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## IBPS PO SPECIAL PHASE - I-368 (SOLUTION)

(1-5) :

## REASONING

## Family Tree




1. (2)
2. (3)
3. (2)
4. (3)
5. (4)
6. (4) $\mathrm{S} \leq \mathrm{T}=\mathrm{W}>\mathrm{R}$
I. $\mathrm{R}<\mathrm{S} \rightarrow$ False
II. $\mathrm{S}<\mathrm{W} \rightarrow$ False

Hence, Neither conclusion I nor II is true.
7. (3) $\mathrm{X}=\mathrm{Y} \leq \mathrm{Z}>\mathrm{W}$
I. $Z=X \rightarrow$ can't say
II. $Z>X \rightarrow$ can't say

Hence, Either conclusion I or II is true.
8. (1) $\mathrm{Y}>\mathrm{S} \geq \mathrm{R}=\mathrm{X} \leq \mathrm{Z}$
I. $\mathrm{Y}>\mathrm{R} \rightarrow$ True
II. $\mathrm{R}>\mathrm{Z} \rightarrow$ False

Hence, Only conclusion $I$ is true.
9. (1) $Z \geq Y=X>P>Q \geq R$
I. $\mathrm{X}>\mathrm{Q} \rightarrow$ True
II. $\mathrm{R}>\mathrm{Y} \rightarrow$ False

Hence, Only conclusion I is true.
10. (2) $\mathrm{T} \geq \mathrm{P} \geq \mathrm{N}=\mathrm{S}<\mathrm{R}<\mathrm{Q} ; \mathrm{L}<\mathrm{P}$
$\mathrm{L}<\mathrm{P} \geq \mathrm{N}=\mathrm{S}<\mathrm{R}<\mathrm{Q}$
I. $\mathrm{L} \geq \mathrm{Q} \rightarrow$ False
$\mathrm{T} \geq \mathrm{P}>\mathrm{L}$
II. $\mathrm{T}>\mathrm{L} \rightarrow$ True

Hence, Only conclusion II is true.
(11-15) :

11. (4)
12. (3)
13. (3)
14. (2)

15. (1)
16. (3)

I. False
II. False III. True Only III follows.
17. (1)

I. True
II. True
III. True
All follow.
18. (3)

I. False
II. True
III. True
Only II and III follow.
(19-20) :

19. (4)
20. (3)

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## (21-25) :

| Floor | Person |
| :---: | :---: |
| 8 | I |
| 7 | H |
| 6 | Vacant Floor |
| 5 | M |
| 4 | L |
| 3 | G |
| 2 | K |
| 1 | J |


26. (2)
27. (5)
29. (3)
30. (1)
31. (4)
32. (4)
28. (2)
33. (3)
34. (2)
35. (5)

## Maths

36. (1)

37. (2)

38. (4)

39. (3)


40. (1)

41. (2) Total sale of Mahindra cars in West

Bengal $=\frac{58}{100} \times 20=11.6=11600$
Total sale of Mahindra car in Goa
$=58 \times \frac{9}{100}=5220$
Required difference $=11600-5220$
$=6380$
42. (5) Sales of Mahindra cars in Punjab
$=\frac{58}{100} \times 14=8.12$ thousand $=8120$
Increase in volume $=15000-8120$
$=6880$
Percentage increase $=\frac{6880}{58000} \times 100$
$\approx 12 \%$
43. (3) Total sale of Mahindra in 2017
$=\frac{112}{100} \times 58,000=\frac{56 \times 29}{25} \times 1000$
$=64960$
New total sale in Maharashtra
$=\frac{134}{100} \times \frac{10}{100} \times 58,000=7772$
New total sale in M.P.
$=\frac{122}{100} \times \frac{22}{100} \times 58,000 \approx 15567$
Total new sale in these states $=23339$
Previous overall sale in all state except
M.P. and Maharashtra $=\frac{68}{100} \times 58,000$
$=39440$
Required increase in sale in other states
$=(64960-23339)-39440 \approx 2180$
44. (4) Required $\%=\frac{101}{58} \times 100 \approx 175 \%$
45. (1) Net total sale $=\frac{120}{100} \times 199000=238800$ New sale of Mahindra in West Bengal
$=\frac{110}{100} \times \frac{20}{100} \times 58000$
New total sale of Mahindra
$=\frac{12760}{20} \times 100=63800$
Required total sale $=238800-63800$
$=1,75,000$

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46. (3) $0.0004 \div 0.0001 \times 36.000009=$ ?
$\Rightarrow$ ? $=\left(\frac{0.0004}{0.0001}\right) \times 36$
$=4 \times 36=144 \approx 145$
47. (3) $63.9872 \times 9449.8780 \div 243.0034=$ ?
$\Rightarrow 64 \times 9450 \div 243 \approx \frac{64 \times 9450}{243}$
$=2488.88 \approx 2490$
48. (3) $\sqrt{1220} \times 16.06+\sqrt{4897}=$ ?
$\Rightarrow 35 \times 16+70=560+70=630$
49. (3) $(25.03)^{2}+(?)^{2}+(5.965)^{2}=805$
$(?)^{2}=805-36-625$
$(?)^{2}=144=12$
50. (3) $\sqrt{(34.999 \times 99.999 \div 5.045+750.0003 \div 24.999)}=$ ?
$=\sqrt{(35 \times 100 \div 5+750 \div 25)}=?$
$=\sqrt{(35 \times 5+30)}=$ ?
$=\sqrt{(700+30)}=$ ?
$=\sqrt{730}=$ ?
? = 27 (approx)
51. (2) Cost price of item $D=$ Rs. 350

Marked price of item $\mathrm{D}=$ Rs. 350
Discount offered $=20 \%$
Selling price of item D = Rs. 280
$\operatorname{Loss} \%=\frac{\text { C.P }- \text { S.P }}{\text { C.P }} \times 100$
$\mathrm{Loss} \%=\frac{350-280}{350} \times 100$
$\operatorname{Loss} \%=\frac{70}{350} \times 100=20 \%$
52. (1) Cost price of item $A=$ Rs. 100

Cost price of item B = Rs. 100
Marked price of item $B=100 \times \frac{107}{100}$
= Rs. 107

## For no loss or profit :

Selling price of item B = Rs. 100
Discount offered for no loss or profit
$=\frac{\mathrm{M} \cdot \mathrm{P}-\mathrm{S} . \mathrm{P}}{\mathrm{M} . \mathrm{P}} \times 100$
Discount offered for no loss or profit
$=\frac{107-100}{170} \times 100=6.54 \%$
53. (3) Marked price of item $\mathrm{C}=$ Rs. 220 Discount offered $=20 \%$
Selling price of item C = Rs. 176
Profit $\%=17 \frac{1}{3} \%$
Profit $\%=\frac{\text { S.P }- \text { C.P }}{\text { C.P }} \times 100$
$\frac{52}{3}=\frac{176-\text { C.P }}{\text { C.P }} \times 100$
52 C.P. $=52800-300$ C.P.
352 C.P. $=52800$
C.P. = Rs. 150
54. (5) Marked price of item $\mathrm{E}=\mathrm{Rs} .620$

Cost price of item $\mathrm{E}=$ Rs. 310
Discount offered = 25\%
Selling price of item $\mathrm{E}=620 \times \frac{75}{100}$
$=$ Rs. 465
Profit $\%=\frac{\text { S.P }- \text { C.P }}{\text { C.P }} \times 100$
$\frac{465-310}{310} \times 100=50 \%$
55. (4) Cost price of item $\mathrm{D}=\mathrm{Rs} .350$

Profit $=40 \%$
Selling price of item $D=350 \times \frac{140}{100}$
= Rs. 490
Discount offered $=20 \%$
Marked price $\times \frac{80}{100}=$ Selling price
Marked price $=\frac{490 \times 100}{80}=$ Rs. 612.5
56. (4) Let the expenditure on grocery products and other items be $3 x$ and $7 x$ respectively So, $3 \mathrm{x}+7 \mathrm{x}=3570$
$10 \mathrm{x}=3570$
$\mathrm{x}=357$
Thus, expenditure on grocery products $=$ Rs. $3 \times 357=$ Rs. 1071
Expenditure on other items $=7 \times 357$
= Rs. 2499
New expenditure $=112 \%$ of Rs. $1071+$ $115 \%$ of Rs. 2499


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$=1.12 \times 1071+1.15 \times 2499$
$=1199.52+2873.85$
$=4073.37$ = New salary
Increase in income $=$ New salary - Old salary $=4073.37-3570=$ Rs. 503.37
57. (4) Value of car after three years = Selling price of Car by Anil
=Rs. $218700+\mathrm{x}$
Cost price for Sandeep $=218700+x+x+$ $18700=$ Rs. $237400+2 x$
Marked up price of car by Sandeep $=(100$
$+20) \%$ of $(237400+2 x)$
$=1.2 \times(237400+2 \mathrm{x})$
Selling price of car for Sandeep $=1.2 \times$ $(237400+2 x)\left(1-\frac{1}{10}\right)$
$=1.08 \times(237400+2 x)$
Profit for Sandeep $=1.08 \times(237400+2 x)-$ $(237400+2 x)=0.08 \times(237400+2 x)$
Therefore, according to the question,
$\mathrm{x}-0.08 \times(237400+2 \mathrm{x})=7300$
$x-18992-0.16 x=7300$
$0.84 \mathrm{x}=26292$
$\mathrm{x}=\frac{26292}{0.84}=31300$
58. (4) The ratio between the cost price of the two articles will be :

A

| +20 |  | $-12 \%$ |
| :--- | :--- | :--- |
| 12 | 0 | 20 |
| 3 | $:$ | 5 |

So the cost price of article $\mathrm{B}=\frac{5}{8} \times 8000$ $=5000$
$\&$ cost price of article $A=\frac{3}{5} \times 8000$
$=3000$
now overall profit $25 \%$ Of $8000=2000$
profit on article A $20 \%$ of $3000=600$
Now required profit amount on article B
$=2000-600=1400$
Hence required selling price of article B
$=5000+1400=6400$
59. (4) $90000 \times\left[1+\frac{6}{100} \times(y+2)\right]+132900$
$=150000 \times\left[1+\frac{9}{100} \times(y+5)\right]$
$90000 \times[1+0.06 \times(\mathrm{y}+2)]+132900$
$=150000 \times[1+0.09 \times(y+5)]$
$90000 \times[1.12+0.06 y]+132900$
$=150000 \times[1.45+0.09 \mathrm{y}]$
$100800+5400 y+132900$
$=217500+13500 \mathrm{y}$
$8100 y=16200$
$\mathrm{y}=2$
Accumulated amount
$=1200000 \times\left(1+\frac{5}{100}\right)^{2}$
$=1200000 \times 1.1025=$ Rs. 1323000
60. (3) Let $x$ be the individual weight of first six boys.
Total weight of six boys $=6 x$
Weight of 7 th boy $=\frac{98}{100} \mathrm{x}$
Weight of 8 th boy $=\frac{104}{100} \mathrm{x}$
Weight of 9 th boy $=\frac{106}{100} x$
Weight of 10 th boy $=\frac{108}{100} \mathrm{x}$

Then, $50.8 \times 10=6 x+\frac{98}{100} x+\frac{104}{100} x+$
$\frac{106}{100} x+\frac{108}{100} x$
$\mathrm{x}=50 \mathrm{~kg}$
Now, weight of 7 th boy
$=\frac{98}{100} \times 50=49 \mathrm{~kg}$
Weight of 8 th boy $=\frac{104}{100} \times 50=52 \mathrm{~kg}$
Weight of 9 th boy $=\frac{106}{100} \times 50=53 \mathrm{~kg}$

Weight of 10 th boy $=\frac{108}{100} \times 50=54 \mathrm{~kg}$
Therefore, the average weight of the group when two new boys of weights 54 kg and 56 kg respectively join the group and six boys having equal weights leave the group,


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$=\frac{49+52+53+54+54+56}{6}=53 \mathrm{~g}$
61. (1) Explanation: Quantity of milk left
$=50\left(1-\frac{10}{50}\right)^{2}$
$=50 \times \frac{4}{5} \times \frac{4}{5}=32$ litres
62. (2) Sum of eight numbers $=25 \times 8=200$

Sum of first two numbers $=\frac{39}{2} \times 2=39$
Sum of first three numbers
$=\frac{70}{3} \times 3=70$
Let, the sixth number be $x$
So, sum of sixth, seventh and eighth number $=200-(39+70)$
$=200-109=91$
$=x+x+5+x+8=91$
$=x=26$
Therefore, seventh number
$=26+5=31$
63. (1) Let the CP of watch $=\mathrm{x}$

SP of watch after selling it at a loss of
$10 \%=x \times \frac{90}{100}=0.9 x$
SP of watch if selling it at a profit of $10 \%$
$=\mathrm{x} \times \frac{110}{100}=1.1 \mathrm{x}$
Difference $=1.1 \mathrm{x}-0.9 \mathrm{x}=0.2 \mathrm{x}$
or, $0.2 \mathrm{x}=50$
Hence, the CP of watch (x) $=250$
Initial loss $=250 \times \frac{10}{100}$
Profit if 'A' sold the watch at $5 \%=250$
Hence,
Requied percentage $=250 \times \frac{5}{100}=12.5$
Hence, Reqd percentage $=\frac{25}{12.5} \times 100$
= 200\%
64. (2) Let dealer charges the shopkeeper

Rs. 1 for 1 unit of item.
Let, money spent by shopkeeper
= Rs. 100
Then items he got $=\frac{120}{100} \times 100=120$
While selling he gives 80 items at the Cost 100 item, total money made by Him on selling 120 items
$\frac{100}{80} \times 120=$ Rs. 150
Profit $\%=\frac{150-100}{100} \times 50 \%$
65. (4) Reduced price or new price of the
mangoes $=2485.50 \times \frac{35.25}{100}$
$=876.13875$
Reduced price or new price of the
mangoes per $\mathrm{Kg}=\frac{876.13875}{6.75}=129.798$
$\approx$ Rs. 130
Initial price of the mangoes per kg
$=\frac{130}{64.75} \times 100=\frac{1200}{7}=200.772$
$\approx$ Rs. 201
66. (2) I. $8 x^{2}+6 x=5$
$\Rightarrow 8 \mathrm{x}^{2}+10 \mathrm{x}-4 \mathrm{x}-5=0$
$\Rightarrow(4 x+5)(2 x-1)=0$
$\Rightarrow \mathrm{x}=\frac{1}{2},-\frac{5}{4}$
II. $12 \mathrm{y}^{2}-22 \mathrm{y}+8=0$
$\Rightarrow 6 y^{2}-11 y+4=0$
$\Rightarrow 6 y^{2}-3 y-8 y+4=0$
$\Rightarrow(2 y-1)(3 y-4)=0$
$\Rightarrow \mathrm{y}=\frac{1}{2}, \frac{4}{3}$
$\Rightarrow \quad y \geq x$
67. (1) I. $17 x^{2}+48 x-9=0$
$\Rightarrow 17 \mathrm{x}^{2}+51 \mathrm{x}-3 \mathrm{x}-9=0$
$\Rightarrow(x+3)(17 x-3)=0$
$\Rightarrow \mathrm{x}=\frac{3}{17},-3$
II. $13 y^{2}-32 y+12=0$
$\Rightarrow 13 y^{2}-26 y-6 y+12=0$
$\Rightarrow(y-2)(13 y-6)=0$
$\Rightarrow \mathrm{y}=2, \frac{6}{13}$
$\Rightarrow y>x$
68. (4) I. $8 x^{2}+26 x+15=0$
$\Rightarrow 8 x^{2}+20 x+6 x+15=0$
$\Rightarrow 4 \mathrm{x}(2 \mathrm{x}+5)+3(2 \mathrm{x}+5)=0$
$\Rightarrow(2 x+5)(4 x+3)=0$
$\Rightarrow \mathrm{x}=-\frac{5}{2},-\frac{3}{4}$
II. $4 \mathrm{y}^{2}+24 \mathrm{y}+35=0$
$\Rightarrow 4 y^{2}+10 y+14 y+35=0$
$\Rightarrow 2 y(2 y+5)+7(2 y+5)=0$
$\Rightarrow(2 y+5)(2 y+7)=0$
$\Rightarrow \mathrm{y}=-\frac{5}{2},-\frac{7}{2}$
$\Rightarrow x \geq y$
69. (1) I. $6 x^{2}+19 x+15=0$
$\Rightarrow 6 x^{2}+9 x+10 x+15=0$
$\Rightarrow(2 x+3)(3 x+5)=0$
$\Rightarrow \mathrm{x}=-\frac{3}{2},-\frac{5}{3}$
II. $24 \mathrm{y}^{2}+11 \mathrm{y}+1=0$
$\Rightarrow 24 y^{2}+8 y+3 y+1=0$
$\Rightarrow(3 y+1)(8 y+1)=0$
$\Rightarrow \mathrm{y}=-\frac{1}{3},-\frac{1}{8}$
$\Rightarrow \mathrm{y}>\mathrm{x}$
70. (3) I. $2 \mathrm{x}^{2}+11 \mathrm{x}+15=0$
$\Rightarrow 2 x^{2}+6 x+5 x+15=0$
$\Rightarrow(\mathrm{x}+3)(2 \mathrm{x}+5)=0$
$\Rightarrow \mathrm{x}=-3,-\frac{5}{2}$
II. $4 y^{2}+22 y+24=0$
$\Rightarrow 2 y^{2}+11 y+12=0$
$\Rightarrow 2 y^{2}+8 y+3 y+12=0$
$\Rightarrow(y+4)(2 y+3)=0$
$\Rightarrow \mathrm{y}=-4,-\frac{3}{2}$

## ENGLISH LANGUAGE

(91-95) : (BADECF)
91. (2)
92. (1)
93.
(4)
94. (3)
95. (5)
96. (4) Replace 'arising' by 'rising'.
97. (2) Replace 'are' by 'is', as the verb will follow the subject and the sentence i.e, 'Duke's collection' which is singular in nature.
98. (3) Replace 'it' by plural pronoun 'them'.
99. (3) Replace 'faster' by 'the fastest'.
100. (4)

Change the sentence in simple past as 'he went home'.


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## IBPS PO SPECIAL PHASE - I - 368 (ANSWER KEY)

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100.(4)
