IBPS PO SPECIAL PRELIMS - 371 (SOLUTION)

REASONING

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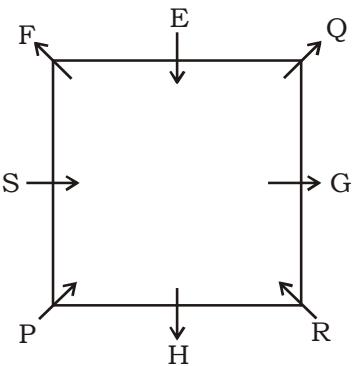
1. (5)   2. (3)   3. (4)
4. (2)   5. (4)

(6-7) :

6. (1) **Given statements**
   $M > A > B = Q < P < J \le Y$ ....(i)
   $Z > A > X$ ......(ii)
   From (i),
   I. $B < Y \to$ True
   Combining (i) and (ii) statements
   $X > A > B = Q < P < J \le Y$
   II. $X \ge Y \to$ False
   Hence, Only conclusion I is true.

7. (4) Combining (i) and (ii) statements
   $Z > A > B = Q$
   I. $Z = Q \to$ False
   II. $Z > Q \to$ True
   Hence, Only conclusion II is true.

8. (1) **Given statements**
   $G < R = A \le S$ ......(i)
   $T > R$ .....(ii)
   From (i),
   I. $G < S \to$ True
   Combining (i) and (ii) statements
   $T > R = A \le S$
   II. $S > T \to$ False
   Hence, Only conclusion I is true.

9. (3) **Given statements**
   $P = U < M < K \le I > N$.......(i)
   $D \ge P$ ......(ii)
   $I > C$ .....(iii)
   Combining (i) and (iii) statements
   $M < K \le I > C$

I. $M < C \to$ False
From (i),
II. $N > U \to$ False
Hence, Neither conclusion I or II is true.

10. (5) **Given statements**
    $B \ge P > V < R = Q$ ......(i)
    $B < N \le M$ ......(ii)
    $Q \le F \le E$ .....(iii)
    Combining all statements
    $M \ge N > B \ge P > V < R = Q \le F \le E$
    I. $M > V \to$ True
    II. $E > V \to$ True
    Hence, Both conclusion I and II is true.

11. (2) Twelfth to the left of the twenty second from the left end is (22–12=) 10th from the left, i.e @.

12. (4) F $\overset{+3}{\underset{-2}{\curvearrowright}}$ D 4 © $\overset{+3}{\underset{-2}{\curvearrowright}}$ D 1 T $\overset{+3}{\underset{-2}{\curvearrowright}}$ V 8

    H $\overset{-2}{\underset{+4}{\curvearrowright}}$ R E 1 $\overset{+3}{\underset{-2}{\curvearrowright}}$ 3 U
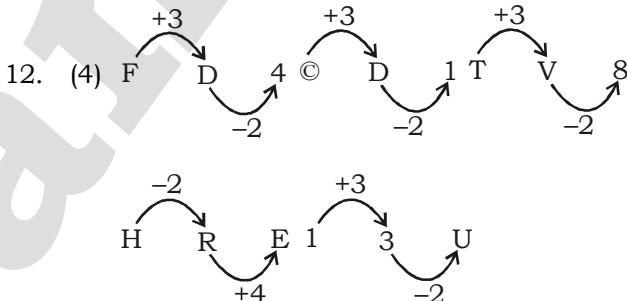
13. (1) New arrangement becomes:
    F % D A © I B @ R H E * N $ U W P T 9 V # Z Q.
    Hence sixteenth from the right end is @.

14. (2)
15. (2)
16. (3)   17. (4)

(18 – 20) :
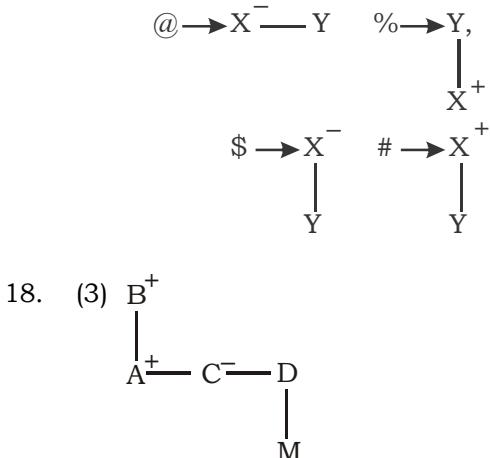
@ → X ‾—— Y   % → Y,
                    |
                    X+
$ → X ‾   # → X+
    | |
    Y   Y

18. (3) B+
        |
    A+— C‾— D
            |
            M

19. (3)

$$M^+$$
$$|$$
$$N^+ \Longleftrightarrow S^-$$
$$|$$
$$Q^- \!\!-\!\! R$$

20. (4)

$$Q^-$$
$$|$$
$$O^- \!\!-\!\! P^+ \!\!-\!\! R^+$$
$$|$$
$$S$$

(21–25) :

N^- (Mumbai), J^- (Uttar Pradesh), P^- (Kolkata), O^+ (Odisha), K^+ (Delhi), M^- (Haryana), L^- (Goa), I^- (Punjab)
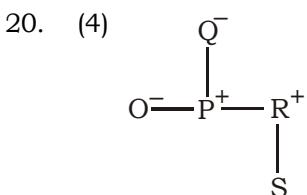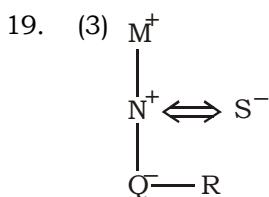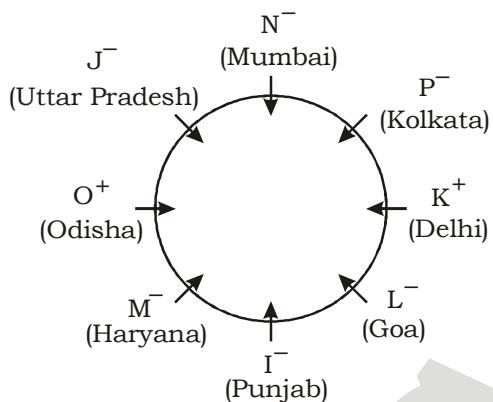
21.	(3)	22.	(2)	23.	(1)
24.	(5)	25.	(4)		

(26–30) :

Aadam Sahil Eban Parth Nadir Kabir Hashim Aadam

March June May Jan April Feb Aug March

26.	(4)	27.	(1)	28.	(1)
29.	(5)	30.	(2)		

31. (3)

I. False   II. False
III. True
Hence, Only III follows.

32. (1)

I. True   II. True
III. True
Hence, All follow.

33. (3)

I. False   II. True
III. True
Hence, Only II and III follow.

34. (2)

I. False   II. True
III. True
Hence, Only II and III follow.

35. (1)
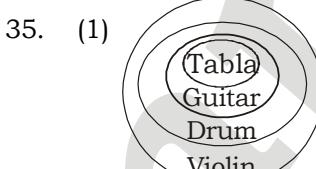
I. True   II. True
III. True
Hence, All follow

Maths

36. (2) 1 minute work of (P+Q) both

$$= \left(\frac{1}{24} + \frac{1}{32} \right) = \frac{4+3}{8 \times 12} = \frac{7}{96} \text{ minutes}$$

i.e tank will full in $\frac{96}{7}$ minutes.

Let Q is closed after x minutes

$\therefore$ Rest work $= \left(1 - \frac{7x}{96} \right)$ done by P

P $\rightarrow$ 24 minutes $\rightarrow$ 1

$\therefore \left(1 - \frac{7x}{96} \right) \rightarrow 24 \left(1 - \frac{7x}{96} \right)$

$\therefore 24 \left(1 - \frac{7x}{96} \right) = (18 - x)$

$\Rightarrow 24 - \frac{7x}{4} = 18 - x$

$\Rightarrow 6 = \frac{3x}{4}$

$\Rightarrow x = 8 \text{ minutes}$

37. (3) Required time to empty the tank

$$= \frac{1}{8} - \frac{1}{10} = \frac{5-4}{40} = \frac{1}{40}$$

i.e. 40 hours will be required.

38. (1) (M + N)'s 1 hour work = $\frac{1}{10}$

(N + Q)'s 1 hour work = $\frac{1}{15}$

(Q + M)'s 1 hour work = $\frac{1}{12}$

∴ (M + N + Q)'s 1 hour work

$$= \frac{1}{2\left[\frac{1}{10}+\frac{1}{15}+\frac{1}{12}\right]} = \frac{1}{2}\left[\frac{6+4+5}{60}\right] = \frac{1}{8}$$

∴ (M + N + Q) can do the required work in 8 hours.

39. (3) Required ways = 3! × 7! × 5! × 6!

40. (1) Total ways = $^8C_3 \times {}^5C_2 \times 5!$

$$= \frac{8 \times 7 \times 6}{3 \times 2} \times \frac{5 \times 4}{2} \times 120 = 67,200$$

41. (1) According to question

$$11200 = \frac{70,000 \times r \times 2}{100}$$

r = 8%

Share of Animesh = $\frac{11}{25} \times 11200 = 4928$

42. (3) Required ratio

$$= \frac{\frac{11}{25} \times 70 + \frac{7}{20} \times 65 + \frac{2}{5} \times 80}{\frac{1}{2} \times 60 + \frac{7}{10} \times 40 + \frac{3}{5} \times 55}$$

$$= \frac{30.8 + 22.75 + 32}{30 + 28 + 33} = \frac{85.55}{91}$$

= 1711 : 1820

43. (3) Average of investment made by Animesh in scheme P and R together is

$$= \frac{\frac{11}{25} \times 70 + \frac{1}{2} \times 60}{2} = \frac{60.8}{2} = 30.8$$

Average of investment made in scheme T and U by Rishi

$$= \frac{\frac{7}{10} \times 40 + \frac{3}{5} \times 55}{2} = \frac{28 + 33}{2}$$

$$= \frac{61}{2} = 30.5$$

Required% = $\frac{30.4}{30.5} \times 100 \approx 100\%$

44. (3) Total investment by Animesh in scheme Q, R and U = $65000 \times \frac{7}{20}$ +

$60000 \times \frac{1}{2} + 55000 \times \frac{2}{5}$

= 22750 + 30000 + 22000 = 74750

Total investment by Rishi in scheme P, S and T

$= 70000 \times \frac{14}{25} + 80000 \times \frac{3}{5} + 40000 \times$

$\frac{7}{10}$ = 39200 + 48000 + 28000 = 115200

Required% = $\frac{115200 - 74750}{115200}$

$\simeq$ 35% Approx

45. (1) Required ratio

$$= \frac{\frac{11}{25} \times 70 + \frac{7}{20} \times 65 + \frac{1}{2} \times 60 + \frac{2}{5} \times 80}{\frac{14}{25} \times 70 + \frac{13}{20} \times 65 + \frac{1}{2} \times 60 + \frac{3}{5} \times 80}$$

$$= \frac{115.55}{159.45} = \frac{2311}{3189}$$

46. (5) I. $6x^2 + 77x + 121 = 0$

⇒ $6x^2 + 66x + 11x + 121 = 0$

⇒ $6x(x + 11) + 11(x + 11) = 0$

⇒ $(6x + 11)(x + 11) = 0$

⇒ $x = -\frac{11}{6}, -11$

II. $y^2 + 9y - 22 = 0$

⇒ $y^2 + 11y - 2y - 22 = 0$

⇒ $y(y + 11) - 2(y + 11) = 0$

⇒ $(y - 2)(y + 11) = 0$

⇒ $y = 2, -11$

Hence, no relationship can be established between x and y.

47. (1) I. $x = \sqrt{625} = +25$

    II. $y = \sqrt{676} = +26$

    So, $y > x$

48. (1) I. $x^2 + 4x + 4 = 0$

    $\Rightarrow x = -2, 2$

    II. $y^2 - 8y + 16 = 0$

    $\Rightarrow y = 4, 4$

    $\therefore y > x$

49. (4) I. $x^2 - (16)^2 = (23)^2 - 56$

    $\Rightarrow x^2 - 256 = 529 - 56$

    $\therefore x = \sqrt{729} = \pm 27$

    II. $y^{1/3} - 55 + 376 = (18)^2$

    $\Rightarrow y^{1/3} = 324 + 55 - 376$

    $\therefore y = (3)^3 = 27$

    $\therefore y \geq x$

50. (4) I. $x^2 - 19x + 84 = 0$

    $\Rightarrow x^2 - 7x - 12x + 84 = 0$

    $\Rightarrow (x - 7)(x - 12) = 0$

    $\therefore x = 7, 12$

    II. $y^2 - 25y + 156 = 0$

    $\Rightarrow y^2 - 13y - 12y + 156 = 0$

    $\Rightarrow (y - 13)(y - 12) = 0$

    $\Rightarrow y = 13, 12$

    $\therefore x \leq y$

51. (2) Average of 5 numbers = 308

    Sum of 5 numbers = 308 × 5 = 1540

    Sum of first 2 numbers

    = 482.5 × 2 = 965

    Sum of last 2 numbers

    = 258.5 × 2 = 517

    Third number = 1540 – 965 – 517 = 58

52. (4) Suppose, the monthly salary of Sophia = x

    Then, total expenses

    = 25% of x + 15% of x + 35% of x

    = 75% of x = $\dfrac{75x}{100}$

    Thus, savings = $x - \dfrac{75x}{100} = \dfrac{25x}{100}$

    Now, according to the question,

    = $\dfrac{25x}{100} = 9050$

    or, $x = \dfrac{9050 \times 100}{25} = 36200$

    So, annual income = 36200 × 12

    = Rs. 434400

53. (1) Ratio of lotus and marigold = 3 : 2

    Number of lotus = 3x

    And, number of marigold = 2x

    Average number of flowers = $\dfrac{3x + 2x}{2}$

    = 180

    5x = 360 or x = 72

    Number of marigold = 2x = 72 × 2 = 144

54. (5) Number of employees in A, B, C = 3x, 2x, 4x

    After increment number of employees

    in A, B, C respectively = $3x\left(1 + \dfrac{20}{100}\right)$,

    $2x\left(1 + \dfrac{30}{100}\right)$, $4x\left(1 + \dfrac{15}{100}\right)$

    = 3.60x, 2.60x, 4.60x

    So, Required ratio = 3.60x : 2.60x : 4.60x

    = 18 : 13 : 23

55. (3) PUMMY

    There are 5 letters.

    And number of words formed = $\dfrac{5!}{2!}$

    = $\dfrac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1} = \dfrac{120}{2} = 60$

56. (3) $(84)^2 - (67)^2 + \sqrt{x} = 2588$

    $\Rightarrow 7056 - 4489 + \sqrt{x} = 2588$

    $\Rightarrow 2567 + \sqrt{x} = 2588$

    $\Rightarrow \sqrt{x} = 2588 - 2567 = 21$

    $\Rightarrow x = (21)^2 = 441$

57. (2) $668 \div 167 \times 284 = 4 \times 284 = 1136$

58. (1) $\sqrt[3]{10648} \times \sqrt{5832}$

    = $\sqrt[3]{22 \times 22 \times 22} \times \sqrt[3]{18 \times 18 \times 18}$

    = 22 × 18 = 396

59. (5) 60% of 25% of $\dfrac{5}{6}$ th of ? = 630

    $\Rightarrow \dfrac{60}{100} \times \dfrac{25}{100} \times \dfrac{5}{6} x = 630$

    $\Rightarrow \dfrac{x}{8} = 630$

    $\therefore x = 5040$

60. (4) $(85410 + 36885 + 24705) \div 1600 = ?$
= $147000 \div 1600 = 91.875$

61. (5) The pattern is:
$21 \times 1.5 = 31.5$
$31.5 \times 2 = 63$
$63 \times 2.5 = 157.5$
$157.5 \times 3 = 472.5$
$472.5 \times 3.5 = 1653.75$
$1653.75 \times 4 = 6615$
Thus, the incorrect number is 160

62. (2) $95 + 47 = 142$
$142 + 55 = \mathbf{197} \neq 187$
$197 + 63 = 260$
$260 + 71 = 331$
$331 + 79 = 410$

63. (3) $3 + 1^2 + 1 = 5$
$5 + 3^2 + 1 = 15$
$15 + 5^2 + 1 = 41$
$41 + 7^2 + 1 = \mathbf{91} \neq 90$
$91 + 9^2 + 1 = 173$

64. (3) $9 \times 1 + 1 = 10$
$10 \times 2 - 1 = 19$
$19 \times 3 + 1 = 58 \neq 57$
$58 \times 4 - 1 = 231$
$231 \times 5 + 1 = 1156$
$1156 \times 6 - 1 = 6935$

65. (5) $2179 - 1^3 = 2178$
$2178 - 3^3 = 2151$
$2151 - 5^3 = 2026$
$2026 - 7^3 = 1683$

66. (4) From statement I,

Speed of car = $\dfrac{\text{Distance covered}}{\text{Time taken}}$

= $\dfrac{135}{3}$ = 45 kmph

From statement II,

Speed of car = $\dfrac{270}{6}$ = 45 kmph

67. (3) From statements I and II,
Let the number be $10y + x$
where $x > y$
$xy = 72$ ....(i)
$x - y = 1$ ...(ii)
$\therefore (x + y)^2 = (x - y)^2 + 4xy$
$\Rightarrow (x + y)^2 = 1 + 4 \times 72$

$\Rightarrow (x + y)^2 = 1 + 288 = 289$
$\therefore x + y = \pm 17$ .... (iii) (ingore – ve value)
From equations (ii) and (iii),
$x = 9$ and $y = 8$
$\therefore$ Number = 89

68. (1) From statement I,
Number of boys

= $2500 \times \dfrac{40}{100}$ = 1000

Number of girls
= $2500 - 1000 = 1500$
$\therefore$ Required ratio
= $1500 : 1000 = 3 : 2$
Statement B is superfluous.

69. (1) For a right angled triangle,
Hypotenuse

= $\sqrt{6^2 + 8^2}$ = $\sqrt{36 + 64}$

= $\sqrt{100}$ = 10 cm = Largest side

$\therefore$ Side of square = $3 \times 10 = 30$ cm
Dignonal of square

= $\sqrt{2} \times 30 = 30\sqrt{2}$ cm

70. (2) If total maximum marks be x,
then,

$\dfrac{x \times 64}{100}$ = 2240 – 128 = 2112

$\Rightarrow ? = \dfrac{2112 \times 100}{64}$ = 3300

Marks obtained by 54 unite
= 2240 – 907 = 1333
Required percentage

= $\dfrac{1333}{3300} \times 100 \approx 40\%$

ENGLISH LANGUAGE

(81-85) : CFABDE

81. (1)   82. (3)   83. (1)
84. (5)   85. (2)
96. (5) No error
97. (4) Replace 'nice' by 'nicer'.
98. (4) Replace 'another' by 'other'.
99. (2) Replace 'a' by 'an'.
100. (2) Replace it with 'on you staying here' or 'on that you stay'.

VOCABULARIES

Word	Meaning in English	Meaning in Hindi
Latent	(of a quality or state) existing but not yet developed	गुप्त, अन्तर्निहित
At the helm of affairs	In the position of being in control of something	किसी के नियत्रंण में होना
Foremost	Most prominent in rank, importance, or position	अग्रणी, सर्वोपरि
Dazzling	Extremely bright	बहुत चमकीला
Sabotaging	Deliberately destroy, damage, or obstruct (something), especially for political or military advantage	राजनैतिक लाभ के लिए नुकसान करना
Subtle	(especially of a change or distinction) so delicate or precise as to be difficult to analyze or describe	गूढ़, चालाक
Come in handy	To be useful	मददगार होना
Veil	Something that stops you from learning the truth about a situation	नकाब, परदा
By and large	Generally, but not completely	कुल मिलाकर
Adaptability	The quality of being able to change or be changed in order to deal successfully with new situations	अनुकूलनशीलता
Vicinity	The area near or surrounding a particular place	पड़ोस
Chronic	Persisting for a long time or constantly recurring	चिरकालिक, स्थायी
Revile	Criticize in an abusive or angrily insulting manner	भला–बुरा कहना
Engrossed	Absorb all the attention or interest of	तल्लीन
Ingrained	Firmly fixed or established; difficult to change	दीर्घस्थायी, अंतर्निहित
Mired	stucked deep in a difficult or unpleasant situation	जड़ तक फंसा हुआ
Concurrence	Agreement	सहमति
Dissemination	The act of spreading information or knowledge so that it reaches many people	सूचना फैलाना
Congruence	Agreement or harmony; compatibility	अनुरूपता
Precipitate	Done, made, or acting suddenly or without careful consideration	अप्रत्याशित रूप से करना

IBPS PO SPECIAL PRELIMS - 371 (ANSWER KEY)

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