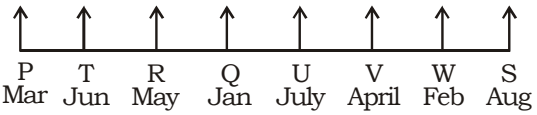
IBPS RRB OFFICER PHASE - I - 152 (SOLUTION)

REASONING

(1–5) :



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

(6-10) :

6. (2)

7. (1) **From I :** Suppose the marks obtained is $(10x + y)$ a, two-digit number. {Note that the possibility of getting 100 marks is ruled out because in case of 100 marks interchanges of digits will not decrease 100 by 81.}

Now, $10x + y - (10y + x) = 81$

Therefore $x - y = \frac{81}{9} = 9$

Thus, the unit's digit will be 9 less than the digit at ten's place. Hence, the only such digit is 90. Hence, marks obtained by Kishore = 90

From II: There are several such numbers sum of digits of which and the difference of the digits are same, ie 10, 20, 30, 40, 50, 60, 70, 80 and 90.

8. (3) **From I:** We get 1st day of the next month is Saturday. This implies that last day of the month under consideration is Friday. And thus we get :

Date	Ist	8th	15th	22nd	29th	31st
Day	Fri	Fri	Fri	Fri	Fri	Sun

Hence, the total number of days in the month = 29.

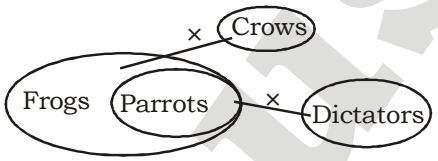
From II: With the information of the last day of the month and the first day of the month (as mentioned in question part), we can find out the number of days in the month by the same method as discussed above, i.e, 31 days.

9. (3)

10. (4) It is not mentioned that Nidhi is towards left of Ranjan or right of Ranjan.

(11-15):

11. (4)

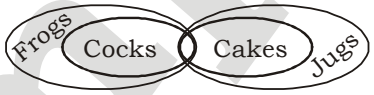


Conclusions :

I. –
II. ✓
III ✓
IV. –

Either I or IV

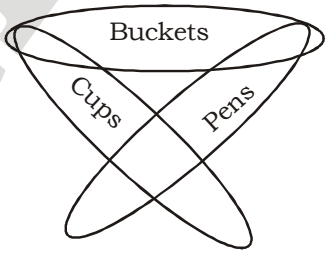
12. (5)



Conclusions :

I. ✓ II. ✓
III. ✓ IV. ✓

13. (4)



Conclusions :

I. –
II. –
III –
IV. –

Either III or IV

14. (4)

Conclusions :

I. –
II. –
III –
IV. –

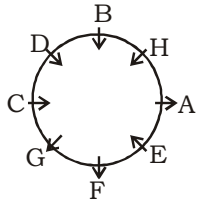
Either I or IV
Either II or III

15. (2)

Conclusions :

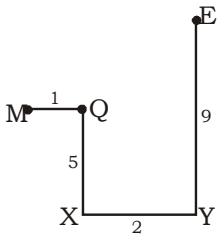
I. ✓ II. ✓
III. ✓ IV. –

(16 – 20) :



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

(21–22) :



21. (5) 3 km 22. (4)

(23-27) :

23. (5) $T < P \leq U$, $L > U \leq K$, $P \geq R$
I. $R \leq P \leq U \leq K$
$K \geq R \rightarrow$ True
II. $R \leq P \leq U < L$
$L > R \rightarrow$ True
Both conclusions I and II are true.

24. (3) $H = I \leq R$, $M \geq R < S$
$\Rightarrow I \leq R \leq M$
I. $M = I \rightarrow$ Doubt
II. $M > I \rightarrow$ Doubt
Either conclusion I or II is true.

25. (2) $D > H \geq N$, $S > I \leq H$
I. $S > I \leq H \geq N$
$N \leq S \rightarrow$ False
II. $I \leq H < D$
$I < D \rightarrow$ True
Only conclusion II is true.

26. (2) $P \leq O < I$, $P > Y > W$
I. $I > O \geq P > Y$
$Y \leq I \rightarrow$ False
II. $O \geq P > Y > W$
$O > W \rightarrow$ True
Only conclusion II is true.

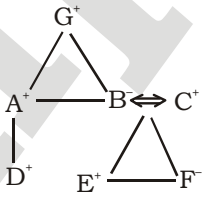
27. (5) $A \geq B > C > F$, $Z < C \leq D < E$
I. $A \geq B > C > Z$
$A > Z \rightarrow$ True
II. $F \leq C \leq D < E$
$F < E \rightarrow$ True
Both conclusion I and II are true.

(28-32) :

Day	Play
Monday	Dream
Tuesday	Rail Gadi
Wednesday	Hind
Thursday	Bay
Friday	Saajan
Saturday	Romeo
Sunday	Travellers

28. (3) 29. (1) 30. (2)
31. (3) 32. (5)

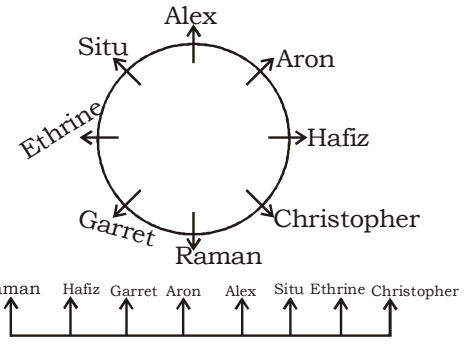
(33–34) :



Three fathers (G, A, C), two brothers (A and E), two sisters (B and F), one husband (C), one wife (B), two brothers-in-law (A and C), two daughters (B and F), three sons (A, D and E), three cousins (D, E and F), two nephews (D and E), one grandfather (G) and one niece (F)

33. (2) 34. (1) 35. (3)

(36–40) :



36. (1) 37. (2) 38. (4)
39. (3) 40. (2)

Maths

(41-45) :

41. (2) $\sqrt[3]{?} = (756 \times 67) \div 804$

$(?)^{\frac{1}{3}} = 50652 \div 804$

$\Rightarrow (?)^{\frac{1}{3}} = 63$

$\therefore ? = (63)^3 = 250047$

42. (4) $(73425 - 33267 - 22418 - 17650) \times \sqrt{11025} = ?$
$= (90 \times 105) = 9450$

43. (1) 14.2% of $5500 + 15.6\%$ of $? = 1795$

$\Rightarrow \frac{14.2}{100} \times 5500 + \frac{15.6}{100} \times ? = 1795$

$\Rightarrow 781 + \frac{15.6}{100} \times ? = 1795$

$\Rightarrow \frac{15.6}{100} \times ? = 1795 - 781$

$\Rightarrow ? = \frac{1014 \times 100}{15.6} = 6500$

44. (1) $475 + \frac{64}{100} \times 950 = 900 + ?$
$\Rightarrow 475 + 608 - 900 = ?$
$\Rightarrow ? = 1083 - 900 = 183$

45. (1) $(0.09)^2 \div (0.0081) \times (0.3)^2 = (0.3)^{?-3}$
$\Rightarrow (0.3)^4 \div (0.3)^4 \times (0.3)^2 = (0.3)^{?-3}$
$\Rightarrow (0.3)^2 = (0.3)^{?-3}$
$\Rightarrow ? - 3 = 2$
$\therefore ? = 2 + 3 = 5$

(46-50) :

46. (3) Total no of student in
B. A = 42 + 50 + 40 + 45 + 48 + 52 = 277
MBA = 50 + 45 + 42 + 52 + 60 = 301
BSC = 38 + 46 + 54 + 50 + 48 + 54 = 290
M.Com = 58 + 45 + 46 + 40 + 55 + 42 = 286
$\therefore$ Required answer is B.A

47. (3) Total no. of students in MCA department
$= 48 + 58 + 58 + 46 + 44 + 54 = 308$

$\therefore$ Required $\% = \left(\frac{308}{290} \times 100\right)\%$

$= 106.20\% \approx 106\%$

48. (5) Required ratio $= (48 + 58) : (46 + 40)$
$= 106 : 96 = 53 : 48$

49. (5) Required average $= \frac{277}{6} = 46.16 \approx 46$

50. (4) Required $\% = \left(\frac{55}{40} \times 100\right)\% = 137.5\%$

(51-55) :

51. (2) The pattern of the number series is :
$732 - 3 = 729 = 9^3$
$1244 - 732 = 512 = 8^3$
$1587 - 1244 = 343 = 7^3$
$1803 - 1587 = 216 = 6^3$
$1928 - 1803 = 125 = 5^3$
$\therefore ? = 1928 + 4^3 = 1928 + 64 =$ **1992**

52. (4) The pattern of the number series is :
$16 \times 1.5 = 24$
$24 \times 2.5 =$ **60**
$60 \times 3.5 = 210$
$210 \times 4.5 = 945$

53. (1) The pattern of the number series is :
$(45030 \div 5) - 6 = 9000$
$(9000 \div 5) - 5 = 1795$
$(1795 \div 5) - 4 = 355$
$(355 \div 5) - 3 = 68$
$(68 \div 5) - 2 = 13.6 - 2 =$ **11.6**

54. (1) The pattern of the number series is :
$5 \times 1 + 1 \times 7 = 12$
$12 \times 2 + 2 \times 6 = 36$
$36 \times 3 + 3 \times 5 = 123$
$123 \times 4 + 4 \times 4 = 492 + 16 =$ **508**
$508 \times 5 + 5 \times 3 = 2540 + 15 = 2555$

55. (4) The pattern of the number series is :
$8 \times 0.5 + 7 = 4 + 7 = 11$
$11 \times 1 + 6 = 17$
$17 \times 1.5 + 5 = 25.5 + 5 =$ **30.5**
$30.5 \times 2 + 4 = 61 + 4 = 65$

56. (4) Simple interest

$= \frac{35500 \times 15 \times 2}{100} =$ ₹ 10650

Principal for another investment
$= 35500 + 10650 =$ ₹ 46150

$\therefore$ C.I. $= 46150 \left[\left(1 + \frac{20}{100}\right)^3 - 1\right]$

$= 46150 \left[\left(\frac{6}{5}\right)^3 - 1\right]$

$= 46150 \left(\frac{216 - 125}{125}\right)$

$= \frac{46150 \times 91}{125}$

$= 33597.20$

Total interest earned
$=$ ₹ $(10650 + 33597.20) =$ ₹ 44247.20

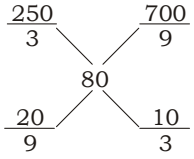
57. (1) Percentage of milk in the first mixture

$= \frac{5}{6} \times 100 = \frac{250}{3}\%$

Percentage of milk in second mixture

$= \frac{7}{9} \times 100 = \frac{700}{9}\%$

Using Alligation method,



So, required ratio $= \frac{20}{9} : \frac{10}{3} = 2 : 3$

58. (1) Let the two parts be ₹ x and ₹ $(1301 - x)$

$$x\left(1+\frac{4}{100}\right)^7 = (1301 - x) \times \left(1 + \frac{4}{100}\right)^9$$

$$\Rightarrow \frac{x}{(1301-x)} = \left(1+\frac{4}{100}\right)^2$$

$\Rightarrow 625x = 676(1301 - x)$

$\Rightarrow 1301\ x = 676 \times 1301$

$\therefore x =$ ₹ 676

So, the two parts are ₹ 676 and $(1301 - 676) =$ ₹ 625

59. (3) $\left(\frac{1}{20}+\frac{1}{30}-\frac{1}{t}\right) \times 60 = -1$

'–1' is taken because the work is negative. T is the time taken by the waste pipe to empty the tank alone. We will $t = 10$

So, capacity $= 10 \times 8 = 80$ litres

60. (4) Ratio of profit between Sunil, Manish and Bhupesh

$= 30000 \times 24 : 120000 \times 18 : 180000 \times 12$

$= 1 : 3 : 3$

$\therefore$ Share of Manish in the profit

$$= \frac{210000}{7} \times 3 = ₹\ 90{,}000$$

(61-65):

61. (5) Required% $= \left(\frac{48}{40} \times 100\right)\% = 120\%$

62. (5) Required ratio $= (61 + 54) : (54 + 48)$
$= 115 : 102$

63. (5) Required average price per product

$$= \frac{\left(\begin{array}{c}43\times16+44\times15+45\times14.5+48\times16\\+55\times18+55\times15\end{array}\right)}{43+44+45+48+55+55} \times 1000$$

$$= \left(\frac{688+660+652.5+768+990+825}{290}\right) \times 1000$$

$$= \left(\frac{4583.5}{290}\right) \times 1000 = ₹\ 15{,}805.17$$

64. (1) Required difference
$= (60 \times 75) \times 1000 - (44 \times 15) \times 1000$
$= 4500 - 660$
$= 4500000 - 660000 =$ ₹ 3840000
$=$ ₹ 38.4 lakh

65. (5) Total amount $= 57 \times 5.6 \times 1000 + 45 \times 50 \times 1000 = 319200 + 2250000$
$=$ ₹ 2281900 $=$ ₹ 22.819 Lakh

(66-70):

66. (3) From statement I,
Circumference of circle
$= \pi \times$ diameter $= 21\pi$ cm

From statement II,

$$\pi r^2 = 346.5 \Rightarrow \frac{22}{7} \times r^2 = 346.5$$

$$\Rightarrow r^2 = \frac{346.5 \times 7}{22} = 110.25$$

$\Rightarrow r = \sqrt{110.25} = 10.5$

$\therefore$ Circumference $= 2\pi r = 21\pi$ cm

67. (4) Data in both the statements are inadequate.

68. (1) From statement I,

$$\text{Required number of pieces} = \frac{900}{80} \approx 11$$

Data in statement II are inadequate.

69. (5) From statement I and II,
Selling price of wrist watch

$$= ₹\left(6400 \times \frac{131.25}{100}\right) = ₹\ 8400$$

70. (5) From statement I and II,
Numbers = 15, 51, 24, 42, 33, 60
Number divisible by 7 = 42

71. (4) $\frac{3}{5}$% of the total distance
$= 40 \times 3 + 60 \times 4.5 = 120 + 270 = 390$ km

$\therefore$ total distance $= \frac{390}{3} \times 5 = 650$ km

Remaining distance $= 650 - 390 = 260$ km

$\therefore$ Speed $= \frac{260}{4} = 65$ km/hr

72. (1) Let the two–digit no. be $10x + y$.

Now, $\frac{1}{4}(10x + y) - \frac{1}{5}(10x + y) = 4$

or, $50x + 5y - 40x - 4y = 80$

or, $10x + y = 80$

73. (3) Let the labelled price be ₹ 100
Reduced price $= (100 - 20)\%$ of $100 =$ ₹ 80
10% additional discount $= 10\%$ of $80 =$ ₹ 8
Net CP $= 80 - 8 =$ ₹ 72

Therefore, Raju's cost price $= \frac{1400}{100} \times 72$
$=$ ₹ 1008

Quicker Method:

$$-20 - 10 + \frac{20 \times 10}{100} = 28\% \text{ discount}$$

$\therefore$ CP $= 72\%$ of $1400 =$ ₹ 1008

(74-75):

74. (3) There are 9 women and 5 men. A committee of 12, consising of at least 5 women, can be formed by choosing:
(i) 5 women and 7 men
(ii) 6 women and 6 men
(iii) 7 women and 5 men
(iv) 8 women and 4 men
(v) 9 women and 3 men
Total number of ways of forrzing the committee = ${}^9C_5 \times {}^8C_7 + {}^9C_6 \times {}^8C_6 + {}^9C_7 \times {}^8C_5 + {}^9C_8 \times {}^8C_4 + {}^9C_9 \times {}^8C_3$
$= 126 \times 8 + 84 \times 28 + 36 \times 56 + 9 \times 70 + 1 \times 56 = 6062$

75. (4) Women are in majority in (iii), (iv) and (v) cases as discussed in question 134.
$\therefore$ Total number of such commitees
$= {}^9C_7 \times {}^8C_5 + {}^9C_8 \times {}^8C_4 + {}^9C_9 \times {}^8C_3$
$= 36 \times 56 + 9 \times 70 + 1 \times 56 = 2702$

(76-80):

76. (1) $4x + 3y = 40$ ..... (i) $\times 6$
$6x - 5y = 22$ ..... (ii) $\times 4$
$24x + 18y = 240$

$$+24x - 20y = +88$$
$$- \quad + \quad -$$
$$38y = 152$$

$\therefore\ y = \frac{152}{38} = 4$

Putting the value of y in equation (i), we have
$4x + 3 \times 4 = 40$
or, $4x = 40 - 12 = 28$
$\therefore\ x = 7$
Hence, $x > y$

77. (2) $2x^2 - 4x - \sqrt{13}\,x + 2\sqrt{13} = 0$ .... (i)
or, $2x(x-2) - \sqrt{13}\,(x-2) = 0$
or, $(x-2)\,(2x - \sqrt{13}\,) = 0$
$\therefore\ x = 2, \frac{\sqrt{13}}{2}$

Note that $\frac{\sqrt{13}}{2} = 1.802775638$

$10y^2 - 18y - 5\sqrt{13}\,y + 9\sqrt{13} = 0$ .... (ii)
or, $2y(5y-9) - \sqrt{13}\,(5y-9) = 0$
or, $(2y - \sqrt{13}\,)\,(5y-9) = 0$
$\therefore\ y = \frac{9}{5}, \frac{\sqrt{13}}{2}$
Hence, $x \geq y$

78. (5) $6x^2 + 17 - 3x^2 - 20 = 0$ ....(i)
or, $3x^2 = 3$
$\therefore\ x \pm 1$
$5y^2 - 12 - 9y^2 + 16 = 0$ ....(ii)
or, $4y^2 = 4$
$\therefore\ y \pm 1$
Hence, the relationship between x and y can't be established

79. (2) $13x + 17 = 134$ ....(i)
$\therefore\ x = \frac{117}{13} = 9$
$(361)^{1/2}\,y^2 - 270 = 1269$ ....(ii)
or, $19y^2 = 1269 + 270 = 1539$
$y^2 = \frac{1539}{19} = 81$
$\therefore\ y \pm 9$
Hence, $x \geq y$

80. (4) $64x^2 = 256$ ....(i)
or, $x^2 = 4 \quad \therefore\ x = \pm 2$
$14y^3 - 12y^3 = 16$ ....(ii)
or, $2y^3 = 16$
$\therefore\ y^3 = 8 \quad \therefore\ y = 2$
Hence, $x \leq y$

IBPS RRB OFFICER PHASE - I - 152 (ANSWER KEY)

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

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