## IBPS PO SPECIAL PHASE - I - 280 (SOLUTION)

(1-5) :

## REASONING



Raman $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$

1. (1)
2. (2)
3. (4)
4. (3)
5. (2)
6. (4) Statements :
$\mathrm{S} \leq \mathrm{L} \leq \mathrm{I}=\mathrm{P}>\mathrm{E}>\mathrm{R}$
$\mathrm{L}>\mathrm{Q}$
From (i), we get
$\mathrm{S} \leq \mathrm{P}$ or $\mathrm{P} \geq \mathrm{S}$. Thus, conclusion I is true.
Again, I $>\mathrm{R}$ is true. Hence both conclusion I and II are true.
7. (3) Given statements :
$\mathrm{G}>\mathrm{R} \geq \mathrm{E}=\mathrm{A} \leq \mathrm{T} \leq \mathrm{S}$
$\mathrm{D} \leq \mathrm{A} \leq \mathrm{J}$
Combining (i) and (ii), we get
$\mathrm{D} \leq \mathrm{A} \leq \mathrm{T}$
Thus, $\mathrm{D} \leq \mathrm{T}$ or $\mathrm{T} \geq \mathrm{D}$. Hence I is true. Again, we can't compare R and S . Hence $\mathrm{II}(\mathrm{R}>\mathrm{S})$ is not true.
8. (4) Given statements :
$\mathrm{A} \geq \mathrm{B}>\mathrm{C} \leq \mathrm{D} \leq \mathrm{E}<\mathrm{F}$
Thus, we can't compare $A$ and $E$. Hence $I(A \leq E)$ is not true.
Again, $\mathrm{C} \geq \mathrm{F}$ is true. Hence II is true.
9. (1) Given statements :
$\mathrm{G}>\mathrm{R} \geq \mathrm{E}=\mathrm{A}<\mathrm{T}<\mathrm{S}$
$\mathrm{D} \leq \mathrm{A} \leq \mathrm{J}$
Combining (i) and (ii), we get
$\mathrm{G}>\mathrm{R} \geq \mathrm{E}=\mathrm{A} \leq \mathrm{J}$
Thus, we can't compare G and $J$. Hence neither $I(J>G)$ nor II $(J=G)$ is true.
10. (2) Given statements :
$\mathrm{S}<\mathrm{L}<\mathrm{I}=\mathrm{P} \geq \mathrm{E}>\mathrm{R}$
L $>$ Q
Combining (i) and (ii), we get
$\mathrm{Q}<\mathrm{L}<\mathrm{I}=\mathrm{P} \geq \mathrm{E}$
Thus, we can't compare $E$ and $Q$. Hence II $(E \geq Q)$ is not true. Again, we can't compare $L$ and $R$. Hence $I(L<R)$ is not true.


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(11-15) :

11. (4)
12. (1)
13. (1)
14. (5)
15. (2)
(16-20) :

16. (2)
17. (1)
18. (3)
19. (4)
20. (3)

21 (4) colour sky high = ki la jo
22. (3) 'the' represents only 'so'.
23. (5) 'pe' represents 'rocket'.
(24-28) :

24. (3)
25. (1)
26. (4)
27. (3)
28. (5)
(29-30) :

29. (1) 30. (4)
31. (1) New arrangement is

19 L B 2 S 6 E G $4 \mathrm{D} \mathbf{H} 75 \mathrm{~K} 8 \mathrm{Q}$ N A 3 C Z U J. Hence thirteenth element from the right end is H .
32. (4)







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33. (4)

34. (3) Fourth to the right of nineteenth element from the left and is $(19+4=) 23 r d$ from left, i.e N.
35. (3) \%EG, \$UJ

## MATHS

36. (4) $?=(4576+3286+5639) \div(712+415+212)=13501 \div 1339=10.08 \approx 10$
37. (5) $?=675.456+12.492 \times 55.671$
$\approx 675+12.5 \times 56$
$=675+700=1375 \approx 1371$
38. (1) $? \approx(447)^{2}=199809 \approx 200000$
39. (3) $?=\frac{4374562 \times 64}{7777}=35999.99 \approx 36000$
40. (2) $?=\frac{659 \times 872}{100} \div 543=10.58 \approx 11$
41. (3) Work done by 1 man in 1 day $=\frac{1}{100}$

Work done by 1 women in 1 day $=\frac{1}{120}$
Work done by 15 men in and 6 women $=\frac{15}{100}+\frac{6}{120}$
$=\frac{3}{20}+\frac{1}{20}=\frac{4}{20}=\frac{1}{5}$ work
$\therefore 15$ men and women will take 5 days to complete the work.
42. (1) Let the speed of second train be $x \mathrm{kmph}$.

Speed of first train relative to second train $=(120-x) \mathrm{kmph}$
$=\left[(120-x) \times \frac{5}{18}\right]=\left(\frac{600-5 x}{18}\right) \mathrm{m} / \mathrm{sec}$
Distance covered $=100+200=300 \mathrm{~m}$
$\therefore \frac{300}{\left(\frac{600-5 x}{18}\right)}=120$
$300=\frac{120(600-5 x)}{18}$
$10 \times 9=2(600-5 x)$
$90=1200-10 x$
$10 x=1200-90$
$x=\frac{1110}{10}=111$
Hence, the speed of second train is 111 kmph .

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43. (1) Let the sum be ₹ $x$.
S.I. $=₹ \frac{16 x}{100}$

Rate $=$ Time $=\mathrm{R}$
$\therefore \quad$ Rate $=\frac{\text { S.I. } \times 100}{\text { Principal } \times \text { Time }}$
$\mathrm{R}=\frac{16 x \times 100}{100 x \times R}$
$\mathrm{R}^{2}=16$
R $=4 \%$ Per annum
44. (1) Let expenditure be ₹ 60 and savings be ₹ 40 .

Total income $=₹ 100$
New income = ₹ 110
New expenditure $=₹ 67.2$
New saving $=110-67.2=₹ 42.8$
$\therefore$ Percentage increase in saving $=\frac{2.8}{40} \times 100=7 \%$
45. (2) Area of 4 walls $=2(16+7) \times 8$

So, $2(16+7) \times 8-65=303$
Cost $=303 \times 7.5=₹ 2272.5$
46. (2) The pattern is :
$\frac{1050-30}{2}=510$
$\frac{510-26}{2}=242$
$\frac{242-22}{2}=110 \neq \mathbf{1 0 6}$
$\frac{110-18}{2}=46$
$\frac{46-14}{2}=16$
47. (1) The pattern is :
$550-2^{2}=550-4=546$
$546-3^{2}=546-9=537$
$537-4^{2}=537-16=521$
$521-5^{2}=521-25=496 \neq 494$
$496-6^{2}=496-36=460$
48. (3) The pattern is :
$8+1 \times 13=21$
$21+2 \times 13=21+26=47$
$47+3 \times 13=47+39=86$
$86+4 \times 13=86+52=138 \neq 140$
$138+5 \times 13=138+65=203$
$203+6 \times 13=203+78=281$

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49. (2) The pattern is :
$4 \times 8-8=32-8=24$
$24 \times 7-7=168-7=161$
$161 \times 6-6=966-6=960 \neq 965$
$960 \times 5-5=4800-5=4795$
50. (3) The pattern is:
$1 \times 2=2$
$2 \times 3=6 \neq 8$
$6 \times 4=24$
$24 \times 5=120$
$120 \times 6=720$
$720 \times 7=5040$
51. (5) Income of company C in the year $2018=₹ 300000$ and expenditure $=₹ 200000$
$\therefore$ Percentage profit got by the company $=\frac{\text { Profit }}{\text { Income }} \times 100 \%$
$=\frac{100000}{300000} \times 10 \%=33 \frac{1}{3} \%$
52. (1) Total income of all the three companies in the year $2014=₹(260+340+480)$ thousand $=$ ₹ 1080 thousand and in the year 2017
$=₹(160+310+440)$ thousand $=₹ 910$ thousand.
$\therefore$ Required ratio $=1080: 910=108: 91$
53. (2) Total income of company $B$ in all the given years together $=₹(340+490+540+310+450)$ thousand $=₹ 2130$ thousand
$\therefore$ Average income of company $B=₹ \frac{2130 \text { thousand }}{5}=₹ 426$ thousand
54. (5) in the year 2019,
income of company $A=105 \%$ of $560=₹ 588$ thousand income of company $B=106 \%$ of $450=₹ 477$ thousand income of company $C=107 \%$ of $300=₹ 321$ thousand
Thus, total income of all the three companies in the year 2019 $=₹(588+477+321)$ thousand $=₹ 1386$ thousand
55. (1) Distance covered by 1 st car $=\{36 \times(5 / 18) \times 15\}=150 \mathrm{~m}$

Distance covered by 2nd car $=\{48 \times(5 / 18) \times 15\}=200 \mathrm{~m}$
Since these two cars are at right angle.
So, the distance between two cars $=250 \mathrm{~km}$
56. (5) I. $p^{2}+3 p+2 p+6=0$
$p(p+3)+2(p+3)=0$
$(p+3)(p+2)=0$
$p=-2$ or -3
II. $q^{3}+q+2 q+2=0$
$q(q+1)+2(q+1)=0$
$(q+1)(q+2)=0$
$q=-1$ or -2
Obviously $p \leq \mathrm{q}$


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57. (4) I. $\mathrm{p}= \pm 2$
II. $q^{2}+2 q+2 q+4=0$
$q(q+2)+2(q+2)=0$
$(q+2)(q+2)=0$
$q=-2$
Obviously, $p \geq q$
58. (2) I. $p^{2}+p-56=0$
$p^{2}+8 p-7 p-56=0$
$p(p+8)-7(p+8)=0$
$(p+8)(p-7)=0$
$p=7$ or -8
II. $q^{2}-8 q-9 q+72=0$
$q(q-8)-9(q-8)=0$
$(q-8)(q-9)=0$
$q=8$ or 9
Obviously, $p<q$
59. (1) We have,
$3 p+2 q=58$
$4 p+4 q=92$
$2 p+2 q=46$
By equation (i) - (ii) we get $p=12$
From equation (i), $3 \times 12+2 q=58$
$2 q=58-36=22$
$q=11$
Hence, $p>q$
60. (2) I. $3 p^{2}+15 p+2 p+10=0$
$3 p(p+5)+2(p+5)=0$
$(p+5)(3 p+2)=0$
$p=-5$ or $-\frac{2}{3}$
II. $10 q^{2}+5 q+4 q+2=0$
$5 q(2 q+1)+2(2 q+1)=0$
$(2 q+1)(5 q+2)=0$
$q=-\frac{1}{2}$ or $-\frac{2}{5}$
Obviously, $p<q$
61. (3) Total equivalent capital of $A=5 x \times 12+8 x \times 12=₹ 156 x$

Total equivalent capital of $B=6 x \times 24=₹ 144 x$
Total equivalent capital of $\mathrm{C}=8 x \times 12+4 x \times 12=₹ 144 x$
$\therefore$ Required ratio $=\mathrm{A}: \mathrm{B}: \mathrm{C}$
$=156 x: 144 x: 144 x=13: 12: 12$

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62. (1) $\because 12$ men can complete the work in 36 days.
$\therefore \quad 12 \times 36$ men can complete the work in 1 day.
Again,
$\because \quad 18$ women can complete the work in 60 days.
$\therefore \quad 18 \times 60$ women can complete the work in 1 day.
Now, $12 \times 36$ men $=18 \times 60$ women
2 men = 5 women
Now, 8 men +20 women $=(4 \times 5+20)$ women $=40$ women
18 women complete the work in 60 days.
40 womens' 20 days' work $=\frac{40 \times 20}{18 \times 60}=\frac{20}{27}$
Remaining work $=1-\frac{20}{27}=\frac{7}{27}$
$18 \times 60$ women do 1 work in 1 day.
1 woman does $=\frac{1}{18 \times 60}$ Work in 1 day

1 woman does in 4 days $=\frac{4}{18 \times 60}=\frac{1}{18 \times 15}$ Work
$\frac{1}{18 \times 15}$ work is done in 4 days by 1 woman
$\frac{7}{27}$ work is done in 4 days by $=\frac{18 \times 15 \times 7}{27}=70$ days
63. (2) Number of balls $=6+5+8=19$ Exhaustive number of cases $=$ Ways of selecting 4 balls out of $19={ }^{19} \mathrm{C}_{4}=\frac{19 \times 18 \times 17 \times 16}{1 \times 2 \times 3 \times 4}=3876$

Favourable number of cases $=$ Selecting 4 red balls or any two green balls out of the four $=$
$6 c_{4}+5 c_{2} \times 14 c_{2}=\frac{6 \times 5 \times 4 \times 3}{1 \times 2 \times 3 \times 4}+\frac{5 \times 4}{2} \times \frac{14 \times 13}{2}=15+910=925$
$\therefore \quad$ Required probability $=\frac{925}{3876}$
64. (5) Required difference $=\left(\frac{7}{11} \times 2-\frac{4}{11} \times 3\right)=\frac{2}{11} \times 73689=₹ 13398$
65. (4) According to the question,
$\frac{A}{B}=\frac{4}{7}$
and $\frac{\mathrm{A}\left(1+\frac{50}{100}\right)}{\mathrm{B}\left(1-\frac{25}{100}\right)}=\frac{8}{7}$
From equations (i) and (ii),
Total earnings of $A$ and $B$ are unknown.
66. (1) Marks obtained by Meera in total subjects

$$
=\frac{100 \times 60}{100}+\frac{80 \times 40}{100}+\frac{130 \times 50}{100}+\frac{150 \times 90}{100}+\frac{120 \times 90}{100}+\frac{80 \times 60}{100}=448
$$

67. (4) Marks obtained by all the seven students $=\frac{40}{100}(80+70+70+60+90+60+80)$

$$
=\frac{40}{100} \times 510=204
$$

$\therefore \quad$ Average marks $=\frac{204}{7}=29.14$
68. (2) Only two students, Kunal and Soni have got $60 \%$ or above marks in all subjects.
69. (3) Total marks obtained by Kunal
$=\frac{60 \times 90}{100}+\frac{40 \times 70}{100}+\frac{130 \times 60}{100}+\frac{150 \times 90}{100}+\frac{120 \times 70}{100}+\frac{80 \times 70}{100}$
$=54+28+78+135+84+56=435$
Total marks $=60+40+130+150+120+80=580$
$\therefore \quad$ Required percentage $=\frac{435}{580} \times 100=75$
70. (1)

## ENGLISH LANGUAGE

71. (5) Refer the first sentence of the last paragraph.
72. (3) Refer the fourth sentence of the second paragraph
73. (5) It simply means that demand has no short-term effect on oil price.
74. (1) While option (i) has been contradicted in the last paragraph, there has not been any corelation between renewable and non-renewable sources of energy in terms of price.
75. (3) Refer the last sentence of the second paragraph.
76. (1) Replace 'began' with 'begun' (have $+v^{3}$ ).
77. (1) Replace "in spite that" with 'though'.
78. (5) Replace 'invested' with 'investing'.
79. (4) Replace 'their' with 'its' (used for 'airline').


## IBPS PO SPECIAL PHASE - I - 280 (ANSWER KEY)

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