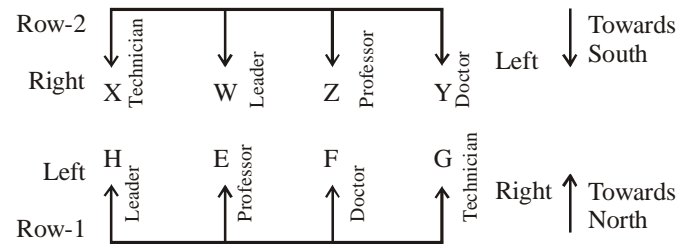


IBPS PO PRELIMINARY GRAND TEST :
IPP-170506 - HINTS AND SOLUTIONS

ANSWER KEY

1	(3)	21	(2)	41	(1)	61	(1)	81	(1)
2	(1)	22	(4)	42	(5)	62	(5)	82	(2)
3	(2)	23	(3)	43	(4)	63	(2)	83	(5)
4	(4)	24	(5)	44	(4)	64	(4)	84	(4)
5	(5)	25	(4)	45	(5)	65	(1)	85	(5)
6	(1)	26	(1)	46	(5)	66	(4)	86	(5)
7	(2)	27	(2)	47	(5)	67	(4)	87	(3)
8	(1)	28	(5)	48	(5)	68	(4)	88	(2)
9	(4)	29	(1)	49	(4)	69	(3)	89	(3)
10	(2)	30	(3)	50	(3)	70	(1)	90	(1)
11	(1)	31	(5)	51	(3)	71	(5)	91	(2)
12	(5)	32	(4)	52	(3)	72	(2)	92	(2)
13	(2)	33	(4)	53	(5)	73	(5)	93	(5)
14	(2)	34	(2)	54	(5)	74	(1)	94	(2)
15	(4)	35	(2)	55	(5)	75	(1)	95	(1)
16	(3)	36	(4)	56	(4)	76	(5)	96	(1)
17	(4)	37	(5)	57	(1)	77	(1)	97	(4)
18	(3)	38	(4)	58	(2)	78	(3)	98	(4)
19	(4)	39	(4)	59	(1)	79	(2)	99	(4)
20	(1)	40	(2)	60	(4)	80	(4)	100	(1)

36-40.

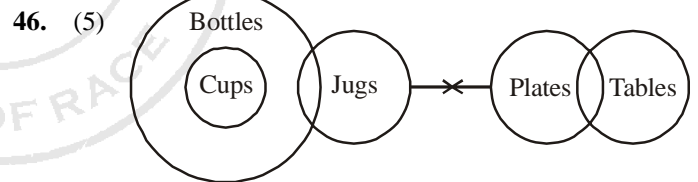


36. (4) 37. (5) 38. (4) 39. (4) 40. (2)

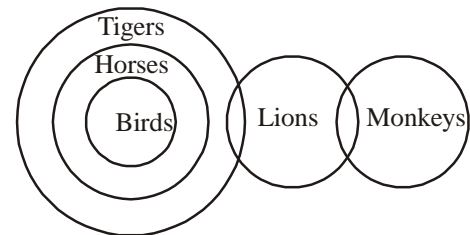
41-45.

Month	City
January	Mumbai
February	Kolkata
March	Chennai
April	Bengaluru
May	Delhi
June	Bhopal
July	Cochin

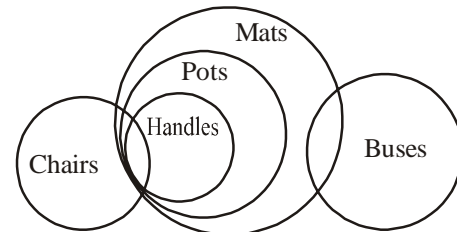
41. (1) 42. (5) 43. (4) 44. (4) 45. (5)



47. (5)

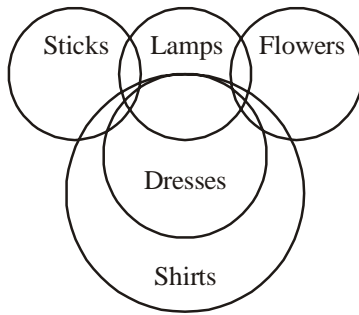


48. (5)

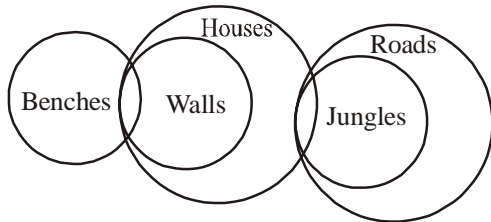


31. (5) All the rest are plants while 'Farm' is a place.
 32. (4) Since only Q reached after R and S. So the last person to reach can't be determined.
 33. (4) On arranging the letters of 'PROJECTING' according to the given conditions, we get
 E I O C G J N P R T.
 In this rearrangement, the fifth letter from the left is 'G'.
 34. (2) $40 \div 360 \times 24 - 4 + 18$
 $\Rightarrow 40 + 360 \div 24 \times 4 - 18$
 $\Rightarrow 40 + \frac{360}{24} \times 4 - 18$
 $\Rightarrow 40 + 60 - 18 \Rightarrow 82$
 35. (2) All the rest are stationery.

49. (4)



50. (3)



51. (3) **Input** : 89 bind 32 goal house 62 12 joy

Step I : 12 89 bind 32 goal house 62 joy

Step II : 12 joy 89 bind 32 goal house 62

Step III : 12 joy 32 89 bind goal house 62

Step IV : 12 joy 32 house 89 bind goal 62

Step V : 12 joy 32 house 62 89 bind goal

Step VI : 12 joy 32 house 62 goal 89 bind

52. (3) **Step II** : 15 yes 62 51 48 talk now gone

Step III : 15 yes 48 62 51 talk now gone

Step IV : 15 yes 48 talk 62 51 now gone

Step V : 15 yes 48 talk 51 62 now gone

Step VI : 15 yes 48 talk 51 now 62 gone

53. (5) **Step III** : 21 victory 30 joint 64 47 all gone

Step IV : 21 victory 30 joint 47 64 all gone

Step V : 21 victory 30 joint 47 gone 64 all

54. (5) **Input** : win 92 task 73 59 house range 34

Step I : 34 win 92 task 73 59 house range

Step II : 34 win 59 92 task 73 house range

Step III : 34 win 59 task 92 73 house range

Step IV : 34 win 59 task 73 92 house range

55. (5) **Input** : save 21 43 78 them early 36 for

Step I : 21 save 43 78 them early 36 for

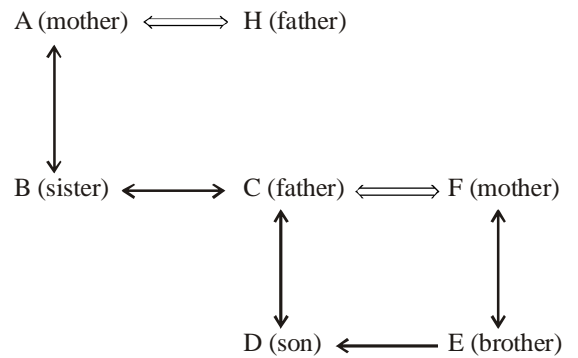
Step II : 21 them save 43 78 early 36 for

Step III : 21 them 36 save 43 78 early for

Step IV : 21 them 36 save 43 for 78 early

56. (4) 57. (1)

58-60.



G is the daughter of either B or C.

58. (2) 59. (1) 60. (4)
 61. (1) 62. (5) 63. (2) 64. (4) 65. (1)
 66. (4) Required per cent

$$= \frac{\left(8 \times \frac{70}{100} + \frac{9 \times 60}{100}\right)}{8+9} \times 100$$

$$= \frac{560 + 540}{17} = \frac{1100}{17} = 64.7\% \approx 65\%$$

67. (4) Suppose Aarti's present age = x years and Sunaina's present age = y years Then, five years from now,

$$y + 5 = \frac{3}{4}(x + 5)$$

$$4(y + 5) = 3(x + 5)$$

$$3x - 4y = 5 \quad \dots(1)$$

and five years ago,

$$\frac{y - 5}{x - 5} = \frac{2}{3}$$

$$2x - 3y = -5 \quad \dots(2)$$

On solving eq. (1) and (2)
 x = 35 years

68. (4) suppose B alone takes to complete the work in x days and A alone takes to complete the work in (x + 3) days.

$$\text{Now, } \frac{1}{x+3} + \frac{1}{x} = \frac{3}{20}$$

$$20(2x + 3) = 3x(x + 3)$$

$$40x + 60 = 3x^2 + 9x$$

$$3x^2 - 31x - 60 = 0$$

On solving, x = 12, -1.67

Hence, B alone takes to complete the work in 12 days.

69. (3) A1 + A2 = A3 + 20° ... (1)
 A4 = A3 + 70° ... (2)
 and A1 + A2 + A3 + A4 = 360°
 From eq. (1) and (2),
 A3 + 20° + A3 + A3 + 70° = 360°
 3(A3) = 270°



$A_3 = 90^\circ$
 Now from eq. (1),
 $A_1 + A_2 = 90^\circ + 20^\circ = 110^\circ$

70. (1) Suppose invested amount in scheme A = ₹ x and invested amount in scheme B = ₹ (22400 - x)

Then, $\frac{x \times 8 \times 2}{100} + \frac{(22400 - x) \times 6 \times 2}{100} = 3280$

$\Rightarrow 4x + 268800 = 328000$
 $\Rightarrow 4x = 59200$
 $\Rightarrow x = 14800$

Now, required ratio

$= \frac{14800}{22400 - 14800} = \frac{14800}{7600} = 37 : 19$

71. (5) Suppose speed of a boat = x kmph

Then, $x + 3 = \frac{3.9}{13} \times 60$

$x + 3 = 18$
 $\Rightarrow x = 15 \text{ kmph}$

Now, required distance = $(15 - 3) \times \frac{28}{60} = \frac{12 \times 28}{60} = 5.6$

72. (2) Side of square = $\sqrt{49} = 7 \text{ cm}$.

Then, breadth of a rectangle = $\frac{5}{7} \times 7\sqrt{2} = 5\sqrt{2}$

And length of a rectangle = $2 \times 5\sqrt{2} = 10\sqrt{2}$

Now, the perimeter of the rectangle = 2 (length + breadth)

$= 2(10\sqrt{2} + 5\sqrt{2}) = 2 \times 15\sqrt{2} = 30\sqrt{2}$

73. (5) A invests for a year = $16000 \times 12 = 192000$

B invests for a year = $26000 \times 4 + (26000 - 6000) \times 8 = 264000$

and C invests for a year = $36000 \times 4 + (36000 - 12000) \times 8 = 336000$

Now, at the end of a year, respective ratio in the profit = $192000 : 264000 : 336000$
 $= 8 : 11 : 14$

Hence, the share of

$A = \frac{8}{33} \times 21450 = ₹ 5200$

74. (1) Suppose length of the train = x cm and length of the platform = y m

Then, $x + y = 75 \times 24 \times \frac{5}{18}$

$x + y = 500$... (1)

and $x = (75 - 3) \times 11 \times \frac{5}{18} = 72 \times 11 \times \frac{5}{18}$

$x = 220$

Now, from eq. (1), $y = 500 - 220 = 280 \text{ m}$

75. (1) Suppose monthly salary of Piyush is ₹ x

$\frac{x \times [100 - (20 + 10 + 10)]}{100} \times \frac{(100 - 30)}{100} = \frac{274932}{12}$

then, $x \times \frac{60}{100} \times \frac{70}{100} = 22911$

$\Rightarrow x = \frac{22911 \times 100 \times 100}{60 \times 70}$

$\therefore x = ₹ 54550$

Now, he gave the amount to his son and daughter together

$= \frac{(10 + 10)}{100} \times 54550 = \frac{20}{100} \times 54550$

$= ₹ 10,910$

76. (5) By observing the state 'C' has the production of rice increased continuously over the years.

77. (1) 2002 $\Rightarrow 1500 + 1250 + 1160 + 1520 + 1440 + 1600 = 8470$

2003 $\Rightarrow 1480 + 1190 + 1190 + 1500 + 1350 + 1620 = 8330$

2004 $\Rightarrow 1620 + 1400 + 1310 + 1480 + 1430 + 1510 = 8750$

2005 $\Rightarrow 1700 + 1450 + 1300 + 1590 + 1280 + 1610 = 8930$

2006 $\Rightarrow 1540 + 1320 + 1340 + 1630 + 1380 + 1580 = 8790$

2007 $\Rightarrow 1650 + 1380 + 1360 + 1580 + 1400 + 1590 = 8960$.

78. (3) By observing 'C' produce the low quantity of rice.

79. (2) State D

$= \frac{1520 + 1500 + 1480 + 1590 + 1630 + 1580}{6} = 1550$

State F

$= \frac{1600 + 1620 + 1510 + 1610 + 1580 + 1590}{6} = 1585$

Ratio = $1550 : 1585 = 310 : 317$.

80. (4) $\frac{1300}{1700} \times 100 = 76.47\% \cong 76\%$

81. (1) Required difference = $[25 + 30 - (10 + 20)]\%$ of 40000

$= 25\%$ of 40000 = $40000 \times \frac{25}{100} = 10000$

82. (2) Total cars sold in country A

$= 40000 \times \frac{25}{100} \times \frac{80}{100} = 8000$

Total cars sold in country B

$= 40000 \times \frac{30}{100} \times \frac{50}{100} = 6000$

Total cars sold in country (A + B)

$= 8000 + 6000 = 14000$

$$\therefore \text{Required percentage} = \frac{14000}{40000} \times 100 = 35\%$$

83. (5) Total unsold cars in country C

$$= 40000 \times \frac{10}{100} \times \frac{30}{100} = 1200$$

Total unsold cars in country E

$$= 40000 \times \frac{15}{100} \times \frac{40}{100} = 2400$$

Total unsold cars in country C and E

$$= 1200 + 2400 = 3600$$

84. (4) Total sale of cars sold in country D

$$= 40000 \times \frac{20}{100} \times \frac{75}{100} \times 5.5 \text{ lakhs} = \text{₹} 33000 \text{ lakhs}$$

Total sale of cars sold in country E

$$= 40000 \times \frac{15}{100} \times \frac{60}{100} \times 7 \text{ lakhs} = \text{₹} 25200 \text{ lakhs}$$

$$\therefore \text{Required ratio} = 33000 : 25200 = 55 : 42$$

85. (5) Total cars sold in country C

$$= 40000 \times \frac{10}{100} \times \frac{70}{100} = 2800$$

Cost price of sold cars = ₹ 2800 × 4.5 lakh = ₹ 12600 lakh

Selling price of sold cars = ₹ 2800 × 6 lakh = ₹ 16800 lakh

$$\text{Percent profit} = \frac{16800 - 12600}{12600} \times 100 = 33\frac{1}{3}\%$$

86. (5)
$$\begin{array}{ccccccccc} 6 & 7 & 16 & 51 & 208 & 1045 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ \times 1+1 & \times 2+2 & \times 3+3 & \times 4+4 & \times 5+5 \end{array}$$

87. (3)
$$\begin{array}{ccccccccc} 1 & 9 & 36 & 100 & 225 & 441 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +2^3 & +3^3 & +4^3 & +5^3 & +6^3 \end{array}$$

88. (2)
$$\begin{array}{ccccccccc} 51 & 52 & 61 & 86 & 135 & 216 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +1^2 & +3^2 & +5^2 & +7^2 & +9^2 \end{array}$$

89. (3)
$$\begin{array}{ccccccccc} 453 & 466 & 505 & 622 & 973 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +13 & +39 & +117 & +351 \\ \times 3 & \times 3 & \times 3 \end{array}$$

90. (1)
$$\begin{array}{ccccccccc} 10 & 110 & 1210 & 13310 & 146410 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ \times 11 & \times 11 & \times 11 & \times 11 \end{array}$$

91. (2) Initial radius = r

$$\text{Increased radius} = \frac{150}{100} \times r = \frac{3}{2}r$$

$$\begin{aligned} \% \text{ increase} &= \frac{2\pi \left(\frac{3}{2}\right)^2 r - 2\pi r}{2\pi r} \times 100 = \frac{2\pi r \left(\frac{9}{4} - 1\right)}{2\pi r} \times 100 \\ &= \frac{1}{2} \times 100 = 50\% \end{aligned}$$

Bag only have mango flavoured candies. Probability of taking out mango flavoured candies = $\frac{1}{1} = 1$.

92. (2)

93. (5)

94. (2) Total distance = 90 + 90 + 90 = 270 km

$$\text{Total time} = \frac{90}{30} + \frac{90}{45} + \frac{90}{90} = 3 + 2 + 1 = 6 \text{ hrs}$$

$$\text{Average speed} = \frac{270}{6} = 45 \text{ km/hr.}$$

95. (1) 1 to 15 number divisible by item 2 (or) 3 are 10.

$$\text{Probability} = \frac{10}{15} = \frac{2}{3}$$

96. (1) ? × 0.4 = 416.7 + 799.5

$$? = \frac{1216.2}{0.4} = 3040.5$$

97. (4) $\frac{5}{8} \times \frac{12}{13} \times \frac{39}{53} \times ? = 202.5$

$$? = \frac{202.5 \times 8 \times 13 \times 53}{5 \times 12 \times 39} = 477$$

98. (4) $\frac{25}{100} \times 1248 + \frac{20}{100} \times ? = \frac{9848}{4}$

$$\Rightarrow 312 + \frac{?}{5} = 2462 \Rightarrow \frac{?}{5} = 2150$$

$$\therefore ? = 10750$$

99. (4) 6561 - 2401 = 2² × 4 × 65

$$2^? = \frac{4160}{4 \times 65} = 16$$

$$\Rightarrow 2^? = 2^4$$

$$\therefore ? = 4$$

100. (1) 1212.59 - ? = 687.74

$$? = 1212.59 - 687.74 = 524.85$$