IBPS PO Preliminary Grand Test –IPP-180924
HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

1.(2) Refer to the last few lines of second paragraph of the passage "the MPC has said monetary policy can be effective only when private investment has revived, the banking sector's health is restored". Hence only sentence (iii) is correct.

2.(3) Refer to the first few lines of first paragraph " The Reserve Bank of India's decision to keep the policy interest rate unchanged, and reaffirm its "neutral" policy stance, clearly indicates that policymakers at the central bank are singularly focussed on their primary remit of ensuring price stability while supporting economic growth".

3.(1) The tone of the author here is descriptive as the author presents the detail report of the news.

4.(2) Refer to the last lines of first paragraph "And the elephant in the room, in the MPC's opinion, is the real prospect of inflationary spillovers from the rising risk of fiscal slippages caused by farm loan waivers". Hence sentence (b) is true.

5.(4) The author describes about the RBI's monetary policy decision of unchanging policy rates. Hence sentence (d) is the correct choice.

6.(5) All of the given statements are true in context of the passage.

7.(4) **Benign** means benevolent or favourable. Hence it has same meaning as **favourable**.
Previse means predict.

8.(2) **Pertinent** means relevant or applicable to a particular matter; apposite. Hence it has same meaning as **appropriate**.
Straggle means an untidy or irregularly arranged mass or group.

9.(3) **Undergird** means provide support or a firm basis for. Hence it has opposite meaning as **undermine**.
Fractious means easily irritated or annoyed.
Inure means cause to accept or become hardened to.
Construe means make sense of.
Enervate means weaken mentally or morally.

10.(1) **Bottlenecks** means blockage/impediment. Hence it has opposite meaning as **aid**.
Adamant means refusing to be persuaded or to change one's mind.
Admonish means scold.
Hapless means unfortunate and deserving pity.

11-15. The correct sequence is **EDACFB.**

11.(5)   12.(2)
13.(1)   14.(2)   15.(5)
16.(2)   17.(4)
18.(4)   19.(3)   20.(5)
21.(1)   22.(3)
23.(2)   24.(5)   25.(1)

26.(2) The correct preposition should be used. Note that it is patience 'with' people and not 'to' people.

27.(4) The same friend is both a singer and a scientist. So it should be 'who is a singer and scientist'.

28.(3) Incorrect preposition is used. We abstain 'from' something.

29.(4) 'Have' must replace 'has' as 'best players' are referred to.

30.(2) Charges are 'levelled' against a person, not 'levied'.

31.(2) Series is +9, −18, +27, −36, +47
So, 25 − 36 = −11.

32.(5) $6 \times 1 + 1, 7 \times 3 + 3, 24 \times 5 + 5, 125 \times 7 + 7, 882 \times 9 + 9$
So, $24 \times 5 + 5 = 125$.

33.(3) Series is $2 + (1^2 + 1^3), 4 + (2^2 + 2^3), 16 + (3^2 + 3^3), 52 + (4^2 + 4^3)$
So, $16 + (3^2 + 3^3) = 52$.

34.(1) Series is $\times 1 + 1, \times 1.5 + 1.5, \times 2 + 2, \times 2.5 + 2.5, \times 3 + 3$
So, $30 \times 3 + 3 = 93$.

35.(1) Series is $1^3 + 1, 2^3 − 1, 3^3 + 1, 4^3 − 1, 5^3 + 1$
So, $125 + 1 = 126$.

36.(4) Number of Indian author books in given libraries
= 26250 + 30250 + 27500
= 84000

Required Average $= \dfrac{84000}{3} = 28000$

37.(2) Number of Indian author books in library A in 2017
= 26250 – 20% of 26250
= 21000
Number of Indian author books in library B in 2017
= 15000 + 10% of 15000
= 16500
Required difference = 21000 – 16500 = 4500

38.(3) Number of foreign author books in library C = 19250

Number of Indian author books in library F = 27500

Required percentage = $\frac{27500 - 19250}{27500} \times 100 = 30\%$

39.(1) Number of Indian author book in libraries C and D

= 30250 + 20250 = 50500

Number of foreign author books in libraries E and F

= 29250 + 24750 = 54000

Required Ratio = $\frac{50500}{54000} = \frac{101}{108} = 101 : 108$

40.(2) Difference between number of Indian and foreign author books:

For Library A = 3750

For Library B = 18750

For Library C = 11000

For Library D = 9000

For Library E = 20250

For Library F = 2750

Hence, maximum difference is for the Library E.

41.(4) Required percentage $= \frac{100 - 50}{50} \times 100 = 100\%$.

42.(4) Average production of TATA $= \frac{60 + 90 + 50 + 100 + 80}{5}$

$= \frac{380}{5} = 76$ lakh

Mahindra $= \frac{50 + 70 + 70 + 80 + 100}{5} = \frac{370}{5} = 74$ lakh

Suzuki $= \frac{70 + 80 + 90 + 70 + 70}{5} = \frac{380}{5} = 76$ lakh

43.(2) Percentage rise or fall in the production of Mahindra in different years

For year 2010 $= \frac{70 - 50}{50} \times 100 = 40\%$ (maximum)

For year 2011 $= \frac{70 - 70}{70} \times 100 = 0$

For year 2012 $= \frac{80 - 70}{70} \times 100 = \frac{100}{7} = 14\frac{2}{7}\%$

For year 2013 $= \frac{100 - 80}{80} \times 100 = 25\%$

44.(2) The percentage of production of company Suzuki to production of company Mahindra

For year 2009 $= \frac{70}{50} \times 100$

For year 2010 $= \frac{80}{70} \times 100$

For year 2011 $= \frac{90}{70} \times 100$

For year 2012 $= \frac{70}{80} \times 100$

For year 2013 $= \frac{70}{100} \times 100$

It is clear that for year 2009 it will be maximum

45.(1) Required Ratio $= \frac{50 + 100 + 80}{70 + 80 + 100} = \frac{230}{250} = \frac{23}{25}$

46.(3) Let initial quantity of solution be 100 ml and therefore, alcohol= 40 ml

Let y ml of alcohol is added to 1st solution

For first jar,

$\frac{40 + y}{100 + y} = \frac{1}{2}$

$\therefore 80 + 2y = 100 + y$

$\Rightarrow y = 20$ ml

For second jar, let y ml of solution is replaced with y ml of alcohol

$\frac{40 - \frac{2}{5}y + y}{60 - \frac{3}{5}y} = \frac{1}{1}$

$\therefore y = \frac{100}{6}$

Hence, required percentage $= \frac{20 - \frac{100}{6}}{\frac{100}{6}} \times 100 = 20\%$

47.(4) Let CP of pen be Rs. x

And SP be Rs. y

Initially at loss of 20%

$\frac{20}{100} = \frac{x - y}{x}$

$\Rightarrow \frac{1}{5}x = x - y$

$\Rightarrow y = \frac{4}{5}x$ ... (i)

Now, if y would change to Rs. $(y + 12)$ then profit becomes 30%

$\Rightarrow \frac{30}{100} = \frac{y + 12 - x}{x} \Rightarrow \frac{3}{10} = \frac{\frac{4}{5}x + 12 - x}{x}$

$\Rightarrow x =$ Rs. 24 ... (ii)

$y =$ Rs. $\frac{96}{5}$ or Rs. 19.2 ...(iii)

% profit now if y becomes Rs. $(y + 4.8)$

% profit $= \frac{SP - CP}{CP} \times 100$

$= \frac{(y + 4.8) - 24}{24} \times 100$

$=$ Rs. $\frac{(19.2 + 4.8) - 24}{24} \times 100$

$= 0\%$

So no profit no loss

48.(3) After taking out 100 litres of milk and adding some amount of water.

Ratio of milk and water $= \frac{900}{100} = 9 : 1$.

After taking out 200 *l* of mixtures, then the quantity of milk $= 800 \times \frac{9}{9 + 1} = 720$ *l*.

The new ratio $= \frac{720}{280} = \frac{18}{7} = 18 : 7$

After taking out 400 *ℓ* of mixture the rest amount of mixture will be 600 *ℓ*.

Quantity of pure milk $= 600 \times \frac{18}{25} = 24 \times 18 = 432$ *ℓ*

The amount of pure milk will be 432 litres.

49.(3) Part of the tank that will be filled when all the pipes are open in 3 min

$= \frac{1}{20} + \frac{1}{30} - \frac{1}{15}$

$= \frac{3 + 2 - 4}{60} = \frac{1}{60}$

$\Rightarrow \left[\left(1 - \frac{1}{20} - \frac{1}{30}\right) = \frac{55}{60}\right]$

part of the tank will be filled in $= 55 \times 3 = 165$ min.

Remaining part $= 1 - \frac{55}{60} = \frac{1}{12}$

Tap A fills $\frac{1}{20}$ part in 1 min

Remaining part $= \frac{1}{12} - \frac{1}{30} = \frac{1}{30}$

$\frac{1}{30}$ th part is filled by B in 1 min.

$\therefore$ Total time $= (165 + 1 + 1) = 167$ min.

50.(2) Internal length = 86 cm

So, external length = (86 + 2 + 2) = 90 cm

Internal breadth = 46 cm

External breadth = (46 + 2 + 2) = 50 cm

Internal height = 38 cm

External height = (38 + 2) = 40 cm

Outer surface area = 2 × 90 × 40 + 2 × 50 × 40 + 90 × 50

= 7200 + 4000 + 4500

= 15700 cm^2

= 1.57 m^2

Cost of painting the outer surface at Rs. 10

per m^2 = 1.57 × 10 = Rs. 15.7

51.(4) ? = 150% of 30 + 25% of 140 = 45 + 35 = 80.

52.(2) $? \approx \sqrt[4]{0.0128 \div 6 \times 972} = \sqrt[4]{(0.0064 \times 2) \times (324 \times 3) \div 6}$

$= \sqrt{0.08 \times 18} = \sqrt{1.44} = 1.2$

53.(1) $?^2 \approx 1445 \times 80 \div 100 = (17^2 \times 5) \times (4^2 \times 5) \div (2^2 \times 5^2)$

Or $? \approx 17 \times 4 \div 2 = 34$

54.(5) $?^3 \approx (75)^2 - (25)^2 - (30)^2 = 5625 - 625 - 900 = 4100$

Or $? \approx 16$

55.(3) $? = \frac{18}{5} \times \frac{15}{4} \times \frac{11}{9} - \frac{32}{5} \div \frac{8}{3} = \frac{33}{2} - \frac{12}{5}$

$= 16.5 - 2.4 = 14.1 = 14$ (approx.)

56.(5) Bob's present age $= x$

Abby's present age $= (x + 8)$ years

$\frac{x+4}{x+12} = \frac{4}{5}$

$x = 28$ years

57.(4) C's investment $= x$

Ratio $= (17600 \times 12) : (12800 \times 12) : x \times 8$

$= 26400 : 19200 : x$

$\therefore 11000 = \frac{x \times 36080}{26400 + 19200 + x}$

$x = 20,000$ Rs.

58.(2) Distance covered in 2 hours $= 62 \times 2 = 124$ km

Distance remaining $= (827 - 124) = 703$ km

Required time $= \frac{703}{62 + 59}$

$= \frac{703}{121}$ hour

$= 5$ hrs 48 min

Hence they will meet $12 : 48$ pm.

59.(2) Let Leena had a sum of money $= x$ Rs.

Sum invested by her in scheme $x = \frac{5x}{11}$

Sum invested by her in scheme $y = \frac{6x}{11}$

$\therefore \frac{5x}{11} \times \frac{6 \times 18}{100} - \frac{6x}{11}\left[\left(1 + \frac{20}{100}\right)^2 - 1\right] = 1518$

$x = 6050$ Rs.

$\therefore$ Required amount $= \frac{6050 \times 5}{11}$

$= 2750$ Rs.

60.(1) Let radius $= r$ cm

Height $= h$ cm

$\frac{2\pi rh + 2\pi r^2}{2\pi rh} = \frac{5}{4}$

$\frac{h+r}{h} = \frac{5}{4}$

$r = \frac{h}{4}$ ....(i)

$2\pi rh = 1232$

$h^2 = \frac{1232 \times 7 \times 4}{2 \times 22} = 784$

$h = 28$ cm

61.(5) Let $\sqrt{x} = a$

$63a^2 - 94a + 35 = 0$

$63a^2 - 49a - 45a + 35 = 0$

$7a(9a - 7) - 5(9a - 7) = 0$

$a = \frac{5}{7}, \frac{7}{9}$

$x = \frac{25}{49}, \frac{49}{81}$

Let $\sqrt{y} = b$

$32b^2 - 28b - 24b + 21 = 0$

$4b(8b - 7) - 3(8b - 7) = 0$

$b = \frac{3}{4}, \frac{7}{8}$

$y = \frac{9}{16}, \frac{49}{64}$

No relation can be established.

62.(1) $x^2 - 7\sqrt{3}x - 5\sqrt{5}x + 35\sqrt{15} = 0$

$x(x - 7\sqrt{3}) - 5\sqrt{5}(x - 7\sqrt{3}) = 0$

$x = 5\sqrt{5}, 7\sqrt{3}$

$y^2 - 2\sqrt{5}y - 3\sqrt{5}y + 30 = 0$

$y(y - 2\sqrt{5}) - 3\sqrt{5}(y - 2\sqrt{5}) = 0$

$y = 2\sqrt{5}, 3\sqrt{5}$

$x > y$

63.(3) $14x^2 + 21x - 10x - 15 = 0$

$7x(2x + 3) - 5(2x + 3) = 0$

$x = \frac{-3}{2}, \frac{5}{7}$

$20y^2 - 15y - 16y + 12 = 0$

$5y(4y - 3) - 4(4y - 3) = 0$

$y = \frac{4}{5}, \frac{3}{4}$

$y > x$

64.(1) $5x + 4y = 41$

$4x - 5y = 40$

Eq. (i) × 4, eq. (ii) × 5

$20x + 16y = 164$

$20x - 25y = 200$

$41y = -36, y = \frac{-36}{41}, x = \frac{365}{41}, x > y$

65.(3) $x^{\frac{5}{2}} = (18^3)^{\frac{5}{2}}$

$x = 18^3$

$y^{\frac{3}{2}} = (19^3)^{\frac{3}{2}}$

$y = 19^3$

$x < y$

66.(3) I. R ≥ W = H (False)
II. R ≥ W = H (False)

67.(1) I. D = K < T (True)
II. K < T > M (False)

68.(2) I. F ≤ N ≥ R (False)
II. B < F ≤ N (True)

69.(4) I. K ≤ M > W (False)
II. H > W < M (False)

70.(5) I. D < M = T (True)
II. R ≥ T = M (True)

71-75. From the given condition, the one, who likes a prime number, sits third from left end of the row, so either the one who likes 37 or who likes 17 sits 3rd from the left end.

From the conditions, The one, who likes a prime number and sits third from left end of the row and F are immediate neighbor of each other. B, sits 4th to the right of F. F likes a number which is perfect square but not a palindrome number. H sits 2nd to the left of B.B, the one who likes a palindrome number which is divisible by both 11 and 5. Palindrome number is a number that remains same when its digits are reversed so the number is 55. The one, who sits 2nd right of the one, who likes 36 numbers likes the palindrome number which is divisible by 11. We have 4 cases from the above conditions.
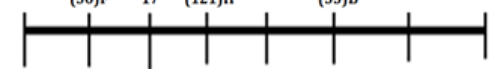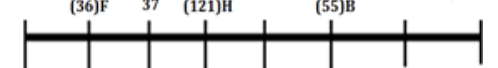
Case-I

(17) F(36) H(121) B(55)
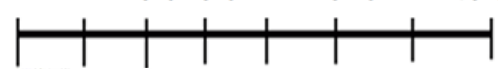
Case-II

37 F(36) H(121) B(55)

Case-III

(36)F 17 (121)H (55)B

Case-IV

(36)F 37 (121)H (55)B

But from the given condition, B sits at extreme end of the row, so case III and case IV will be eliminated). Only case I and case II will be continued.

From the rest conditions, The number which is liked by A is double of the number which is liked by C. A and C are immediate neighbors of each other. The one who likes 60 sits 5th left of the one, who likes 121. G, likes the number, which is half of the number, which is liked by F. G sits left of both B and H. D sits right of F.
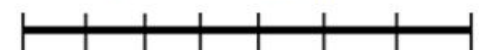
Case-I

A(60)   C(30)   E(17)   F(36)   G(18)   H(121)   D(37)   B(55)

Case-II

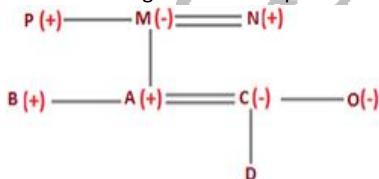A(60)   C(30)   E(37)   F(36)   G(18)   H(121)   D(17)   B(55)

From the given condition, D does not like the prime number which is less than 35 so case II will be eliminated. Case- I will be final answer.

A(60)   C(30)   E(17)   F(36)   G(18)   H(121)   D(37)   B(55)

71.(4)   72.(1)
73.(2)   74.(2)   75.(3)

76-80.   i. First after using the conditions given in the puzzle, we draw blood relation diagram from the puzzle-

P (+) —— M (-) == N(+)

B (+) —— A (+) == C (-) —— O(-)

D

ii. It is given that The person whose phone cover is Golden colour lives on the fifth floor. D's grandmother's phone cover is Golden. The person who has Samsung phone lives on the top floor. The person who has Lenovo phone lives on the seventh floor. C's father-in-law has Pink phone cover and lives on the sixth floor. The person who has Red phone cover has also Motorola phone and lives on the third floor. The person who has Black phone cover lives on the first floor.

Floor	Person	Mobile	Phone cover Colour
8		Samsung	
7		Lenovo	
6	N		Pink
5	M		Golden
4			
3		Motorola	Red
2			
1			Black

iii. It is given that the person whose phone cover is of orange colour lives between C and D's grandmother. D's uncle's phone cover is Blue. The person who has Redmi phone is a brother of A. O's phone cover is Silver and N's brother-in-law has phone cover of purple colour. A's child lives on an even numbered floor. The one who has One plus phone lives on even-numbered floor. The person who has Apple phone lives on an even-numbered floor. The person who has Golden phone cover does not has Micromax mobile phone so the final arrangement is-

Floor	Person	Mobile	Phone cover Colour
8	P	Samsung	Purple
7	O	Lenovo	Silver
6	N	Apple/One plus	Pink
5	M	Vivo	Golden
4	D	Apple/One plus	Orange
3	C	Motorola	Red
2	B	Redmi	Blue
1	A	Micromax	Black

P (+) —— M (-) == N(+)

B (+) —— A (+) == C (-) —— O(-)

D
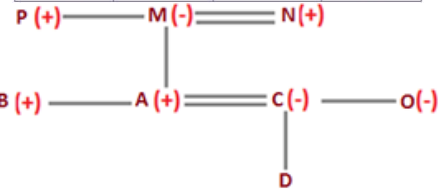
76.(5)   77.(4)
78.(3)   79.(4)   80.(5)

81-85.

DAY	PERSON	COLOUR
Monday	B	Green
Tuesday	D	Blue
Wednesday	A	Grey
Thursday	G	Black
Friday	C	Orange
Saturday	E	Pink
Sunday	F	White

81.(2)   82.(4)
83.(1)   84.(3)   85.(2)

86-90.

Word	Code
Follow	Za
Always	La
Elders	Sa
We	Na
Be	Da
The	Fa
Younger	Wa
Traffic	Ka/ga
Rules	Ga/ka

86.(3)   87.(3)
88.(5)   89.(1)   90.(1)

91-95.   From the given conditions, there are two person sits between the person who want to see Vashisht Baths and the one who is immediate above the one, who is planning to go on December. The person, who want to see Beas Kund is planning to go on May and sits immediate above the person, who wants to see Vashisht Baths. The person, who is planning to go on December, is not immediate above the person, who is planning to go on May. Only One person sits between the person, who wants to see Solang Valley and the person, who wants to see Vashisht Baths, who is planning to go on July.

Case-1

Person	Months	Locations
	May	Beas Kund
	July	Vashisht Baths
		Solang Valley
	December	

Case-2

Person	Months	Locations
		Solang Valley
	May	Beas Kund
	July	Vashisht Baths
	December	

From the given conditions, neither V nor T is planning to go on December and May. There are three persons sit

between the one who is planning to go on June and V. V is planning to go on September and he does not want to see Solang Valley. Hence there can be two possibilities in case-1.

Case-1

(i)

Person	Months	Locations
	May	Beas Kund
	July	Vashisht Baths
V	September	
		Solang Valley
	December	
	June	

(ii)

Person	Months	Locations
	May	Beas Kund
	July	Vashisht Baths
	June	
		Solang Valley
	December	
V	September	

Case-2

Person	Months	Locations
	June	Solang Valley
	May	Beas Kund
	July	Vashisht Baths
V	September	
	December	

From the given conditions, the person who wants to see Hadimba Temple is planning to go on June. Hence case-2 is eliminated. U wants to see Rohtang Pass and he is not planning to go on August and September. Two persons sit between U and T. T does not want to see that location, which is immediate below the person, who is planning to go on July.

Case-1

(i)

Person	Months	Locations
	May	Beas Kund
T	July	Vashisht Baths
V	September	
		Solang Valley
U		Rohtang Pass
	December	
	June	Hadimba Temple

(ii)

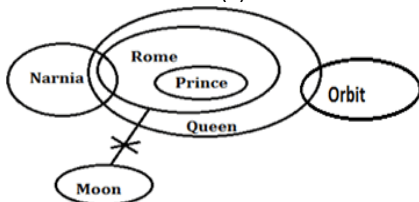| Person	Months	Locations
	May	Beas Kund
T	July	Vashisht Baths
	June	Hadimba Temple
		Solang Valley
U		Rohtang Pass
	December	
V	September	

From the given conditions, the person, who wants to see Rohtang Pass is above the person, who wants to see Old Manali (but not immediate above). Hence case-(i) is eliminated and case-(ii) is continued. Four persons sit between R and S. Q sits below R and one person sits between Q and U. U is not planning to go on August and September. Hence Final arrangement are-

Person	Months	Locations
R	May	Beas Kund
T	July	Vashisht Baths
Q	June	Hadimba Temple
P	August	Solang Valley
U	February	Rohtang Pass
S	December	Adventure Activities
V	September	Old Manali

91.(2) 92.(4)

93.(1) 94.(4) 95.(5)

96.(3)
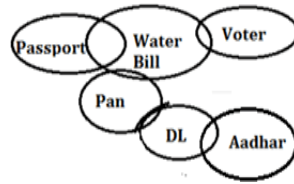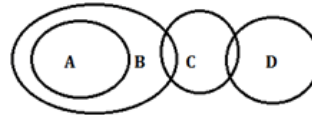

97.(3)

98.(3)

99-100.   G > D > F > C > E > A > B
            38   35

99.(5)   100.(2)