \dfrac{3}{17}, -3$

II. $13y^2 + 12 = 32y$

$\Rightarrow 13y^2 - 32y + 12 = 0$

$\Rightarrow 13y^2 - 26y - 6y + 12 = 0$

$\Rightarrow 13y(y - 2) - 6(y - 2) = 0$

$\Rightarrow (13y - 6)(y - 2) = 0$

$\Rightarrow y = \dfrac{6}{13}, 2$

Clearly, $x < y$

75. (5) I. $4x + 7y = 209$ .... (i)

II. $12x - 14y = -38$ .... (ii)

equation (i) × 2 + (ii), we get

$8x + 14y + 12x - 14y = 418 - 38$

$\Rightarrow 20x = 380 \Rightarrow x = 19$

Now, put the value of x in equation (ii)

$12 \times 19 - 14y = -38$

$\Rightarrow 14y = 228 + 38$

$\Rightarrow 14y = 266 \Rightarrow y = \dfrac{266}{14} = 19$

∴ Clearly, $x = y$

(76-80):

76. (5) Income of Company A in 2006

$= ₹\left(\dfrac{100}{110} \times 37.5\right)$ crores

$= ₹ 34.09$ crores

Let the expenditure in 2006 be ₹ x crores.

∴ $20 = \dfrac{34.09 - x}{x} \times 100$

or, $0.2x = 34.09 - x$

or, $1.2x = 34.09$

or, $x = \dfrac{34.09}{1.2}$

$= ₹ 28.41$ crores

77. (4) Profit/loss percentage of companies:

Company B:

$\dfrac{42.5 - 32.5}{32.5} \times 100 = 30.77\%$ (profit)

Company C:

$\dfrac{35 - 45}{45} \times 100 = 22.2\%$ (loss)

Company F :

$\dfrac{32.5 - 25}{25} \times 100 = 30\%$ (profit)

Company A :

$\dfrac{37.5 - 27.5}{27.5} \times 100 = 36.36\%$ (profit)

78. (5) Total expenditure of Companies C and D together

$= 45 + 40$

$= ₹ 85$ crores

Total income of Companies C and D = 35 + 50

$= ₹ 85$ crore

79. (2) Expenditure of Company G in 2006

$= \dfrac{45 \times 100}{120}$

$= ₹ \dfrac{75}{2}$

$= ₹ 37.5$ crores

∴ $10 = \dfrac{\text{Income} - 37.5}{37.5} \times 100$

Income $= ₹ 41.25$ crores

80. (3) Total income

$= 37.5 + 42.5 + 35 + 50 + 40 + 32.5 + 50$

$= ₹ 287.5$ crores

Total expenditure

$= 27.5 + 32.5 + 45 + 40 + 45 + 25 + 45$

$= ₹ 260$ crores

∴ Profit % $= \dfrac{287.5 - 260}{260} \times 100$

$= 10.57$

IBPS RRB OFFICER PHASE - I - 157 (ANSWER KEY)

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

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- Whatapp with Mock Test No. and Question No. at 7053606571 for any of te doubts. Join the group and you may also share your suggestions and experience of sunday Mock Test.

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003