## Campus

## KD Campus

## IBPS PO SPECIAL PHASE - I - 345 (SOLUTION)

REASONING
(1-5) :

| Friends | Day | Show |
| :---: | :---: | :---: |
| P | Tuesday | Monolog ue |
| Q | Thursday | Play |
| R | Saturday | Debate |
| S | Monday | Speech |
| T | Sunday | Music |
| U | Wednesday | Dance |
| V | Friday | Mimicry |

1. (2)
2. (4)
3. (1)
4. (5)
5. (4)
(6-10) :

6. (2)
(2) 7. (1)
7. (1)
8. (5)
9. (4)
(11-15) :

10. (1)
11. (5)
12. (3)
13. (4)
14. (4)
(16-20) :
15. (3)

I. Doubt
III. Doubt
II. Doubt
IV. Doubt

Only either II or IV follows.

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17. (2)

I. True
III. Doubt
II. Doubt
IV. Doubt

Only I follows.
18. (4)

I. Doubt
III. Doubt
II. Doubt
IV. Doubt

Only either I or III follows.
19. (1)

I. True
III. Doubt
II. True
IV. Doubt

Only I, II and either III or IV follow.
20. (1)

I. Doubt
III. Doubt
II. Doubt
IV. Doubt

None follows.
(21-23) :

21. (2)
22. (4)
23. (3)
(24-28) :

24. (4)
25. (2)
26. (1)
27. (4)
28. (3)

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(29-33) :
@ $\rightarrow \geq \quad \# \rightarrow>\quad$ > $\rightarrow=\quad * \rightarrow<$
29. (1) $\mathrm{T}>\mathrm{V}>\mathrm{M}=\mathrm{F}$
I. $\mathrm{T}>\mathrm{M} \rightarrow$ True
II. $\mathrm{T} \geq \mathrm{F} \rightarrow$ False

Only conclusion I is true.
30. (5) $R=L \leq M<F$
I. $\mathrm{F}>\mathrm{R} \rightarrow$ True
II. $\mathrm{R}<\mathrm{N} \rightarrow$ True

Both conclusions I and II are true.
31. (1) $\mathrm{H}>\mathrm{I} \geq \mathrm{J} \leq \mathrm{P}$
I. $\mathrm{H}>\mathrm{J} \rightarrow$ True $\quad$ II. $\mathrm{H}>\mathrm{P} \rightarrow$ False

Only conclusion I is true.
32. (4) $\mathrm{L}<\mathrm{D}>\mathrm{K} \leq \mathrm{J}$
I. L $>\mathrm{K} \rightarrow$ False $\quad$ II. $\mathrm{L} \leq \mathrm{K} \rightarrow$ False

Neither conclusion I nor II is true.
33. (4) $\mathrm{Q}<\mathrm{W}=\mathrm{E} \geq \mathrm{K}$
I. $\mathrm{Q} \leq \mathrm{K} \rightarrow$ False
II. W $\geq \mathrm{K} \rightarrow$ False

Neither conclusion I nor II is true.
34. (5)
35. (3)

$\mathrm{AC}=\sqrt{\mathrm{AB}^{2}+\mathrm{BC}^{2}}$
$=\sqrt{35^{2}+12^{2}}=\sqrt{1225+144}$
$=\sqrt{1369}=37 \mathrm{~m}$
$\therefore$ Required distance $=37-20=17 \mathrm{~m}$

## MATHS

36. (3) $(\text { ? })^{2}=63.9872 \times 9449.8780 \div 243.0034$

Taking approximate integral values,
(?) $=64 \times 9450 \div 240$
$\approx \frac{64 \times 9450}{240}=2520 \approx 2500$
$\therefore \quad ?=\sqrt{2500}=50$
37. (4) $?=5237.897-6629.010+7153.999-2205.102$
$\approx 5238-6629+7154-2205$
$=(5238+7154)-(6629+2205)$
$\approx 12392-8834=3558$

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38. (2) $?=4985.0346 \div 215.987-3768.112 \div 206.868$
$\approx 4985 \div 216-3768 \div 207$
$=23.078-18.202$
$=4.876 \approx 5$
39. (1) ? $\sqrt{956240} \approx 977.8 \approx 979$
40. (5) $?=459 \%$ of $849.947+266 \%$ of $6284.012-1486.002$
$\approx \frac{460 \times 850}{100}+\frac{260 \times 6280}{100}-1486$
$=3910+16328-1486=18752$
41. (3) No. of employess who are managers in company $B=\frac{1800}{6} \times 11=3300$
$\therefore \quad$ No of male employees who are supervisor for company $B==\frac{3300}{20} \times 80 \times \frac{7}{10}=9240$
42. (1) Number of female employees who are manager for company $D=2000 \times \frac{35}{100} \times \frac{3}{7}=300$
43. (3) No. of employees who are supervisor in company $E=\frac{2100}{7} \times 15=4500$
$\therefore$ Total employees of company $E=\frac{4500}{40} \times 100=11250$
44. (2) No. of emplyees who are manager in company $C=\frac{1500}{3} \times 10=5000$

Total employees in company $C=\frac{5000}{25} \times 100=2000$
No. of employees who are manager in company $A=\frac{1800}{2} \times 5=4500$

Total employees $=\frac{4500}{25} \times 100=18000$
$\therefore$ Required ratio $=20000: 18000=10: 9$
45. (4) Total of employees in company $A=\frac{2500}{25} \times 100=10000$

No. of male employees in company D who are supervisor $=10000 \times \frac{75}{100} \times \frac{6}{10}=4500$
46. (4) The pattern is :
$8+6=14$
$14+18(=6+12)=32$
$32+38(=18+20)=70$
$70+66(=38+28)=136$
$136+102(=66+36)=\mathbf{2 3 8}$

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47. (1) The pattern is:
$25+1 \times 16=41$
$41+3 \times 16=41+48=89$
$89+5 \times 16=89+80=169$
$169+7 \times 16=169+112=281$
$281+9 \times 16=281+144=425$
48. (2) The pattern is:
$461+13=474$
$474-9=465$
$465+13=478$
$478-9=469$
$469+13=482$
49. (5) The pattern is :
$(980 \div 2)+26=516$
$(516 \div 2)+26=284$
$(284 \div 2)+26=168$
$(168 \div 2)+26=110$
$(110 \div 2)+26=81$
50. (5) The pattern is :
$4+0=4$
$4+6=10$
$10+24(=6+18)=34$
$34+60(=6+54)=94$
$94+168(=6+162)=262$
51. (3) According to question, work done by A in 4 days $=\frac{4}{8}=\frac{1}{2}$

Net work done by $(A+B)$ in 1 day $=\left(\frac{1}{8}-\frac{1}{3}\right)=\frac{-5}{24}$

Work done by $(\mathrm{A}+\mathrm{B})$ in 2 days $=\frac{-5}{24} \times 2=\frac{-5}{12}$
Work done in 6 days $=\frac{1}{2}+\left(-\frac{5}{12}\right)=\frac{1}{12}$
$\therefore$ Remaining $\frac{11}{12}$ of the wall is built by A in $\frac{8 \times 11}{12}=\frac{88}{12}=\frac{22}{3}=7 \frac{1}{3}$ days
52. (1) If the length of train-B be $x$ metre, then

Speed of train $=\frac{240+x}{50}=\frac{240}{20}$
$\frac{240+x}{50}=12$
$240+x=600$
$x=360$ metre

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53. (1) $\mathrm{S} . \mathrm{I}=\frac{\text { Principal } \times \text { Time } \times \text { Rate }}{100}=\frac{11200 \times 3 \times 8.5}{100}=₹ 2856$
$\therefore$ Required amount $=₹(11200+2856)=₹ 14056$
54. (1) Numbers $=2 x$ and $3 x$
$\frac{2 x+4}{3 x+4}=\frac{5}{7}$
$15 x+20=14 x+28$
$x=28-20=8=$ Difference between numbers.
55. (3) According to question purchasing capacity $=₹ 160$

A reduction of $20 \%$ means, now a person gets $\frac{5}{2} \mathrm{~kg}$ for Rs 32 and this is the present price of that commodity.

Present price per $\mathrm{kg}=\frac{32}{5} \times 2=₹ 12.8$
Let the originai price be Rs $x$, then new price is arrived after reduction $20 \%$ of it.
$\therefore \quad x \times 0.8=12.8 \Rightarrow x=\operatorname{Rs~} 16$
56. (3) Required no. of students passed the examination $=360 \times \frac{90}{100} \times \frac{75}{100}=243$
57. (4) Total no. of students from all the colleges in the year 2012
$480+350+380+500+540=2250$
$\therefore$ Required no. of student who enrolled for computer course $=2250 \times \frac{40}{100}=900$
58. (3) Average no. of students enrolled with colleges in the year $2014=\frac{460+360+430+470+480}{5}$ $=\frac{2200}{5}=440$
Average no. of students enrolled with colleges in the year $2015=\frac{470+340+390+530+530}{5}$ $=\frac{2260}{5}=452$
$\therefore$ Required ratio $=440: 452=110: 113$
59. (1) Average no. of student enrolled from college $M$ for all the years together
$=\frac{320+350+300+360+340}{5}=\frac{1670}{5}=334$
Average no. of students enrolled from colloage N for all the years together
$=\frac{400+380+410+430+390}{5}=\frac{2010}{5}=402$
$\therefore \quad$ Required $\%=\left(\frac{334}{402} \times 100\right) \%=83.08 \% \approx 83 \%$
60. (2) Total no. of students who enrolled in $2013=420+300+410+520+460=2110$
$\therefore \quad$ No of student went abroad $=2110 \times \frac{10}{100}=211$

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61. (2) $n(S)=$ Number of ways of selecting 3 marbles out of marbles $={ }^{7} C_{3}=\frac{7 \times 6 \times 5}{1 \times 2 \times 3}=35$
$n(\mathrm{E})=$ Number of ways selecting 2 green marbles and 1 red marble $={ }^{4} \mathrm{C}_{2} \times{ }^{3} \mathrm{C}_{1}=\frac{4 \times 3}{1 \times 2}=18$
$\therefore$ Required probability $=\frac{n(E)}{n(S)}=\frac{18}{35}$
62. (3) Each man gives the votes for any of the four candidates.

Total number of ways $=4 \times 4 \times 4 \times 4 \times 4=10247$
(1) Firstly we fix the alternate position of men in a round table is $(6-1)$ ! ways $=5$ !

In out of six position 5 women can be seated in ${ }^{5} \mathrm{P}_{\mathrm{K}}=6$ !
Required no. of ways $=6!.5!5$.
(4) According to question, Total number of seats
$=1$ grandfather +5 sons and daughters +8 grandchildren $=14$ The grandchildren can occupy the 4 seats on either side of the table in $8 \mathrm{P}_{4} \times 4!=8!$
The grandfather can occupy a seat in 4 ways (ie, $\mathrm{S}_{6}, \mathrm{~S}_{7}, \mathrm{~S}_{8} \mathrm{~S}_{9}$ )
And, the remaining seats can be occupied in $5!=5 \times 4 \times 3 \times 2=120$ ways
(5 seat for sons and daughters)
Hence, the total number of required ways
$=8!\times 480=19353600$
63. (5) Let the original fraction be $\frac{x}{y}$

According to the question,
$\frac{x \times 500}{y \times 600}=\frac{20}{27}$
$\frac{x}{y}=\frac{20}{27} \times \frac{6}{5}=\frac{8}{9}$
64. (5) Ratio of the earned profit = Ratio of the equivalent capitals of Tanvi and Anisha
$=45000 \times 12: 52000 \times 4=45 \times 3: 52=135: 52$
Sum of ratios $=135+52=187$
$\therefore \quad$ Anisha's share $=₹\left(\frac{52}{187} \times 56165\right)=₹ 15618.074$
65. (1) Let the value of second rate of interest be $x \%$ and equal amounts be $P$ each.
$\mathrm{P} \times\left(1+\frac{5}{100}\right)^{6}=\mathrm{P} \times\left(1+\frac{x}{100}\right)^{3}$
$\left(1+\frac{5}{100}\right)^{2}=\left(1+\frac{x}{100}\right)$
$\frac{105 \times 105}{100 \times 100}=\frac{100+x}{100}$
$110.25=100+x$
$x=10.25 \%$
$x=10 \frac{25}{100}=10 \frac{1}{4} \%$

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66. (5) I. $2 x^{2}-7 x+6=0$
$2 x^{2}-4 x-3 x+6=0$
$2 x(x-2)-3(x-2)=0$
$(x-2)(2 x-3)=0$
$x=2$ or $x=\frac{3}{2}$
II. $4 y^{2}=9$
$y^{2}=\frac{9}{4}$
$y= \pm \frac{3}{2}$
Obviously, $y \leq x$
67. (5) I. $4 x^{2}-4 x-3=0$
$4 x^{2}-6 x+2 x-3=0$
$2 x(2 x-3)+1(2 x-3)=0$
$(2 x-3)(2 x+1)=0$
$x=\frac{3}{2}$ or, $x=-\frac{1}{2}$
II. $4 y^{2}+12 y+5=0$
$4 y^{2}+10 y+2 y+5=0$
$2 y(2 y+5)+1(2 y+5)=0$
$(2 y+5)(2 y+1)=0$
$y=-\frac{5}{2}$ or, $y=-\frac{1}{2}$
Obviously, $x \geq y$
68. (1) I. $4 x^{2}=49$
$x^{2}=\frac{49}{4}$
$x= \pm \frac{7}{2}$
II. $9 y^{2}-66 y+121$
$9 y^{2}-33 y-33 y+121=0$
$3 y(3 y-11)-11(3 y-11)=0$
$(3 y-11)(3 y-11)=0$
$y=\frac{11}{3}$
Obviously, $x<y$
69. (2) I. $x^{2}+9 x+14=0$
$x^{2}+2 x+7 x+14=0$
$x(x+2)+7(x+2)=0$
$(x+2)(x+7)=0$
$x=-2$ or, $x=-7$

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II. $y^{2}+y-2=0$
$y^{2}+2 y-y-2=0$
$y(y+2)-1(y+2)=0$
$(y-1)(y+2)=0$
$y=1$ or, $y=-2$
Clearly, $y \geq x$
70. (1) I. $9 x^{2}-18 x+5=0$
$9 x^{2}-15 x-3 x+5=0$
$3 x(3 x-5)-1(3 x-5)=0$
$(3 x-5)(3 x-1)=0$
$x=\frac{5}{3}$ or, $x=\frac{1}{3}$
II. $2 y^{2}-9 y+10=0$
$2 y^{2}-5 y-4 y+10=0$
$y(2 y-5)-2(2 y-5)=0$
$(2 y-5)(y-2)=0$
$y=\frac{5}{2}$ or $y=2$
Clearly, $y>x$

## ENGLISH LANGUAGE

91. (2) Add 'that' before 'the work'.
92. (4) Change 'indicates' into 'indicate'.
93. (3) Change 'to be' into 'being'.
94. (3) Remove 'the' before 'earth'.
95. (1) Change 'life' into 'lives'.
96. (1) Change 'have' into 'has'.
97. (2) Change 'linkage to into' 'linked to'.
98. (1) Change 'easy through' into 'eased through'.
99. (5) No error.
100. (1) Remove 'the' before 'Anglo - saxon'.

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| $\qquad$ <br> VOCABULARIES |  |  |
| Words | Meaning in English | Meaning in Hindi |
| Burgeoning | increase rapidly | ते जे से बढ़ ता हु आ |
| Substantial | of considerable importance, size, or worth | प्य ${ }^{\text {c }}$ |
| Prosperity | the state of being prosperous | समृ fिद्ध, स ¢ नता |
| Attractions | power of evoking interest | आ कठ ${ }^{\circ}$ प |
| Fever Pitch | a state of extreme excitement | उ $\overline{<}$ ते जाt की चरम से मा |
| Sanitation | conditions relating to public health | ₹ वचछ ता |
| Rendered | provide or give | दे ना |
| Lymph tissues | a colorless fluid containing white blood cells | लसे का उ亏 तक |
| Aggression | hostile or violent behavior | आ क्रमक्ता |
| Derive (from) | obtain something from | उ ¢ ¢ न हा' ना |

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## IBPS PO SPECIAL PHASE - I - 345 (ANSWER KEY)

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