# IBPS PO Preliminary -2021. IPP-2021-11007

# HINTS & SOLUTIONS

## ANSWER KEY

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

## HINTS & SOLUTIONS

1.(5) Only 'depending' and 'relying' will suit the first blank of (c) and (e), (c) has to be left out as the meaning of 'reserve' does not apply in the context of the sentence.

2.(3) Only (a) and (c) 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.

3.(2) 'Resulted' (a) 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.

4.(4) We cannot say, 'Execution has been taken' and 'lawsuit has been taken'. So (c) and (e) 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.

5.(1) Most of the given options can suit the first blank. Note, however, that 'counter' (e) and 'inhibit' (b) 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.

6.(3) Double negatives should never be used in a sentence. It makes an error. So, remove 'No'

7.(4) By/to should be used in place of 'at'

8.(1) Replace 'so' with 'as' because correct expression is **As+Adverb+As**

9.(2) Use 'support' in place of 'supports' because it has been used as an uncountable noun here.

10.(2) Since the sentence is in the present tense, use 'reconsiders' in place of 'reconsidered'

| | |
|---|---|
| 11.(3) | 12.(3) |
| 13.(4) | 14.(3) |
| 15.(3) | 16.(4) |
| 17.(1) | 18.(4) |
| 19.(1) | 20.(4) |

21.(1) They resort to ways and means without any ethical or moral considerations

| | | |
|---|---|---|
| 22.(2) | 23.(5) | |
| 24.(4) | 25.(3) | |
| 26.(5) | 27.(5) | |
| 28.(2) | 29.(5) | 30.(4) |

31.(1) Required percentage

$$=\frac{\dfrac{18}{25}\times 3350}{\dfrac{7}{8}\times 2016}\times 100 = \frac{18\times 134}{7\times 252}\times 100$$

$$=\frac{2412}{1764}\times 100 = 136.73\%.$$

32.(4) TA earned $=\dfrac{3}{19}\times 4256\times 12.90 = 8668.8.$

33.(3) Distance travelled by Rail in -

Delhi $=\dfrac{11}{12}\times 432 = 396$

Kolkata $=\dfrac{3}{19}\times 4256 = 672$

Chennai $=\dfrac{5}{18}\times 3528 = 980$ (maximum)

Mumbai $=\dfrac{7}{15}\times 3350 = 938$

Hyderabad $=\dfrac{4}{13}\times 1456 = 448$

Bengaluru $=\dfrac{1}{8}\times 2016 = 252$

Lucknow $=\dfrac{3}{4}\times 1024 = 768$

34.(2) Required Ratio = 1 × 16.1 : 3 × 12.10 = 16.1 : 36.3

= 161 : 363 ≈ 2 : 5.

35.(2) Required value $=\dfrac{11}{12}\times 432\times 12.6+\dfrac{1}{12}\times 432\times 15.2$

$$+\dfrac{3}{4}\times 1024\times 12.1+\dfrac{1}{4}\times 1024\times 16.1$$

= 4989.6 + 547.2 + 9292.8 + 4121.6

= 18951.2.

**36.(2)** $3x^2 - 21x - 8x + 56 = 0$
$3x(x-7) - 8(x-7) = 0$
$x = 7, \frac{8}{3}$
$3y^2 + 3y - 8y - 8 = 0$
$3y(y+1) - 8(y+1) = 0$
$y = -1, 8$
$x \geq y$

**37.(4)** $5x^2 + 30x - 4x - 24 = 0$
$5x(x+6) - 4(x+6) = 0$
$x = \frac{4}{5}, -6$
$5y^2 - 30y - 4y + 24 = 0$
$5y(y-6) - 4(y-6) = 0$
$y = \frac{4}{5}, 6$
$x \leq y$

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

**39.(1)** eq. (i) × 2
$14x - 8y = 80$
$8x + 8y = 8$
Eq. (i) + eq. (ii)
$22x = 88, x = 4, y = -3$
$x > y$

**40.(3)** $15x^2 - 35x - 6x + 14 = 0$
$5x(3x-7) - 2(3x-7) = 0$
$x = \frac{2}{5}, \frac{7}{3}$
$2y^2 - 8y - 5y + 20 = 0$
$2y(y-4) - 5(y-4) = 0$
$y = \frac{5}{2}, 4$
$x < y$

**41.(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 × 5 = 15 lires.

**42.(1)** Ratio of profit = 700 × 3 + 500 × 3 + 620 × 6 : 600 × 12
= 2100 + 1500 + 3720 : 7200
= 61 : 60
Share of A = $\frac{61}{(61+60)} \times 726 = 366$ Rs

**43.(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

**44.(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

**45.(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

**46.(4)** Let fare of first class = 4x
Fare of second class = x
Let No. of travelers travelled by first class = y
No of travelers travelled by second class = 40 y
Total fare = 1100
$4xy + 40xy = 1100$
$44xy = 1100$
$xy = 25$
Required amount = 4xy = 100 Rs

**47.(4)** 20% of 24 = 4.8
$\therefore$ Due to increase, 2 eggs costs Rs. = 4.8
$\therefore$ Present rate of eggs per dozen $= \frac{4.8}{2} \times 12$
= 28.8 Rs

**48.(4)** Let initially boys and girls be 5x and 3x.
Now, new boys and girls be 5y and 7y
$\therefore 5x + 3x + 5y + 7y = 1200$
$8x + 12y = 1200$
$2x + 3y = 300$ ............(i)
Now,
$\frac{5x+5y}{3x+7y} = \frac{7}{5}$
$25x + 25y = 21x + 49y$
$4x - 24y = 0$
$2x - 12y = 0$ ......(ii)
From eqn. (i) - Eqn. (ii)
$15y = 300$
$y = 20$
$x = 120$
Required students = 8x
$= 8 \times 120$
= 960

**49.(3)** S.P. of two bullock = 8400 + 8400 = Rs. 16800
CP of first bullock $= \frac{100}{120} \times 8400$
= 7000
CP of second bullock = 16800 - 7000
Required % less $= \frac{9800-8400}{9800} \times 100$
$= \frac{1400}{9800} \times 100$
$= \frac{7}{49} \times 100$
$= \frac{100}{7} = 14\frac{2}{7}\%$

**50.(3)** $\dfrac{S_2}{S_1} = \sqrt{\dfrac{\frac{24}{5}}{\frac{10}{8}}} = \sqrt{\dfrac{72}{50}}$

$\dfrac{S_2}{S_1} = \sqrt{\dfrac{36}{25}} = \dfrac{6}{5}$

$S_2 = \dfrac{45 \times 6}{5}$

$= 54 \text{ km/hr}$

**51.(4)** $84 + 144 = \dfrac{1440}{x}$

$x = \dfrac{1440}{228}$

$x = 5$

**52.(5)**

**53.(3)** $3^2 = 5 + x \Rightarrow x = 4$.

**54.(4)** $4^{2x} = 4^8 \Rightarrow x = 4$.

**55.(2)** $1.135 + 2.55 = 3.68$

**56.(3)** Req. difference $= \left[50 \times \dfrac{10}{100} \times \dfrac{52}{100}\right] - \left[50 \times \dfrac{8}{100} \times \dfrac{35}{100}\right]$

$= \dfrac{50}{100 \times 100}[520 - 280]$

$= \dfrac{50 \times 240}{100 \times 100} = 1.2 \text{lakh}$

**57.(4)** Number of children in city C which is below poverty line

$= 30\% \text{ of} 50 \times \dfrac{8}{100} \times \dfrac{35}{100}$

$= \dfrac{30}{100} \times 50 \times \dfrac{8}{100} \times \dfrac{35}{100}$

Number of children in city D which is below poverty line.

$= 25\% \text{ of } 50 \times \dfrac{13}{100} \times \dfrac{40}{100} = \dfrac{25}{100} \times 50 \times \dfrac{13}{100} \times \dfrac{40}{100}$

Total $= \dfrac{50}{100 \times 100 \times 100} \times [30 \times 8 \times 35 + 25 \times 13 \times 40]$

$= \dfrac{1}{20000}[8400 + 13000]$

$= \dfrac{21400}{20000} = 1.07 \text{lakh}.$

**58.(1)** Req. Ratio $= 50 \times \dfrac{20}{100} \times \dfrac{55}{100} : 50 \times \dfrac{22}{100} \times \dfrac{55}{100}$

$= 10 : 11$

**59.(5)** Req.% $= \dfrac{50 \times \frac{18}{100} \times \frac{45}{100}}{50 \times \frac{9}{100} \times \frac{50}{100}} \times 100$

$= 180\%$

**60.(4)** Req. Sum $= 50 \times \dfrac{9}{100} \times \dfrac{50}{100} + 50 \times \dfrac{22}{100} \times \dfrac{45}{100}$

$= \dfrac{50}{100 \times 100}[450 + 990]$

$= \dfrac{50 \times 1440}{100 \times 100}$

$= 7.2 \text{ lakh}$

**61.(5)** $\times \dfrac{1}{2} + 4, \times \dfrac{1}{2} + 4, \times \dfrac{1}{2} + 4,$ and so on

$128 \times \dfrac{1}{2} + 4 = 64 + 4 = 68.$

**62.(2)** $\times 2, \times \dfrac{1}{3}, \times 4, \times \dfrac{1}{5}$

$320 \times \dfrac{1}{5} = 64$

**63.(5)** $\times 2 + 3, \times 3 + 4, \times 4 + 5, \times 5 + 6$

$? \times 2 + 3 = 33 \Rightarrow ? \times 2 = 30 \Rightarrow ? = 15.$

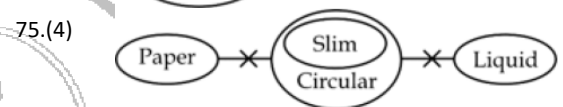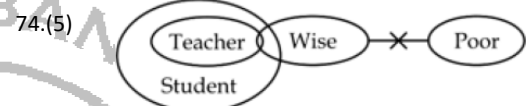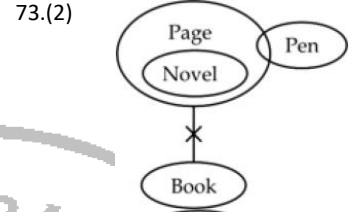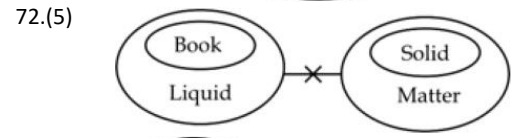**64.(2)** $+1^3, +2^3, +3^3, +4^3 \ldots$

$5 + 1^3 = 6$

$6 + 2^3 = 14$

**65.(3)**

26 → 47 → ? → 131 → 194

21 ........ 63

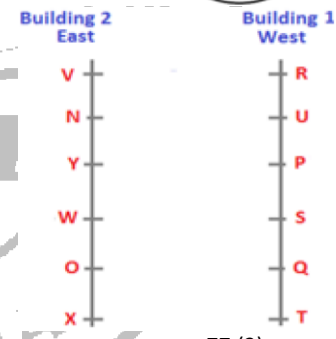7×3  7×5  7×7  7×9

$47 + 35 = ? \Rightarrow ? = 82.$

**66-70.** fastest – re
champion – nu
is – li
vettel – fo
team – jit

Ferrari / was – pil / dil

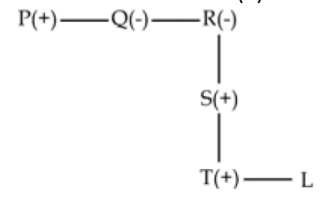**66.(3)**  **67.(5)**

**68.(4)**  **69.(3)**  **70.(2)**

**71.(2)**

Book | Register | Folder | Coloumn

**72.(5)**

Book Liquid ✕ Solid Matter

**73.(2)**

Page Novel | Pen
✕
Book

**74.(5)**

Teacher Student | Wise ✕ Poor

**75.(4)**

Paper ✕ Slim Circular ✕ Liquid

**76-80.**

Building 2 East          Building 1 West

V            R
N            U
Y            P
W            S
O            Q
X            T
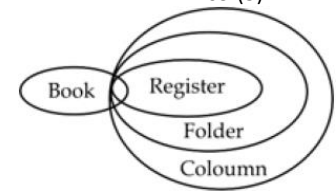
**76.(5)**  **77.(3)**

**78.(1)**  **79.(4)**  **80.(1)**

**81-85.**

| Stations | Get in | Get down |
|---|---|---|
| Base | E , C, F | - |
| I | B , D | - |
| II | - | F |
| III | G | D, B |
| IV | A | E |
| V | - | A, G, C |

**81.(3)**  **82.(4)**

**83.(1)**  **84.(4)**  **85.(5)**

**86.(4)**  P(+) —— Q(-) —— R(-)

S(+)

T(+) —— L

87.(5)

```
D(-)
 |
E(-)——F(+)
         |
       G(+)——H
```

88.(5)

```
L(+)
 |
M(-)——N(+/-)——P(+)
                 |
              Q(+)——R
```

89.(4)

```
+2 +2+2 -3 -3 -3        +2 +2+2 -3 -3 -3
R U S S I A            M O B I L E
P T F W X U            F O I Q B D
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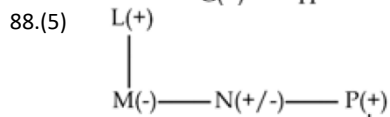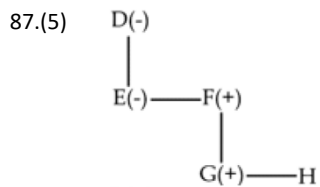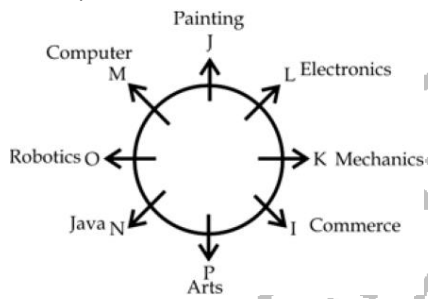
90.(5) Girl may be sister or cousin.

91-95.



91.(4)        92.(2)
93.(5)        94.(3)        95.(5)
96.(3)        97.(1)
98.(1)        99.(2)        100.(4)