IBPS PO PRELIMINARY GRAND TEST : IPP-170619 - HINTS AND SOLUTIONS

ANSWER KEY

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

1. (2) Use 'is' in place of 'are'. The subject is singular and so a singular verb is required.
2. (1) Use 'students' in place of 'student'. After one of, each of, none of a plural noun is required.
3. (3) Use 'who' in place of 'which'. For persons relative pronoun who is required.
4. (3) Use 'seems' in place of 'seemed'. Present Indefinite form of verb is required.
5. (5) The sentences is correct.
6. (4) 'no alternative but' is the correct use.
7. (5) The sentences is correct.
8. (1) 'many requests but' completes the sentence logically and grammatically.
9. (3) Here an infinitive is required.
10. (2) Here, use of 'how' is superfluous.
11. (3) Refer to the first sentence of the passage.
12. (2) Refer to the second last sentence of the first paragraph.
13. (5) Refer to the first sentence of the second paragraph.
14. (1) Refer to the first sentence of the third paragraph.
15. (4) Answer can be inferred after reading the passage.
21. (1) 'shambles' fits the blank appropriately.
22. (4) 'stress' fits the blank appropriately.
23. (2) 'across' fits the blank appropriately.
24. (3) 'consisted' fits the blank appropriately.
25. (2) 'provide' fits the blank appropriately.
26. (1) 'gap' fits the blank appropriately.
27. (2) 'sea' fits the blank appropriately.
28. (4) 'affluent' fits the blank appropriately.
29. (5) 'tremendous' fits the blank appropriately.
30. (3) 'inequality' fits the blank appropriately.
31. (2) $(-251 \times 21 \times 12) \div 158.13 \times x \Rightarrow x = 400.$
32. (2) 25.6% of 250 $+\sqrt{x} = 119$

$\Rightarrow 64 + \sqrt{x} = 119 \Rightarrow \sqrt{x} = 55$

$\therefore x = 3025.$
33. (3) 36865 + 12473 + 21045 – 44102 = 26281.
34. (4) $[(15.20)^2 - 103.04] \div x = 8$

$\Rightarrow (231.04 - 103.04) \div x = 8$

$\Rightarrow 128 \div x = 8 \Rightarrow x = \frac{128}{8} = 16.$

35. (1) Number of teachers in Physics $= 1800 \times \frac{17}{100} = 306$

Female teachers in Physics $= 306 \times \frac{2}{9} = 68$

Male teachers in Physics = 306 – 68 = 238

Number of teachers in Chemistry $= 1800 \times \frac{23}{100} = 414$

Required percentage = $\frac{238}{414} \times 100 = 57\%$

36. (2) Total number of teachers teaching Chemistry, English and Biology $= 1800 \times \frac{(23 + 27 + 12)}{100} = 1116$

37. (2) Required difference

$= 1800 \times \frac{(27 + 17)}{100} - 1800 \times \frac{(13 + 12)}{100}$

= 792 – 450 = 342.

38. (5) Ratio = $\frac{1800 \times \frac{13}{100}}{1800 \times \frac{8}{100}} = 13 : 8$

39. (3) Required number

$= \left(1800 \times \frac{13}{100} \times \frac{150}{100}\right) + \left(1800 \times \frac{8}{100} \times \frac{75}{100}\right)$

= 351 + 108 = 459

40. (3) $CI = P\left[\left(1+\frac{R}{100}\right)^n - 1\right]$

$$= 8000\left[\left(1+\frac{15}{100}\right)^3 - 1\right] = 8000\left[\left(\frac{115}{100}\right)^3 - 1\right]$$

$$= 8000\left[\left(\frac{23}{20}\right)^3 - 1\right]$$

$$= 8000\left[\frac{23\times23\times23 - 20\times20\times20}{20\times20\times20}\right]$$

$$= \frac{8000}{8000}(12167 - 8000) = ₹4167$$

41. (2) Length of a plot = $\sqrt{361}$ = 19 ft.
∴ Total cost = 4 × 19 × 62 = ₹4712.

42. (3) Suppose the number is 10x + y.
(When number at unit place is y and at tens place is x)
(10x + y) – (10y + x) = 9
x – y = 1 ...(i)
x + y = 15 ...(ii)
On solving Eqs. (i) and (ii), we get
x = 8, y = 7
∴ Required number = 10 × 8 + 7 = 87.

43. (5) There are 5 letters in the word TRUST and T comes two times.

Required permutation = $\frac{5!}{2!} = \frac{5\times4\times3\times2!}{2!} = 60$

44. (1) Suppose the age of Shirish = 5x yr.
and age of Kunder = 6x yr.
After 8 yrs.,

$$\frac{5x+8}{6x+8} = \frac{7}{8} \Rightarrow 42x + 56 = 40x + 64$$

$\Rightarrow$ 42x – 40x = 64 – 56
$\Rightarrow$ 2x = 8 $\Rightarrow$ x = 4.
Required difference = 6x – 5x = 24 – 20 = 4 yrs.

45. (5) x + x + 2 + x + 4 + x + 6 = 4×36
$\Rightarrow$ 4x + 12 = 144 $\Rightarrow$ 4x = 144 – 12 = 132

$$\therefore x = \frac{132}{4} = 33$$

46. (1) $CI = P\left[\left(1+\frac{r}{100}\right)^t - 1\right] = 7850\left[\left(1+\frac{14}{100}\right)^2 - 1\right]$

$$= 7850\left[\left(\frac{114}{100}\right)^2 - 1\right] = 7850[(1.14)^2 - 1]$$

= 7850 [12996 – 1] = 7850 [0.2996] = ₹2351.86

47. (3) Ratio of the capital of one month equivalent of Mithilesh and Vidya
= 4800 × 12 : 56000 × 5 = 48 × 12 : 56 : 5
= 8 × 6 × 12 : 7 × 8 × 5 = 72 : 35

$$\therefore \text{Share of Vidya} = \frac{35}{72+35}\times5885 = \frac{35}{107}\times5885$$

= ₹1925

48. (5) Let first number is x
Second number is y.

$$\frac{3}{4}x = \frac{5}{6}y$$

$$\Rightarrow \frac{x}{y} = \frac{5}{6}\times\frac{4}{3} = \frac{20}{18} = \frac{10}{9}.$$

∴ x : y = 10 : 9.

49. (3) Let total salary of Natasha is x.

$$\frac{45}{100}\times\frac{60}{100}\times x = 11475$$

$$\Rightarrow x = \frac{11475\times100}{27} = 42500.$$

50. (4) Given word "RUDE"
Total no. of letters is 4.
Total no. of ways to arranging is 4! = 24.

51. (1) $\frac{B}{N} = \frac{8}{7}$

7B = 8N ...(i)

$$\frac{B+6}{N+6} = \frac{19}{17}$$

$\Rightarrow$ 17B + 17 × 6 = 19N + 19 × 6
$\Rightarrow$ 17B – 19N = 114 – 102
$\Rightarrow$ 17B – 19N = 12 ...(ii)
From (i),

$$B = \frac{8N}{7} \Rightarrow 17\left(\frac{180}{7}\right) - 19N = 12$$

$\Rightarrow$ (17 × 8) N – (19 × 7)N = 12 × 7
$\Rightarrow$ 136N – 133N = 12 × 7
$\Rightarrow$ 3N = 12 × 7 $\Rightarrow$ N = 28
From (i),
7B = 8 × 28 $\Rightarrow$ B = 32
Required difference = 32 – 28 = 4 years.

52. (2) $\frac{600x}{400y} = \frac{18}{7} \Rightarrow \frac{3x}{2y} = \frac{18}{7} \Rightarrow \frac{x}{y} = \frac{12}{7}$

53. (1) Female population in,
City A = 5.5, City B = 7.8, City C = 8, City D = 9.1
City E = 11.2
Total = 41.6

$$\text{Average} = \frac{41.6}{5} = 8.32.$$

54. (2) Production in 2006 = 1100
Production in 2007 = 1300

$$\text{Required \%} = \frac{1300-1100}{1100}\times 100 = \frac{200}{1100}\times 100 = 18.18\%$$

55. (4) The student prefere Maths and Economics is = 28%
Did not prefere Maths and Economics is = 72%
Total students = 550 i.e. = 100%
100 — 550
72 — ?

$$= \frac{72\times 550}{100} = 396.$$

56. (1) The committee should consist of
2 Professor's out of 5 = ${}^5C_2$
2 Teachers out of 6 = ${}^6C_2$
1 Reader out of 3 = ${}^3C_1$

$$\therefore {}^5C_2 \times {}^6C_2 \times {}^3C_1 = \frac{5\times 6}{2\times 1}\times\frac{6\times 5}{2\times 1}\times\frac{3}{1}$$

$$= 10 \times 15 \times 3 = 450.$$

57. (4) The committee should consist,
3 readers out of 3 = ${}^3C_3 = 1$
Remaining 2 members out of 11 = ${}^{11}C_2$.

$$\therefore {}^{11}C_2 \times {}^3C_3 = \frac{11\times 10}{2} = 55$$

58. (3) 4 5 12 **39** 160 805 4836
×1+1 ×2+2 ×3+3 ×4+4 ×5+5 ×6+6

Hence, the wrong number is 38.
Right number = 12 × 3 + 3 = 36 + 3 = 39.

59. (1) 3 7 16 32 **57** 93 142
$+(2)^2$ $+(3)^2$ $+(4)^2$ $+(5)^2$ $+(6)^2$ $+(7)^2$

Hence, the wrong number is 56.
Right number = 32 + $(5)^2$ = 32 + 25 = 57.

60. (5) 11 18 29 42 59 **78** 101
+7 +11 +13 +17 +19 +23

Hence the wrong number is 78.
Right number = 59 + 19 = 78.

61. (1) From I,
$5x^2 - 18x + 9 = 0$
$\Rightarrow 5x^2 - 15x - 3x + 9 = 0$
$\Rightarrow 5x(x-3) - 3(x-3) = 0$
$\Rightarrow (x-3)(5x-3) = 0$

$\Rightarrow x = 3$ or $\frac{3}{5}$

From II,
$20y^2 - 13y + 2 = 0$
$\Rightarrow 20y^2 - 5y - 8y + 2 = 0$
$\Rightarrow 5y(4y-1) - 2(4y-1) = 0$
$\Rightarrow (4y-1)(5y-2) = 0$

$\Rightarrow y = \frac{1}{4}$ or $\frac{2}{5}$

$\therefore x > y.$

62. (2) From I,
$x^3 - 878 = 453 \Rightarrow x^3 = 453 + 878 \Rightarrow x^3 = 1331$
$\Rightarrow x^3 = (11)^3 \Rightarrow x = 11$
From II,
$y^2 - 82 = 39 \Rightarrow y^2 = 39 + 82 = 121$
$\Rightarrow y^2 = (11)^2 \Rightarrow y = 11$
$\therefore x \geq y$

63. (5) From I,

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

From II,

$$y^3 - \frac{(7)^{7/2}}{\sqrt{y}} = 0 \Rightarrow \frac{(y)^3(y)^{1/2} - (7)^{7/2}}{\sqrt{y}} = 0$$

$$\Rightarrow (y)^{7/2} - (7)^{7/2} = 0 \Rightarrow (y)^{7/2} = (7)^{7/2} \Rightarrow y = 7$$

$\therefore x = y$

64. (5) From I,
$9x - 15.45 = 54.55 + 4x$
$\Rightarrow 9x - 4x = 54.55 + 15.45$

$$\Rightarrow 5x = 70 \Rightarrow x = \frac{70}{5} = 14$$

From II,

$$\sqrt{y+155} - \sqrt{36} = \sqrt{49} \Rightarrow \sqrt{y+155} - 6 = 7$$

On squaring both sides, we get

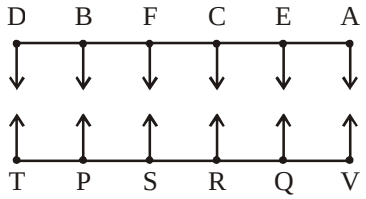
$$(\sqrt{y+155})^2 = (13)^2$$

$$\Rightarrow y + 155 = 169 \Rightarrow y = 169 - 155 = 14$$

$\therefore x = y$

65. (3) From I,
$x^2 + 11x + 30 = 0$
$\Rightarrow x^2 + 6x + 5x + 30 = 0$
$\Rightarrow x(x+6) + 5(x+6) = 0$
$\Rightarrow (x+6)(x+5) = 0$
$\Rightarrow x = -6$ or -5
From II,
$y^2 + 7y + 12 = 0$
$\Rightarrow y^2 + 4y + 3y + 12 = 0$
$\Rightarrow y(y+4) + 3(y+4) = 0$
$\Rightarrow (y+4)(y+3) = 0$
$\Rightarrow y = -4, -3$
$\therefore y > x$

66-70.



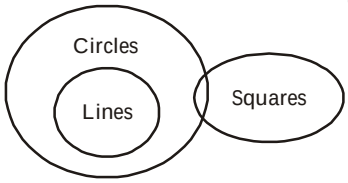
66. (1) T
67. (2) T, A
68. (5) D-R (All othersw are diagonally opposite to each other).
69. (2) S (All other are sitting at extreme ends of the rows)
70. (2) Two (P, S)

71-75.

Monday	South Africa	Samir
Tuesday	Australia	Nita
Wednesday	France	Gifty
Thursday	Australia	Paul
Friday	South Africa	Richa
Saturday	France	Shweta
Sunday	South Africa	Mohit

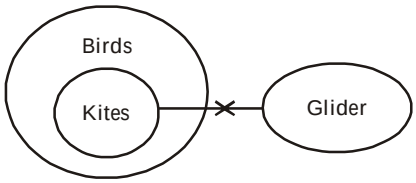
71. (3) 72. (1)
73. (5) 74. (4)
75. (3)

76. (4)



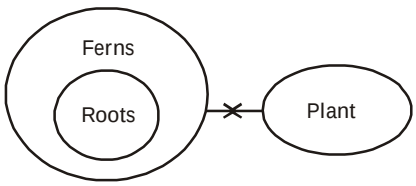
(i) × (ii) ×
Neither I nor II follows.

77. (2)



(i) × (ii) ✓
Only II follows.

78. (1)

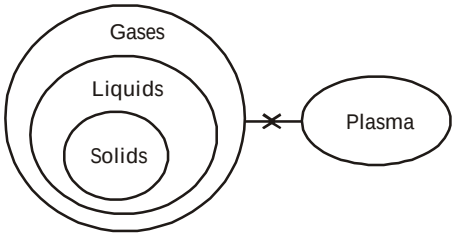


(i) ✓ (ii) ×
Only I follows.

79. (2)

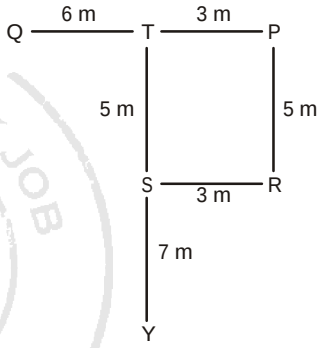
(i) × (ii) ✓
Only II follows.

80. (5)



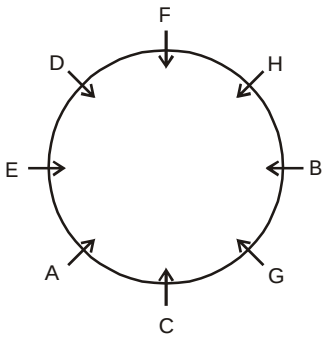
(i) ✓ (ii) ✓
Only I and II follows.

81-82.



81. (4) 82. (5)
83. (2) Required sequency is 'Even 5 Even'
Only one 5.
84. (5) After deleting all even numbers.
8th from the right end is 3.
85. (3) Required arrangement is,
Perfect Square 2
Only two numbers.

86-90.



86. (5) 87. (2)
88. (3) 89. (5)
90. (4)

91. (1) **Statement** $W \geq D < M < P < A = F$
Conclusions I. $F > D \rightarrow$ It follows.
II. $P < W \rightarrow$ It does not follow.
So, only Conclusion I follows.

92. (4) **Statement** $H \geq M > F < A = B > S$
Conclusions I. $H > B \rightarrow$ It does not follow.
II. $F < S \rightarrow$ It does not follow.
Neither Conclusion I nor II follows.

93. (2) **Statement** $B > T > Q > R = F$
Conclusions I. $Q \geq F \rightarrow$ It doe not follow because $Q > F$ only.
II. $T > F \rightarrow$ It follows.
So, only Conclusion II follows.

94. (2) **Statement** $S = R \geq Q, P < Q \quad \therefore S = R \geq Q > P$
Conclusions I. $S \geq P \rightarrow$ It does not follow because $S \geq Q$ and $Q > P$.
II. $R > P \rightarrow$ It follows.
So, only Conclusion II follows.

95. (2) **Statement** $S \geq M < Y = Z > F > T$
Conclusions I. $S > F \rightarrow$ It does not follow.
II. $Y > T \rightarrow$ It follows.
So, only Conclusion II follows.

96. (1) After the interchanging positions of first and second letter of all words is
NAF, POH, TEG, BUC, PIM
No one is meaning full.

97. (3) After all words are arranged Alphabetical order within the letters.
AFN, HOP, EGT, BCU, DMI
Only HOP is unchanged.

98. (5) After the arrangement
GAN, IOP, HET, DUB, NID
Only IOP have two vowels.

99. (4) S U R V E Y
U D X T V S

100. (1) G R O U P S
T O R H S P.