IBPS PO PRELIMINARY GRAND TEST : IPP-170510 - HINTS AND SOLUTIONS

ANSWER KEY

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

1. (5) **2.** (3) **3.** (1) **4.** (5) **5.** (5)
6. (5) **7.** (1) **8.** (4) **9.** (3) **10.** (1)
11. (5)
12. (3) Use 'has' in place of 'have' as the subject is singular in number.
13. (3) Use 'had' in place of 'have' as the subject is in Past Tense and auxiliary must be used accordingly.
14. (5)
15. (2) Use 'all one' to make the syntax correct here.
16. (4) **17.** (3) **18.** (2) **19.** (4) **20.** (1)
21. (4) **22.** (5) **23.** (2) **24.** (3) **25.** (1)
26. (5) **27.** (5) **28.** (3) **29.** (1) **30.** (4)

31-34. 29 cone 42 pale fear 39 67 fame 32 weld 77 turn
Step I : 77 29 42 pale fear 39 67 fame 32 weld turn cone
Step II : 67 77 29 42 pale fear 39 32 weld turn cone fame
Step III : 42 67 77 29 pale 39 32 weld turn cone fame fear
Step IV : 39 42 67 77 29 32 weld turn cone fame fear pale
Step V : 32 39 42 67 77 29 weld cone fame fear pale turn
Step VI : 29 32 39 42 67 77 cone fame fear pale turn weld

31. (5) **32.** (3) **33.** (2) **34.** (1)

35-38. $P \% Q \rightarrow P < Q$

$P \delta Q \rightarrow P > Q$

$P @ Q \rightarrow P \leq Q$

$P * Q \rightarrow P \geq Q$

$P \# Q \rightarrow P = Q$

35. (2) R * T, T δ M, M % K, K @ V

$R \geq T > M < K \leq V$

I. V > M ✓ (True)
II. V > T × (False)
III. M < R ✓ (True)
IV. K > R × (False)

36. (5) H δ J, J # N, N @ R, R δ W

$H > J = N \leq R > W$

I. W < N × (False)
II. W < H × (False)
III. R = J ✓ (True)
IV. R > J ✓ (True)

Either (III) or (IV).

37. (1) $B \leq D > F < M \geq N$

I. B < F × (False)
II. M > D × (False)
III. N < F × (False)
IV. D > N × (False)

38. (3) $F = Z \leq H < N > B$

I. F ≤ H ✓ (True)
II. N > Z ✓ (True)
III. B < H × (False)
IV. B < Z × (False)

39-40. $P \times Q \rightarrow P(\text{Wife}) \Leftrightarrow Q$

$P \div Q \rightarrow P(\text{Father})$
$\updownarrow$
Q

$P + Q \rightarrow$ Q
$\updownarrow$
P (Son)

$P - Q \rightarrow P$ (Sister) $\Leftrightarrow Q$

39. (4)

I (Father)
$\updownarrow$ $\updownarrow$
(Son) H L

We don't know the gender of L either Brother or Sister.

40. (1) S × M ÷ H – T

S (Wife) ⟺ M (Father)

↕

H (Sister) ⟺ T

∴ S is mother of T.

41-44. 'always create new ideas' → 'ba ri sha gi' ...(i)
'ideas and new thoughts' → 'fa gi ma ri' ...(ii)
'create thoughts and insights' → 'ma jo ba fa' ...(iii)
'new and better solutions' → 'ki ri to fa' ...(iv)
From Eqs. (i) and (iv), new → ri
From Eqs. (i), (ii) and (iv), ideas → gi
and → fa
thoughts → ma
From Eqs. (i) ans (iii), create → ba
always → sha
insights → jo
better solutions → ki to

41. (3) **42.** (4) **43.** (2) **44.** (2)

45. (3)

L	I	V	E	S	&	L	A	T	E	R
↓	↓	↓	↓	↓		↓	↓	↓	↓	↓
2	1	&	9	5		2	%	4	9	8

Therefore,

R	E	A	L
↓	↓	↓	↓
8	9	%	2

46-50.

Member	Country	Game
L	Australia	Athletics
H	Japan	Boxing
K	China	Archery
T	USA	Football
F	France	Volleyball
J	Russia	Tennis
R	Korea	Rifle shooting

46. (2) **47.** (4) **48.** (4) **49.** (2) **50.** (1)

51-55. According to the information, the arrangement of seven persons is ass shown below

LEFT U R V Q T W S RIGHT

51. (2) **52.** (4) **53.** (1) **54.** (3) **55.** (5)

56. (2) Given number → 5 2 6 3 1 8 7

After rearrangement → 6 1 5 4 2 7 8

Arranged in ascending order 1, 2, 4, 5, 6, 7, 8.
So, the third digit from left end is 4.

57. (4)

B
|
F — D

N
W — E
S

According to question, H is South of B. Therefore the position of H may be between B and D or it may be South of D.
So, the position of H cannot be determined.

58. (4) D > A (B, E) > C
D id heavier than only A
So, (B, E) > C > D > A
So, heaviest is either B or E.

59. (4)

S	E	A	R	C	H	E	S
19	5	1	18	3	8	5	19

So, there are three pairs AC, AE and CE.

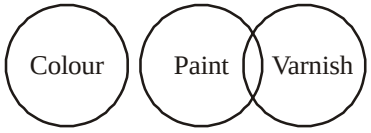
60. (2) 15 – 8 × 6 ÷ 12 + 4 = ?
After changing the sign
15 × 8 ÷ 6 + 12 – 4 = ?

$\Rightarrow \frac{15\times 8}{6} + 8 = ?$

⇒ 20 + 8 = ? ⇒ ? = 28

61. (3)

OR

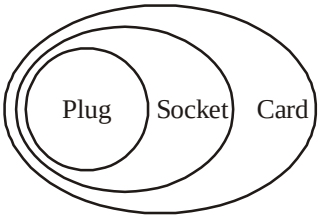


Conclusions

I. ✓
II. ✓ } Complementary pairs.

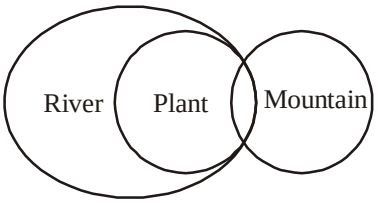
So, either conclusion I or II follows.

62. (1)



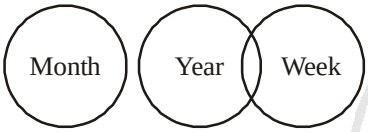
Conclusions I. ✓ II. ×
So, only conclusion I follows.

63. (2)



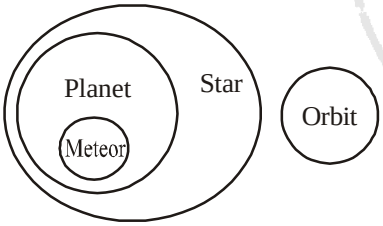
Conclusions I. × II. ✓
So, only conclusion II follows.

64. (2)



Conclusions I. × II. ✓
So, only conclusion II follows.

65. (5)



Conclusions I. ✓ II. ✓
So, both conclusions I and II follows.

66. (1) $14 \times 1 - 1^2 = 13$
$13 \times 2 - 2^2 = 22$
$22 \times 3 - 3^2 = \mathbf{57}$
$57 \times 4 - 4^2 = 212$
$212 \times 5 - 5^2 = 1035$.

67. (3) $217 + 7 = 224$
$224 - 11 = 213$
$213 + 13 = 226$
$226 - 17 = \mathbf{209}$
$209 + 19 = 228$

68. (4) $488 \times 0.5 + 1 = 245$
$245 + 0.5 + 1.5 = 124$
$124 \times 0.5 + 2 = 64$
$64 \times 0.5 + 2.5 = \mathbf{34.5}$
$34.5 \times 0.5 + 3 = 20.25$

69. (3) $16 + 9 = 25$
$25 + 10 = 35$
$35 + 11 = \mathbf{46}$
$46 + 12 = 58$
$58 + 13 = 71$
$71 + 14 = 85$

70. (4) $2 + 1^2 = 3$
$3 + 2^2 = 7$
$7 + 3^2 = 16$
$16 + 4^2 = \mathbf{32}$
$32 + 5^2 = 57$
$57 + 6^2 = 93$.

71. (3) Required part $= \frac{45}{24 \times 60} = \frac{1}{32}$

72. (5) Suppose required distance was x km.

$$\therefore \frac{x}{40} - \frac{x}{45} = 1$$

$$\Rightarrow \frac{9x - 8x}{360} = 1 \Rightarrow \frac{x}{360} = 1$$

X = 360 km

73. (4) Suppose two numbers are x and y
$\therefore xy = 640$
$(x+y) - (x - y) = 32$
$\Rightarrow x + y - x + y = 32$
$\Rightarrow 2y = 32$
$Y = 16$
$x \times 16 = 640$

$$x = \frac{640}{16}; x = 40$$

So, largest number is 40.

74. (1) Suppose required percentage is x

$$\because \frac{150 \times 60}{100} = \frac{75 \times 40}{100} + \frac{75 \times x}{100}$$

$$\Rightarrow 9000 = 3000 + 75x$$

$$x = \frac{6000}{75} = 80\%$$

75. (1) Marks obtained by D in English = 40
Marks obtained by B in English = 65
Required ratio = 40 : 65 = 8 : 13

76. (3) Overall percentage of A

$$= \frac{(45 + 50 + 55) \times 100}{300}\% = \frac{150 \times 100}{300}\% = 50\%$$

77. (1) Total marks obtained by B = 65+50+70 = 185
Total marks obtained by C = 75+60+55 = 190
Required difference = 190 – 185 = 5

78. (1) $? = 182.225 \times 21.652 \times 33.584$

$? = 132506.87 = 132507 (\text{approx})$

79. (5) $? = \sqrt{8650} = 93$ (approx.)

80. (1) Suppose the fraction is $\frac{x}{y}$

$\therefore \frac{x+3x}{y+y} = \frac{30}{19} \Rightarrow \frac{4x}{2y} = \frac{30}{19}$

$\Rightarrow 76x = 60y$

$\therefore \frac{x}{y} = \frac{60}{76} = \frac{15}{19}$

81. (2) **82.** (1) **83.** (4)

84. (2) Suppose selling price = ₹ x

Cost price = ₹ $\frac{2x}{3}$

Profit = SP – CP = $x - \frac{2x}{3} = ₹ \frac{x}{3}$

Percent profit = $\frac{\frac{x}{3} \times 100}{\frac{2x}{3}} = 50\%$

85. (3) Let the ages of Dheeraj and Raman be 2x and 3x respectively.
Then according to the question,

$\frac{2x-4}{3x-4} = \frac{5}{8} \Rightarrow 16x - 32 = 15x - 20 \Rightarrow x = 2$

After 7 yr, age of Dheeraj
$= 2x + 7 = 2 \times 12 + 7 = 31$ yr

86. (4) Simple interest = $\frac{P \times R \times T}{100}$

$750 = \frac{2500 \times 4 \times R}{100}$

$\therefore R = \frac{750 \times 100}{2500 \times 4} = 7.5\%$

87. (5) SP = CP – Loss = 3200 – 240 = ₹ 2960

88. (1) According to the question, monthly income of Reshma

$= 3500 \times \frac{(100-22)}{100} = ₹ 4270$

89. (4) Cost price of 100kg of sugar
$= 40 \times 152 + 60 \times 14.8 = ₹ (608 + 888) = ₹ 1496$
Selling price of 100 kg of sugar
$= 100 \times 15.40 = ₹ 1540$
$\therefore$ Profit = 1540 – 1496 = ₹ 44

90. (1) Total expenditure = ₹ 45(2.5+2) = ₹ 45 × 4.5 = ₹ 202.50

91. (1) Suppose 1 kg of both alloys A and B are melted to form alloy C.
New, the quality of diamond in

$C = \left(\frac{7}{9} + \frac{7}{18}\right) = \frac{7}{6}$ kg

and that of silver in C = $\left(\frac{2}{9} + \frac{11}{18}\right) = \frac{5}{6}$ kg

$\therefore$ Required ratio = 7 : 5

92. (2) **From I.** $x^2 - 10x + 24 = 0$
$\Rightarrow x^2 - 6x - 4x + 24 = 0$
$\Rightarrow x(x-6) - 4x(x-6) = 0$
$\Rightarrow (x-4)(x-6) = 0$
$\Rightarrow x = 4$ or 6
From II. $y^2 - 14y + 48 = 0$
$\Rightarrow y^2 - 8y - 6y + 48 = 0$
$\Rightarrow y(y-8) - 6(y-8) = 0$
$\Rightarrow (y-6)(y-8) = 0$
$\Rightarrow y = 6$ or 8
So, $x \le y$

93. (3) **From I.** $2x^2 - 13x + 20 = 0$
$\Rightarrow 2x^2 - 8x - 5x + 20 = 0$
$\Rightarrow 2x(x-4) - 5(x-4) = 0$
$\Rightarrow (2x-5)(x-4) = 0$

$\Rightarrow x = \frac{5}{2}$ or 4

From II. $2y^2 - 7y + 6 = 0$
$\Rightarrow 2y^2 - 4y - 3y + 6 = 0$
$\Rightarrow 2y(y-2) - 3(y-2) = 0$
$\Rightarrow (2y-3)(y-2) = 0$

$\Rightarrow y = \frac{3}{2}$ or 2

So, $x > y$

94. (1) **From I.** $x^2 - 5x + 6 = 0$
$\Rightarrow x^2 - 3x - 2x + 6 = 0$
$\Rightarrow x(x-3) - 2(x-3) = 0$
$\Rightarrow (x-2)(x-3) = 0$
$\Rightarrow x = 2$ or 3
From II. $y^2 - 9y + 20 = 0$
$\Rightarrow y^2 - 5y - 4y + 20 = 0$
$\Rightarrow y(y-5) - 4(y-5) = 0$
$\Rightarrow (y-4)(y-5) = 0$
$\Rightarrow y = 4$ or 5
So, $x < y$

95. (5) **From I.** $4x^2 - 20x + 21 = 0$
$\Rightarrow 4x^2 - 6x - 14x + 20 = 0$
$\Rightarrow 2x(2x-3) - 7(2x-3) = 0$
$\Rightarrow (2x-7)(2x-3) = 0$

$\Rightarrow x = \frac{7}{2}$ or $\frac{3}{2}$

From II. $9y^2 - 27y + 20 = 0$

$\Rightarrow 9y^2 - 15y - 12y + 20 = 0$

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

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

$\Rightarrow y = \frac{4}{3}$ or $\frac{5}{3}$

So, the relationship cannot be established.

96. (3) $\frac{1}{\sqrt{81}} - \frac{1}{(\sqrt[3]{64})^2} = x$

$\Rightarrow x = \frac{1}{9} - \frac{1}{16} \Rightarrow x = \frac{7}{144}$

97. (4) $\frac{331.8}{23.7} + (-21)^2 - 94 = x^2$

$\Rightarrow 14 + 441 - 94 = x^2$

$\Rightarrow 361 = x^2 \Rightarrow x = 19$

98. (5) $\frac{34}{100} \times 576 + \frac{18}{100} \times 842 = \frac{x}{100} \times 400 + 83.4$

$\Rightarrow 195.84 + 151.56 = 4x + 83.4$

$\Rightarrow 4x = 264 \Rightarrow x = 66$

99. (1) $\frac{\sqrt{29241}}{\sqrt{361}} \times \frac{47}{9} = \frac{171}{19} \times \frac{47}{9} = 47$

100. (2) $\frac{13}{4} + \frac{44}{7} + x = \frac{367}{28}$

$\Rightarrow x = \frac{367}{28} - \frac{13}{4} - \frac{44}{7} = \frac{25}{7}$

$\Rightarrow x = 3\frac{4}{7}$