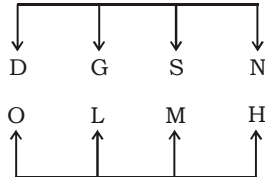


**IBPS PO SPECIAL PHASE - I - 312 (SOLUTION)**

**Reasoning**

(1-5):



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

(6-10):

\$ \Rightarrow = \quad ? \Rightarrow < \quad \% \Rightarrow > \quad \text{©} \Rightarrow \geq\$  
# \Rightarrow \leq

6. (3)  $Z \geq P > Q < F \leq S$

- I.  $S > Q \rightarrow \text{True}$   
II.  $Z > Q \rightarrow \text{True}$   
III.  $F > P \rightarrow \text{False}$

Hence, Only I and II follow

7. (4)  $I < R = H > S \geq A$

- I.  $A < H \rightarrow \text{True}$   
II.  $H > I \rightarrow \text{True}$   
III.  $R > A \rightarrow \text{True}$

Hence, All I, II and III follow

8. (4)  $L > N \leq T = D < A$

- I.  $L > A \rightarrow \text{False}$   
II.  $L \leq A \rightarrow \text{False}$   
III.  $A > N \rightarrow \text{True}$

Hence, Only III follows

9. (1)  $M \leq Q = K < A \leq V$

- I.  $K \geq M \rightarrow \text{True}$   
II.  $A > Q \rightarrow \text{True}$   
III.  $A > M \rightarrow \text{True}$

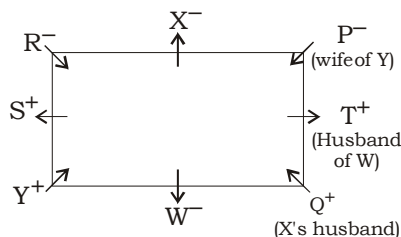
Hence, All I, II and III follow

10. (1)  $E = C < A \geq R \leq S$

- I.  $S > A \rightarrow \text{False}$   
II.  $R < C \rightarrow \text{False}$   
III.  $R \leq E \rightarrow \text{False}$

Hence, None follows

(11-15):



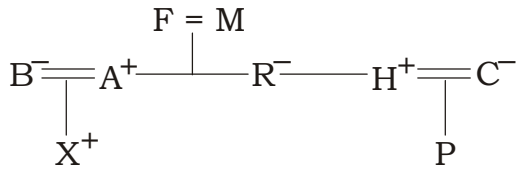
11. (2)      12. (3)      13. (3)      14. (1)      15. (5)

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**(16-18) :**

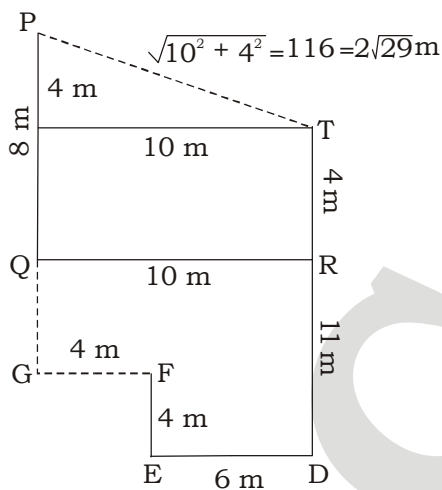
16. (4) From both I and II statement, M is grandfather or grandmother of X.



17. (4) From statement I and II, we cannot determined W's direction thus statement I and II not sufficient to give answer the questions.

18. (4) From statement I and II, we cannot determined Lovely rank in her class thus both statement not sufficient to given answer the question.

**(19-20) :**



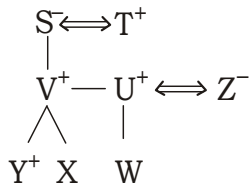
19. (4)      20. (2)

**(21-25) :**

Floor	People	Bike/Car	Colour
9	B	Car	Golden
8	H	Car	Silver
7	G	Car	White
6	A	Bike	Yellow
5	F	Bike	Black
4	E	Car	Purple
3	I	Bike	Green
2	D	Car	Orange
1	C	Bike	Red

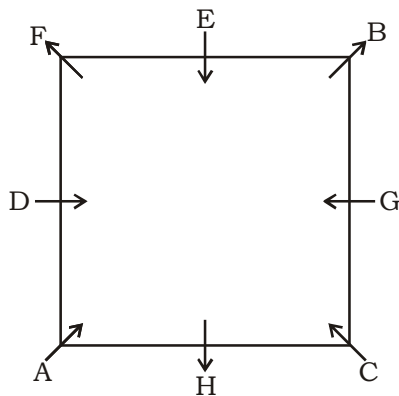
21. (4)      22. (4)      23. (4)      24. (4)      25. (3)

(26-28) :



26. (5)    27. (2)    28. (4)    29. (5)    30. (4)    31. (1)    32. (1)

(33-35) :



33. (5)    34. (3)    35. (4)

**Maths**

36. (4) In ASSISTANT A → 2, S → 3, T → 2, I → 1  
 In STATISTICS A → 1, S → 3, T → 3, I → 2  
 P (same letter) = P[A] + P(S) + P(S) + P(T) + P(I)

$$= \frac{2}{9} \times \frac{1}{10} + \frac{3}{9} \times \frac{3}{10} + \frac{2}{9} \times \frac{3}{10} + \frac{1}{9} \times \frac{2}{10} = \frac{19}{90}$$

37. (3) Total number of ways by which 4-digit number can be formed =  ${}^5P_4 = 120$   
 Number which are divisible by 5 =  ${}^4P_3 = 24$

$$\text{Required Probability} = \frac{24}{120} = \frac{1}{5}$$

38. (4) Let the number of minutes taken to empty the cistern be x minutes.  
 According to the question,

$$\frac{x}{6} - \frac{x+5}{12} - \frac{x+5}{12} = 0$$

$$\frac{x}{6} - \frac{x}{12} - \frac{5}{12} - \frac{x}{15} - \frac{5}{15} = 0$$

$$\frac{x}{6} - \frac{x}{12} - \frac{x}{15} = \frac{5}{12} + \frac{5}{15}$$

$$\frac{10x - 5x - 4x}{60} = \frac{25 + 20}{60}$$

$$\frac{x}{60} = \frac{45}{60} = x = 45 \text{ minutes}$$

39. (2) A can fill the tank = 30 minutes  
 B can fill the tank = 20 minutes  
 C can fill the tank = 10 minutes  
 LCM of (30, 20, 10) = 60

	A	B	C
Efficiency =	$\frac{60}{30}$	$\frac{60}{20}$	$\frac{60}{10}$
	2	3	6

Given, A, B and C are discharging chemical's P, Q and R respectively.

In 3 minutes, A discharge P =  $3 \times 2 = 6$

3 minutes, B discharge Q =  $3 \times 3 = 9$

3 minutes, C discharge R =  $6 \times 3 = 18$

Total Quantity of chemical in 3 minutes =  $18 + 9 + 6 = 33$

$$\text{Ratio of R after 3 minutes} = \frac{18}{33} = \frac{6}{11}$$

40. (2) Let C alone can complete work in C days

$$\frac{20}{80} + \frac{60}{120} + \frac{28}{C} = 1$$

$$\frac{28}{C} = \frac{1}{4}$$

C = 112 days

41. (4) Required number of students (boys and girls)

$$= \left( \frac{26}{100} \times 6000 - 900 \right) + 600 + \left( \frac{29}{100} \times 6000 - 1200 \right)$$

$$= 3900 - 2100 = 1800$$

42. (3) Required ratio =  $\frac{900 + \frac{9}{100} \times 6000 - 400}{29 \times \frac{6000}{100}} = 52 : 87$

43. (4) Required difference =  $1200 - 360 = 840$

44. (2) No. of girls in School E =  $1740 - 1200 = 540$

Now,

540 = Total no. of students in school B

45. (5) Required % =  $\frac{720 - 500}{540} \times 100 \approx 40\%$

46. (5) I.  $2x^2 - 11x + 15 = 0$   
 $2x^2 - 6x - 5x + 15 = 0$   
 $2x(x - 3) - 5(x - 3) = 0$   
 $(2x - 5)(x - 3) = 0$

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

$$\begin{aligned} \text{II. } 5y^2 - 13y - 6 &= 0 \\ 5y^2 - 15y + 2y - 6 &= 0 \\ 5y(y - 3) - 2(y - 3) &= 0 \\ (y - 3)(5y + 2) &= 0 \end{aligned}$$

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

47. (1) I.  $4x + 3y = 12$

II.  $3x + 5y = 8$

Multiplying eq. (I) by 3 and eq. (II) by 4 and then subtracting (I) from (II) we get,

$$(20 - 9)y = 32 - 36$$

$$y = -\frac{4}{11}$$

Put,  $y = -\frac{4}{11}$  in equ. (I)

$$4x - \frac{12}{11} = 12$$

$$4x = \frac{144}{11}$$

$$x = \frac{36}{11}$$

$$x > y$$

48. (2) I.  $x^2 + 26x + 168 = 0$

$$x^2 + 12x + 14x + 168 = 0$$

$$(x + 12)(x + 14) = 0$$

$$x = -12, -14$$

II.  $y^2 - 32y - 144 = 0$

$$y^2 - 36y + 4y - 144 = 0$$

$$(y - 36)(y + 4) = 0$$

$$y = 36, -4$$

$$y > x$$

49. (5) I.  $7x^2 - 19x + 12 = 0$

$$7x^2 - 7x - 12x + 12 = 0$$

$$7x(x - 1) - 12(x - 1) = 0$$

$$(x - 1)(7x - 12) = 0$$

$$x = 1, \frac{12}{7}$$

II.  $4y^2 - 21y + 17 = 0$

$$4y^2 - 4y - 17y + 17 = 0$$

$$4y(y - 1) - 17(y - 1) = 0$$

$$(y - 1)(4y - 17) = 0$$

$$y = 1, \frac{17}{4}$$

No relation

50. (1) I.  $8y^2 + 34y + 36 = 0$   
 $4y^2 + 17y + 18 = 0$   
 $4y^2 + 8y + 9y + 18 = 0$   
 $4y(y + 2) + 9(y + 2) = 0$   
 $(y + 2)(4y + 9) = 0$

$$y = -2, -\frac{9}{4}$$

II.  $6x^2 - 28x + 32 = 0$   
 $3x^2 - 14x + 16 = 0$   
 $3x(x - 2) - 8(x - 2) = 0$   
 $(x - 2)(3x - 8) = 0$

$$x = 2, \frac{8}{3}$$

$$x > y$$

51. (4)  $15 \times 2 + 1 = 31$   
 $31 \times 2 - 1 = 61$   
 $61 \times 2 + 1 = 123$   
 $123 \times 2 - 1 = 245$   
 $245 \times 2 + 1 = 491$

52. (4)  $100 + 8 = 108$   
 $108 - 16 = 92$   
 $92 + 32 = 124$   
 $124 - 64 = 60$   
 $60 + 128 = 188$

53. (1)  $12 + 22 = 5$   
 $22 + 32 = 13$   
 $32 + 42 = 25$   
 $42 + 52 = 41$   
 $52 + 62 = 61$   
 $62 + 72 = 85$

Clearly, '3' in the given series in question is wrong and it should be replaced by 5. Hence the answer would be 3.

54. (4)  $(17 + 1) \times 1 = 18$   
 $(18 + 2) \times 2 = 40$   
 $(40 + 3) \times 3 = 129$   
 $(129 + 4) \times 4 = 532$   
 $(532 + 5) \times 5 = 2685$

55. (4)

56. (5) From statement I,

Let the length of the train be  $x$  m

$$\text{Length of platform} = \frac{3x}{2} \text{ m}$$

From statement II,

$$\text{Speed of train} = \frac{\frac{3x}{2} + x}{25} = \frac{5x}{50} = \frac{x}{10} \text{ m/s} \dots(i)$$

But  $x$  is not known.

Hence, we proceed.

From statement III,

$$\text{Speed of train} = \frac{x}{10} \dots(ii)$$

Clearly, we reach at no unique conclusion.

Hence, question cannot be answered even with the information in all three statements.

57. (1) Let C.P. =  $x$

From A,

$$= \frac{x - 500}{x} \times 100 - \frac{x - 600}{x} \times 100 = 10$$

From B,

$$= \frac{99}{100} \times \frac{110}{100} x = x - 10$$

From C,

Table + chair = 25 % profit

58. (4) I. S.I. =  $\frac{P \times R \times 3}{100} = 4500$

II.  $R = 10\%$  per annum

III. C.I. - S.I. = 465

$$P = \frac{R^2}{100^2} = \frac{300 + R}{100} \quad (\text{for 3 years})$$

From above statement, we can find compound interest from any two of above 3 statements.

59. (2) Suppose he bought  $x$  kg.

$$\text{Then old cost price of commodity per kg} = \frac{4500}{x}$$

$$\left(\frac{4500}{x}\right) + 5 = \frac{4500}{(x - 10)}$$

Solving for  $x$ ,

And selecting positive values, we get

$$x = 100$$

Hence, Quantity II > Quantity I

60. (3) **Quantity-I**

Total number of students in class IX = 600

$$\text{Total number of girls in class IX} = \frac{600}{100} \times 25 = 150$$

Total number of boys in class IX = 600 - 150 = 450

Then,

The total number of boys in class X = 450 - 200 = 250

Total number of students in class X = 450

Total number of girls in class X = 450 - 250 = 200

**Quantity-II : 200**

So, Quantity-I = Quantity II

61. (1) Speed =  $\frac{\text{distance}}{\text{time}}$

Let the speed and length of 1<sup>st</sup> train be 's1' and 'l1' respectively.

Let the speed and length of 2<sup>nd</sup> train be 's2' and 'l2' respectively.

Given, train going in the opposite direction cross each other in 12 sec.

Relative speed between the trains going in opposite direction = s1 + s2

Total distance travelled = l1 + l2

$$\therefore s1 + s2 = \frac{(l1 + l2)}{12} \quad \dots\dots (1)$$

**Quantity I :** Length of train 1 if it crosses the pole in 9 sec

$$s1 = \frac{l1}{9}$$

**Quantity II :** Length of train 2 if it crosses the pole in 24 sec

$$s2 = \frac{l2}{24}$$

Substituting value of s1 and s2 in eq1

$$\frac{l1}{9} + \frac{l2}{24} = \frac{l1}{12} + \frac{l2}{12}$$

$$\frac{l1}{36} + \frac{l2}{24}$$

$$l1 = 1.5 l2$$

Thus, l1 > l2

62. (1) In a race of 1 km P defeats Q by 50 m.

When P runs 1 km Q runs = 950 m      ... (1)

In a race of 1 km Q defeats R by 20 m

When Q runs 1 km (1000 m) R runs = 980 m

$$\text{When Q runs 950 m R runs} = 980 \times \frac{950}{1000} \text{ m} = 931 \text{ m} \quad \dots (2)$$

From (1) and (2) we get,

When P runs 1 km R runs = 931 m

When P runs 3 km R runs = 3 × 931 m = 2793 m

In a race of 3 km P defeats R by = (3000 - 2793) = 207 m



63. (1)  $SP = \frac{120}{100} \times CP$

$$SP - 420 = \frac{125}{100} \times \frac{80CP}{100}$$

$$\frac{120}{100} \times CP - 420 = CP$$

$$\frac{20CP}{100} = 420$$

$$CP = \text{Rs } 2100$$

64. (3) Let the investment made by A be 'a'.

Given, B invested Rs. 9600, C invested Rs. 10800. Time for which A, B and C invested the amount is in the ratio 2 : 3 : 5.

Ratio of profits = Ratio of investment made

Ratio of profit =  $a \times 2 : 9600 \times 3 : 10800 \times 5$

Ratio of profit =  $a : 14400 : 27000$

Given, B received Rs. 2800 as profit out of a total profit of Rs. 10850 for his investment.

$$\frac{14400}{a + 14400 + 27000} \times 10850 = 2800$$

$$55800 = a + 14400 + 27000$$

$$a = \text{Rs. } 14400$$

65. (1) Amount of work done by 18 boys and 24 girls in 12 days =  $\frac{12}{16} = \frac{3}{4}$

$$\text{Remaining work} = 1 - \frac{3}{4} = \frac{1}{4}$$

Now 12 boys complete  $\frac{1}{4}$  work in 9 days

Therefore 18 boys can complete the entire work in  $9 \times 4 \times \frac{12}{18} = 24$  days

24 girls have to complete the job =  $\frac{1}{16} - \frac{1}{24} = \frac{1}{48} = 48$  days

66. (4) Number of boys in Course A =  $\frac{20}{100} \times 1200 - \frac{30}{100} \times 800$

$$= 240 - 240 = 0$$

$$\text{Number of boys in Course B} = \frac{15}{100} \times 1200 - \frac{10}{100} \times 800$$

$$= 180 - 80 = 100$$

$$\text{Number of boys in Course C} = \frac{5}{100} \times 1200 - \frac{2}{100} \times 800$$

$$= 60 - 16 = 44$$

$$\text{Number of boys in Course D} = \frac{35}{100} \times 1200 - \frac{30}{100} \times 800$$

$$= 420 - 240 = 180$$

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$$\begin{aligned}\text{Number of boys in Course E} &= \frac{12}{100} \times 1200 - \frac{14}{100} \times 800 \\ &= 144 - 112 = 32\end{aligned}$$

$$\begin{aligned}\text{Number of boys in Course F} &= \frac{13}{100} \times 1200 - \frac{14}{100} \times 800 \\ &= 156 - 112 = 44\end{aligned}$$

So, the minimum number is in Course A.

67. (2) Number of girls in Course C =  $\frac{2}{100} \times 800 = 16$

68. (1) Number of girls in Course D =  $\frac{30}{100} \times 800 = 240$

$$\text{Number of boys in Course D} = \frac{35}{100} \times 1200 - \frac{30}{100} \times 800 = 180$$

$$\text{Required ratio} = 180 : 240 = 3 : 4$$

69. (3) Number of boys in Course C =  $\frac{5}{100} \times 1200 - \frac{2}{100} \times 800$   
 $= 60 - 16 = 44$

$$\begin{aligned}\text{Number of boys in Course F} &= \frac{13}{100} \times 1200 - \frac{14}{100} \times 800 \\ &= 156 - 112 = 44\end{aligned}$$

So, number are same in C and F.

70. (1) Number of girls in Course E =  $\frac{14}{100} \times 800 = 112$

$$\text{Number of boys in Course E} = \frac{12}{100} \times 1200 - 112 = 144 - 112 = 32$$

$$\therefore \text{Required percentage} = \frac{112 - 32}{32} \times 100 = 250\%$$

**ENGLISH LANGUAGE**

91. (4) Change 'live' into 'living'.
92. (4) Change it into 'before the commence -ment of olympics games next year.'
93. (3) Change 'them' into 'those'.
94. (2) Replace 'in that' by 'by which'.
95. (4) Change 'their' into 'its'.
96. (2) Add 'a' before 'chairman'.
97. (5) No error.
98. (4) Add 'to' after 'reach'.
99. (3) Replace 'about' by 'for'.
100. (1) Add an apostrophe 's' to 'state'.

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**VOCABULARIES**

<b>Words</b>	<b>Meaning in English</b>	<b>Meaning in Hindi</b>
Bare-Bone	the most important part of a system that gives it support	आधार
Intensively	in an extremely thorough way	गहनता से
Juggle	to try to deal with two or more important things	हथकण्डे अपनाना
Envision	imagine as a future possibility; visualize.	कल्पना करना
Hamper	hinder or impede	रोकना
Presumed	to suppose that something is true	परिकल्पना करना
Rapport	a friendly relationship in which people understand each other very well	सौहार्द-स्थापन, घनिष्टता
Prescribe	advise and authorize the use of (a medicine or treatment) for someone, especially in writing.	लिखित रूप से सलाह देना

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### IBPS PO SPECIAL PHASE - I - 312 (ANSWER KEY)

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