

IBPS PO Preliminary Grand Test –IPP-180913

HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

- 1.(3) 2.(3) 3.(4)
 4.(3) 5.(3) 6.(4)
 7.(1) 8.(4) 9.(1)
 10.(4)
 11.(2) Only option (ii) is correct, option (iii) is incorrect as although is a negative conjunction which makes a sentence negative .
 12.(5) Option (ii) is incorrect because of 'was' as 'is' should be used. Option (iii) is incorrect as 'does' should be used instead of 'did'. Option (i) is also not a correct choice.
 13.(1) Option (iii) is incorrect because of 'by'.
 14.(1) Option (ii) is incorrect as 'you' should be used instead of 'us'. Option (iii) is incorrect due to the use of negative words
 15.(5) In this question the first sentence of the paragraph is cause and the other sentence is effect and we can use because/because of in the sentence which is cause. Hence option (i) is correct. Option (iii) is a part of the 1st sentence. In option (ii) we can't use because/because of as it is an effect.
 16.(5) Only 'depending' and 'relying' will suit the first blank of (3) and (5), (3) has to be left out as the meaning of 'reserve' does not apply in the context of the sentence.
 17.(3) Only (1) and (3) will suit the first blank. But 'churning out fresh graduates' does not make sense, as the graduates

- who emerge from universities every year are, needless to say, fresh graduates only.
 18.(2) 'Resulted' (1) has to be followed by 'in'. 'Angered an outcry' and 'activated an outcry' are not correct usage. We can say 'incited', meaning 'cause to rise', but then 'determined' does not suit the second blank.
 19.(4) We cannot say, 'Execution has been taken' and 'lawsuit has been taken'. So (3) and (5) are out. We can say 'Note has been taken of 'but not 'against' a thing. 'Steps' (meaning, 'measures') can suit the first blank but not 'step'. So only 'action' fully suits the first blank. In this question, there is no need to study the options for the second blank once it is certain that only 'action' will apply in the first blank. This saves time during the exam.
 20.(1) Most of the given options can suit the first blank. Note, however, that 'counter' (5) and 'inhibit' (2) do not suit in the context of the meaning conveyed by the sentence. 'Measure' and 'inflict' are not suitable either. Only 'meet' will be correct in the second blank.

- 21.(4) 22.(4)
 23.(1) 24.(5) 25.(3)
 26-30. The correct sequence of sentences is **FEBCAD**
 26.(3) 27.(3)
 28.(2) 29.(2) 30.(1)

31.(2) $\div 3, \div 4, \div 3, \dots$
 $\therefore \frac{43}{4} = 10.75$

- 32.(4) $\times 0.2, \times 0.3, \times 0.4, \times 0.5, \times 0.6, \dots$
 $\therefore 189.8 \times 0.3 = 56.94$
 33.(1) $+ 23, + 23 \times 2, + 23 \times 3, + 23 \times 4, \dots$
 $\therefore 259 + 92 = 351$
 34.(2) $(\times 3 + 1.5), (\times 6 + 3), (\times 12 + 6), (\times 24 + 12) \dots$
 Therefore, ? = $264 \times 12 + 6 = 3174$.
 35.(2) $\times 8, \times 16, \times 32, \times 64$
 Therefore, ? = $2624 \times 32 = 93968$.

- 36.(4) Suppose the two liquid A and B are 5x and 3x litres respectively.

Now, 16 litres of mixture are taken out and 16 litres of liquid B is added

$$5x - 16 \left(\frac{5}{5+3} \right) : 3x - 16 \left(\frac{3}{5+8} \right) + 16 = 3 : 5$$

$$\frac{5x-10}{3x-6+16} = \frac{3}{5}$$

$$x = 5$$

Quantity of liquid B = $3x = 3 \times 5 = 15$ litres.

- 37.(1) Ratio of profit = $700 \times 3 + 500 \times 3 + 620 \times 6 : 600 \times 12$
 $= 2100 + 1500 + 3720 : 7200$
 $= 61 : 60$

Share of A = $\frac{61}{(61+60)} \times 726 = 366$ Rs

- 38.(5) 25 men and 15 women can complete the work in 12 days.

\therefore work done by them in 8 days = $\frac{8}{12} = \frac{2}{3}$
 Remaining work = $\frac{1}{3}$
 $\frac{1}{3}$ work is completed by 25 men in 6 days
 \Rightarrow 25 men will take 18 days to complete the whole work.
 So, 1 day's work of 25 men = $\frac{1}{18}$
 \Rightarrow 1 day's work of 15 women = $\frac{1}{12} - \frac{1}{18} = \frac{1}{36}$
 \Rightarrow 15 women will take 36 days to complete the entire job

Grand Test – IPP 180913



39.(4) According to the question,
 Part of tank filled in 10 minutes
 $= \left(\frac{1}{24} + \frac{1}{30}\right) \times 10$
 $= \frac{3}{4}$
 If all the pipes are opened together,
 Part of tank filled in 1 minute = $\left(\frac{1}{24} + \frac{1}{30} - \frac{1}{12}\right) = \frac{-1}{120}$
 \Rightarrow part of tank emptied in 1 minute = $\frac{1}{120}$
 Time taken to empty the tank = $\frac{3}{4} \times 120$
 = 90 minutes

40.(1) Let initially no. of workers = 15x
 Wages = 22y
 Now, No of workers = 11x
 Wages = 25y
 Required Ratio = $\frac{15 \times 22 \times xy}{11 \times 25 \times xy}$
 $= \frac{2 \times 3}{5}$
 = 6 : 5

41.(3) Total expenditure on Salary in 2010 and 2015 together
 = 2162 - (420 + 336 + 324 + 342) = 740
 Expenditure on salary
 in 2015 = $\frac{113}{(72+113)} \times 740 = 452$ lakh
 Percentage increase in expenditure on
 Salary from 2014 to 2015 = $\frac{452-420}{420} \times 100 \approx 7.62\%$

42.(5) Sum of expenditure on transport and expenditure on
 interest in 2013
 = 624.16 - (336 + 4.16 + 112) = 172 lakh
 Expenditure on transport in 2013
 $= \frac{3}{3+1} \times 172 = 129$ lakh

Expenditure on Transport in 2011
 = 723 - (98 + 101 + 129 + 142 + 141) = 112 lakh

43.(2) Expenditure on Bonus in 2012
 = 20.16 - (3 + 2.52 + 4.16 + 3.58 + 3.98) = 2.92 lakh
 Expenditure on bonus in 2013 = 4.16 lakh.
 Required percentage = $\frac{4.16 - 2.92}{4.16} \times 100 \approx 30\%$.

44.(2) Average expenditure on "interest on loans" from 2011 to
 2012 = $\frac{32.5 + 40.9}{2} = 36.7$.

Average expenditure on "interest on loans" from 2014 to
 2015 = $\frac{41.6 + 48.9}{2} = 45.25$.

Difference = 45.25 - 36.7 = 8.55 lakh = 855000.

45.(1) Expenditure on taxes in 2015
 = 550 - (88 + 93 + 112 + 79) $\times \frac{103}{178} = 103$ lakh
 Expected expenditure on taxes in 2016
 $= \frac{(100 + 20)}{100} \times 103 = 123.6$ lakh = Rs. 1,23,60,000.

46.(2)

	2016	2017
Arts	52,800	57,200
Commerce	96,800	1,24,800
Science	1,05,600	1,14,400
Agriculture	30,800	26,000
Pharmacy	26,400	46,800
Medicine	48,400	52,000
Engineering	79,200	98,800

Clearly in Agriculture, there was decrease in number of students from 2016 to 2017.

47.(1) Ratio = 26400 : 46800 = 22 : 39.

48.(1) % increase in Engineering students from 2016 to 2017
 $= \frac{98800 - 79200}{79200} \times 100 \approx 25\%$

49.(4) Arts & Commerce together in 2016
 = 52800 + 96800 = 1,49,600
 Arts & commerce together in 2017
 = 57,200 + 1,24,800 = 1,82,000
 Desired % = $\frac{1,49,600}{1,82,000} \times 100 \approx 82\%$

50.(3) Clearly in commerce % increase was maximum

51.(2) $3x^2 - 21x - 8x + 56 = 0$
 $3x(x - 7) - 8(x - 7) = 0$

$x = 7, \frac{8}{3}$
 $3y^2 + 3y - 8y - 8 = 0$
 $3y(y + 1) - 8(y + 1) = 0$
 $y = -1, 8$

52.(4) $x \geq y$
 $5x^2 + 30x - 4x - 24 = 0$
 $5x(x + 6) - 4(x + 6) = 0$

$x = \frac{4}{5}, -6$
 $5y^2 - 30y - 4y + 24 = 0$
 $5y(y - 6) - 4(y - 6) = 0$
 $y = \frac{4}{5}, 6$

53.(1) $x \leq y$
 $x = 7, 2y^2 + 2y + 3y + 3 = 0$
 $2y(y + 1) + 3(y + 1) = 0$
 $y = -1, \frac{-3}{2}$

54.(1) $x > y$
 eq. (i) $\times 2$
 $14x - 8y = 80$
 $8x + 8y = 8$

Eq. (i) + eq. (ii)
 $22x = 88, x = 4, y = -3$
 $x > y$
 55.(3) $15x^2 - 35x - 6x + 14 = 0$
 $5x(3x - 7) - 2(3x - 7) = 0$

$x = \frac{2}{5}, \frac{7}{3}$
 $2y^2 - 8y - 5y + 20 = 0$
 $2y(y - 4) - 5(y - 4) = 0$
 $y = \frac{5}{2}, 4$
 $x < y$

56.(3) Let the leak can empty the cistern in x minutes.

$\frac{1}{4} - \frac{1}{x} = \frac{1}{16} \Rightarrow x = \frac{16}{3}$ or $5\frac{1}{3}$ min.

57.(3) Distance covered by train from 1.35 pm to 2.45 pm,
 which is going from Amritsar to Delhi
 $= \frac{70}{60} \times 60 = 70$ km.

Now relative speed = 110 km/hr.

Distance to be covered = 400 km.

Time taken = 4 h.

Required distance = 4 \times 50 = 200 km.

58.(4) $(\ell + 8)(b - 4) = \ell b$ (i)

$(\ell - 6)(b + 5) = \ell b$ (ii)

Solving the 2 equations we get = $\ell = 27, b = 17.5m$

59.(3) Required probability = $\frac{7c_3}{15c_3} \times \frac{8c_3}{15c_3} = \frac{8}{845}$

Grand Test – IPP 180913

60.(4) A and B per day work = $\frac{1}{120} + \frac{1}{150} = \frac{27}{1800}$
 A and B work in 20 days = $\frac{20 \times 27}{1800}$
 B work in 12 days = $\frac{12}{150} = \frac{144}{1800}$
 Remaining work = $1 - (\frac{540}{1800} + \frac{144}{1800})$
 $= \frac{1116}{1800}$
 B and C 1 day work = $\frac{1116}{1800 \times 48}$
 C per day work = $\frac{1116}{1800 \times 48} - \frac{1}{150}$
 $= \frac{540}{1800 \times 48} = \frac{1}{160}$
 So no. of days by C to complete the work = 160

61.(2) $?(= (\frac{127}{100} \times 1540) + (\frac{5.5}{100} \times 150) + (\frac{104}{100} \times 7))$
 $= 1955.8 + 8.25 + 7.28$
 $= 1971.33 \approx 1970$

62.(2) $? = \sqrt{361} \times 19 + 1083 \div 57 \approx 380.$

63.(4) $(95 \times 13) + (6 \times 15) = 53 \times \sqrt{?}$
 $\Rightarrow 1235 + 90 = 1325 = 53 \times \sqrt{?}$
 $\Rightarrow 53 \times 25 = 53 \times \sqrt{?}$
 $\Rightarrow ? = 625$

64.(5) $(333\% \text{ of } 856) \div 49.95$
 $= 2850.48 \div 49.95$
 $\approx 2850 \div 50 = 57$

65.(1) $\frac{43 \times 45 \times 1680}{100 \times 301} = 108.$

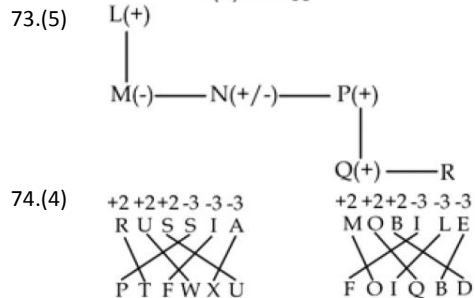
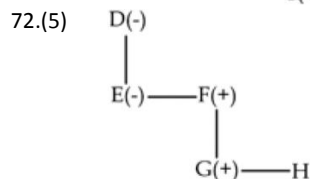
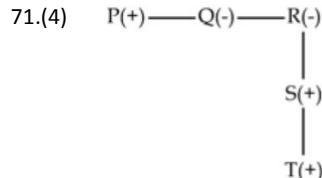
- 66.(5) I. V ♂ X (False)
 III. O ♀ S (True)

- 67.(2) I. C ♀ Q (False)
 III. I \$ M (False)

- 68.(2) I. N \$ S (False)
 III. M ♀ Q (True)

- 69.(1) I. U \$ R (True)
 III. U ♂ L (False)

- 70.(2) I. G \$ E (False)
 III. N ♀ X (False)

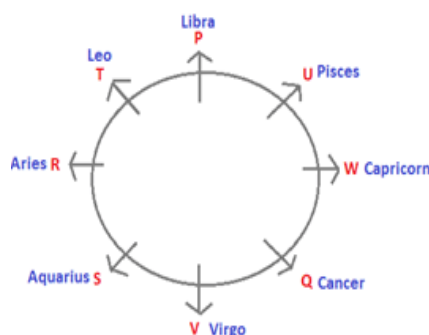


74.(4) $+2 + 2 + 2 - 3 - 3 - 3$
 R U S S I A
 P T F W X U

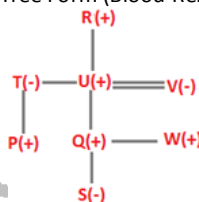
$+2 + 2 + 2 - 3 - 3 - 3$
 M O B I L E
 F O I Q B D

75.(5) Girl may be sister or cousin.

76-80.



Tree Form (Blood-Relation)-



76.(1)

77.(3)

78.(5)

79.(1)

80.(3)

81-85.

From the conditions, Vani is playing Badminton and lives on floor number 8. Only five people live above the floors on which Priya lives. Only one person lives between Priya and the one who is playing Hockey, it means the one who is playing Hockey lives either 2nd floor or 6th floor. Only three people live between the ones who are playing Hockey and Polo. Uma lives immediately below the one who is playing Disc Throw. The one, who is playing Disc Throw lives on an even numbered floor, so only one place is left for who is playing Disc Throw now it is clear that Priya is playing Disc Throw. Babita is playing Football and lives immediately above Vani now it is clear that Babita lives on topmost floor.

Only two people live between Queen and the one who is playing Golf. The one, who is playing Golf lives below the floor on which Queen lives. So there is only one possibility that Queen will live on 6th floor.

Case-1

Case-2

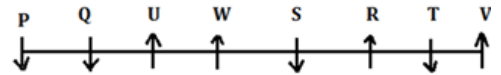
Floor	Person	Game
9	Babita	Football
8	Vani	Badminton
7		
6	Queen	Polo
5		
4	Priya	Disc Throw
3	Uma	Golf
2		Hockey
1		

Tisha lives immediately above Ria. Tisha is not playing Polo, From this condition case-2 will be eliminate. Because in case-2 there is no places for Tisha and Ria. Only case-1 will be continued with the remaining conditions.

With the rest conditions, the one who is playing Cricket does not live immediately above or immediately below Queen it means Ria is playing Cricket. Seema does not live immediately above or immediately below Priya so Seema will live on 7th floor. Veena is not playing Kabaddi so Seema will play Kabaddi. It will be fixed that Veena lives on 5th floor and is playing Bowling. We will get final answer.

Floor	Person	Game
9	Babita	Football
8	Vani	Badminton
7	Seema	Kabaddi
6	Queen	Polo
5	Veena	Bowling
4	Priya	Disc Throw
3	Uma	Golf
2	Tisha	Hockey
1	Ria	Cricket

Case-I



- 81.(1)
- 83.(5)
- 86.(2)

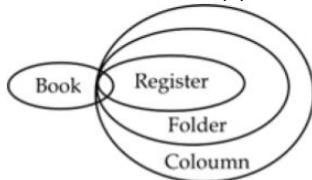
- 82.(5)
- 84.(5)

- 85.(3)

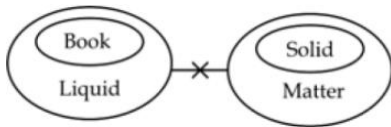
- 91.(2)
- 93.(3)
- 96-100.

Colours – Ki
 Rainbow – ro
 Sky – la
 The – so
 Of – fa
 Rocket – pe
 High – jo
 World - ne

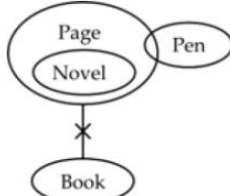
- 92.(1)
- 94.(4)
- 95.(4)
- 96.(4)
- 98.(5)
- 97.(3)
- 99.(4)
- 100.(2)



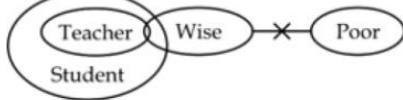
- 87.(5)



- 88.(2)



- 89.(5)

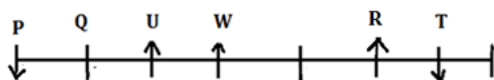


- 90.(4)

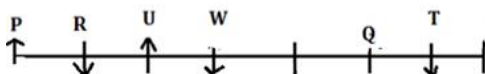


91-95. From the given conditions, Q sits 2nd to the left of the one who is 3rd to the right of T, Hence Q sits either 5th to the right of T or immediate to the right of T. T is not facing towards the north. P does not face the same direction as W faces. W is an immediate neighbor of U. Only one person sits to the left of the T. P, who sits one of the extreme ends of the row, sits 2nd left of U. Q sits 4th to the left of the R. Only one person sits to the left of the T.

Case-I



Case-II



From the given condition, U, who faces the same direction as R faces. Hence Case-II will be eliminated. Case-I is continued with the remaining conditions, V and Q face opposite direction. S sits 2nd right of U. S faces towards south direction. S sits 2nd right of U. The one, who sits 3rd to the right of the one, who sits immediate right of W, doesn't face to the north direction.