## IBPS CLERK SPECIAL - I MOCK TEST - 296 (SOLUTION)

(1-5) :


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


Facing $\uparrow$ North

6. (2)
10. (1)
(11-16):

| Person | Day | School |
| :---: | :--- | :---: |
| Raju | Tuesday | C |
| Jyoti | Wednesday | D |
| Mohan | Thursday | A |
| Roshan | Saturday | F |
| Kiran | Sunday | G |
| Kamal | Monday | B |
| Tony | Friday | E |

11. (3)
12. (4)
(17-19):

| Car 1 | Car 2 |
| :---: | :---: |
| $\mathrm{C}, \mathrm{A}, \mathrm{F}, \mathrm{G}$ | $\mathrm{E}, \mathrm{B}, \mathrm{D}$ |

17. (1)
18. (4)
19. (2)
20. 3
21. (1)
22. (3)

| Car 1 | Car 2 |
| :---: | :---: |
| $\mathrm{C}, \mathrm{A}, \mathrm{E}, \mathrm{G}$ | $\mathrm{B}, \mathrm{D}, \mathrm{F}$ |



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20. (1) The letters move four places backward and each number is increased by 4 from its preceding number

21. (2) Given statements:
$\mathrm{Z}>\mathrm{P} \geq \mathrm{T}=\mathrm{N}$
$\mathrm{R}=\mathrm{T}<\mathrm{Q} \leq \mathrm{S}$
Combining both state-ments, we get
$\mathrm{Z}>\mathrm{P} \geq \mathrm{T}=\mathrm{N}=\mathrm{R}=\mathrm{T}<\mathrm{Q} \leq \mathrm{S}$
Thus, $Z<Q$ is not true.
Again, $\mathrm{S}>\mathrm{N}$ is true.
And, $P \geq S$ is not true.
Hence, only II is true.
22. (3) Given statements:
$\mathrm{S}<\mathrm{U}=\mathrm{R} \leq \mathrm{N}$
$B>X \geq W$
$\mathrm{S}>\mathrm{J}=\mathrm{W}$
Combining all the statements, we get
$\mathrm{N} \geq \mathrm{R}=\mathrm{U}>\mathrm{S}>\mathrm{J}=\mathrm{W} \leq \mathrm{X}<\mathrm{B}$
Thus, $\mathrm{N}>\mathrm{J}$ is true.
Again, $\mathrm{B}<\mathrm{S}$ is not true. And, $\mathrm{U}>\mathrm{J}$ is true.
Hence, only I and III are true.
23. (5) Given statements:
$\mathrm{X}=\mathrm{Q} \geq \mathrm{R}$
$\mathrm{M}=\mathrm{N}>\mathrm{P}$
$\mathrm{P}>\mathrm{V}=\mathrm{Z}<\mathrm{R}$

Combining all the statements, we get
$\mathrm{M}=\mathrm{N}>\mathrm{P}>\mathrm{V}=\mathrm{Z}<\mathrm{R} \leq \mathrm{Q}=\mathrm{X}$
Thus, $\mathrm{M} \geq \mathrm{R}$ is not true.
Again, $\mathrm{V}>\mathrm{Q}$ is not true.
And, $\mathrm{N} \leq \mathrm{R}$ is not true.
Hence none is true.
24. (4) Given statements:
$\mathrm{U} \geq \mathrm{V} \geq \mathrm{W}=\mathrm{X}$
$\mathrm{B}>\mathrm{C}=\mathrm{D} \geq \mathrm{U}$
Combining All the statements, we get
B $>\mathrm{C}=\mathrm{D}>\mathrm{U} \geq \mathrm{V} \geq \mathrm{W}=\mathrm{X}$
Thus, $\mathrm{D} \geq \mathrm{V}$ is true.
Again, $\mathrm{C} \geq \mathrm{X}$ is true.
Also, $\mathrm{B}>\mathrm{U}$ is true.
Hence, all I, II and III are true.
25.(4) Given statements:
A > B = M
$\mathrm{M} \geq \mathrm{L}$
L $>\mathrm{S}$
$\mathrm{S}<\mathrm{V}$

$$
\begin{equation*}
\ldots \text {. iv) } \tag{ii}
\end{equation*}
$$

Combining all the statements, we get
A $>\mathrm{B}=\mathrm{M} \geq \mathrm{L}>\mathrm{S}<\mathrm{V}$
Thus, $\mathrm{M}>\mathrm{S}$ is true.
$\mathrm{L} \leq \mathrm{A}$ is not true.
$\mathrm{V}>\mathrm{A}$ is not true.
Hence, only conclusion I is true.
(26-28) :

26. (3)
27. (3)
28. (3)
29. (2)
(30-32) :

30. (2) The shortest person is D.
$\therefore$ D's height $=147-15=132 \mathrm{~cm}$
31. (1)
32. (4) 155 lies between 160 and 147. Thus, the possible height of $G$ or $J$ will be 155 cm .
(33-34) :

33. (5) I. True II. True Hence, both Conclusion I and II follow.
34. (1)
I. True
II. False

Hence, only conclusion I follows.
35. (1)

I. True
II. Can't say

Hence, only conclusion I follows.
36. (1) $\times \frac{1}{2}+\frac{1}{2}, \times 1+1, \times 1 \frac{1}{2}+1 \frac{1}{2}, \ldots$.
37. (2) $\times 1 \frac{1}{2}, \times 2, \times 2 \frac{1}{2}, \ldots$
38. (4) $+1^{2},+3^{2},+5^{2}, \ldots$
39. (3) $\times 1+1, \times 2-1, \times 3+1, \times 4-1, \ldots$
40. (5) $\times 2+2, \times 2+4, \times 2+4, \times 2+6, \ldots$
41. (2) Direct Formula:

$$
\begin{aligned}
& \text { Speed of boat }=\frac{1}{2}\left[\frac{16}{2}+\frac{16}{4}\right]=6 \mathrm{~km} / \mathrm{hr} \\
& \text { Speed of stream }=\frac{1}{2}\left[\frac{16}{2}-\frac{16}{4}\right]=2 \mathrm{~km} / \mathrm{hr}
\end{aligned}
$$



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42. (3) $=9900 \div 25+215-310=$ ?
$\therefore ?=(400-4)+215-310=396+215-310 \approx 300$
43. (5) Ratio of profit $=50 \times 3: 80 \times 2.5=150: 200=3: 4$
$\therefore$ Sunetra's share $=\frac{24500}{7} \times 3=₹ 10500$
44. (2) 2 girls +4 boys can sit in a row in $6!=720$ ways without any condition. Now, if girls sit always together, they can sit in $5!\times 2$ ways, i.e. 240 ways. $\therefore$ Required ways in which girls do not sit together $=720-240=480$
45. (4) Since $T$ is a common in both groups, we can't separate the weight of one $T$ from $P+2 T+$ $\mathrm{R}+\mathrm{F}+\mathrm{G}$.
46. (5) $2 x+3 y+z=55 \ldots$ (1)
$x+z-y=4 \ldots$ (2)
$y-x+z=12$
(2) $+(3) \Rightarrow 2 z=16 \therefore z=8$

Now, (2) $\Rightarrow x-y=-4 \ldots$ (4)
and (1) $\Rightarrow 2 x+3 y=47 \ldots$ (5)
(5) $-2 \times(4) \Rightarrow 5 y=55$
$\therefore y=11$
47. (3) Suppose there are $x$ children. Then each children gets $\frac{x}{5}$ sweets. Therefore $x\left(\frac{x}{5}\right)=405$ $\therefore x=\sqrt{2025}=45$ $\therefore \frac{x}{5}=9$
48. (1) The required amount $=15000\left(1+\frac{5}{100}\right)^{2}=15000\left(\frac{21}{20}\right)^{2}$
$=\frac{15000 \times 21 \times 21}{20 \times 20}=₹ 16537.5$
49. (4) Only ratio and percentage are given. So we cannot find any absolute value.
50. (4) Let $E=$ the event of getting the sum 7 .
and,
$\mathrm{F}=$ the event of getting at least one 2.
Then,
$\mathrm{E}=\{(1,6)(2,5)(3,4)(4,3)(5,2)(6,1)\}$
and,
$F=\{(1,2),(2,2),(3,2),(4,2),(5,2),(6,2)$,
$(2,1),(2,3),(2,4),(2,5),(2,6)\}$
Then, $\mathrm{E} \cap \mathrm{F}=\{(2,5),(5,2)\}$
Now, we have to find $\mathrm{P}(\mathrm{F} / \mathrm{E})$
$\mathrm{P}(\mathrm{F} / \mathrm{E})=\frac{P(E \cap F)}{P(S)}=\frac{2}{6}=\frac{1}{3}$
51. (1) Marks of S in Chemistry $=120$

Total marks obtained by all the five students together $=90+110+100+120+60=480$
$\therefore$ Required $\%=\frac{120}{480} \times 100=25 \%$

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52. (5) Marks obtained by T in Physics $=50$

New marks to T in Physics $=50+\frac{50 \times 14}{100}$
$\therefore$ Required $\%=\frac{57}{140} \times 100=40.71 \approx 41 \%$
53. (2) Total marks of T in both the subjects $=50+60=110$

Marks obtained by R in Physics $=80$, which is less than the marks obtained by T in both the subjects together.
54. (4) Ratio $=\frac{\text { Total marks obtained by P in both subjects }}{\text { Total marks obtained by T in both subjects }}=\frac{130+90}{50+60}=\frac{220}{110}=2: 1$
55. (2) Ratio $=\frac{\text { Marks obtained by Qand Sin Chemistry }}{\text { Marks obtained by P and R in physics }}=\frac{110+120}{130+80}=\frac{230}{210}=23: 21$
56. (2) $(n \times 47)+38=n \times 49$
or, $38=2 n$
$n=19$
57. (3) $\therefore$ Required profit $\%=\frac{8}{25} \times 100=32 \%$
58. (3) Worth of hotel after 3 years $=1200000 \times(1.25)^{3}=2343750$

Worth of car after 3 years $=1800000\left(1-\frac{30}{100}\right)^{3}=1800000\left(\frac{7}{10}\right)^{3}=617400$
Reqd. difference $=2343750-617400=₹ 1726350$
59. (1) $\mathrm{A}+\mathrm{B}=75$
$B+C=60$
Now, adding (1) and (2)
$(\mathrm{A}+2 \mathrm{~B}+\mathrm{C})-(\mathrm{A}+\mathrm{B}+\mathrm{C})=\mathrm{B}$
or, $75+60-100=B$
$B=35 \% \quad A=40 \%$
Hence, A is the most efficient.
60. (4) Suppose he walks for $x$ hours.
then $6 x+30(12-x)=20 \times 12$
or, $6 x+360-30 x=240$
or, $360-240=24 x$
$x=\frac{120}{24}=5$ hours
(61-65) :
61. (2) Total number of Engi-neering Colleges in the year $2009=225+150+100+50=525$

Total number of Engin-eering Colleges in the year $2012=425+325+250+175=1175$
Increase $=1175-525=650$
Percentage increase $=\left(\frac{650}{525} \times 100\right) \%=123.8 \%$
62. (3) Total number of (IITs + NITs + Government Eng-ineering Colleges) in the year $2009=50+$ $100+150=300$
Number of IITs in the year $2012=175$
$\therefore$ Reqd ratio $=300: 175=12: 7$
63. (3) Total number of colleges in the year $2009=525$

Total number of colleges in the year $2010=250+200+150+75=675$
$\therefore$ Percentage increase $=\left(\frac{150}{525} \times 100\right) \%=28.57 \%$
Total number of colleges in the year $2011=275+250+175+175=825$

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$\therefore$ Percentage increase $=\left(\frac{825-675}{650} \times 100\right) \%=23.07 \%$
Total number of colleges in the year $2012=1175$
$\therefore$ Percentage increase $=\left(\frac{1175-825}{825} \times 100\right) \%=42.42 \%$
Hence, required year is 2011.
64. (1) Total number of students studying in (IITs + NITs + Government Engine-ering Colleges) in the year $2012=200000$
$\left(\frac{10}{100}+\frac{15}{100}+\frac{30}{100}\right)=55 \times 2000=110000$
Average of the number of students studying in (IITs + NITs + Government Engineering
Colleges) $=\frac{110000}{3}=36666.7$
Students studying in Private Engineering colleges in the year $2012=200000 \times \frac{45}{100}$
$=90000$
$\therefore$ Required $\%=\left(\frac{90000-36666.7}{90000} \times 100\right) \%=59.25 \%$
65. (3) Number of IITs and NITs in the year 2011=125+175=300

Number of IITs and NITs in the year $2012=175+250=425$
$\therefore$ Percentage increase $=\left(\frac{425-300}{300} \times 100\right) \%$
Required\% = 41.66\%
66. (4) $?=\frac{6561 \times 100}{1018 \times 215 \times 3}=81$
67. (5) $7365+29.16+\sqrt{?}=7437.16$
$\sqrt{?}=7437.13-7394.16$
$\sqrt{?}=43 \quad ?=1849$
68. (3) $98 \div 14 \times 49-294=(?)^{2}$
$\frac{98}{14} \times 49-294=343-294$
$=49=(-7)^{2}=-7$
69. (1) $(2 \times 3)^{3} \div(4 \times 9)^{2} \times(27 \times 8) 2=6$ ?
$\frac{6 \times 6 \times 6}{36 \times 36} \times 27 \times 8 \times 27 \times 8=6^{5}$
70. (2) $454.58-376.89+121.45-95.42=$ ?
$=576.03-472.31=103.72$

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IBPS CLERK SPECIAL - I MOCK TEST - 296 (ANSWER KEY)

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