## WBCS (Mains) Exam. Paper - VI - Practice Set

## Answers with Explanation

1. (c) Check through option

$$
\frac{303375}{25}=\frac{303375 \times 4}{25 \times 4}=\frac{1213500}{100}=12135
$$

A number is divisible by 25 if the last two digits are divisible by 25 or zero.
2. (d) Let four numbers be a, b, c and d respectively. $\therefore \mathrm{a}+\mathrm{b}+\mathrm{c}+\mathrm{d}=48$ $\qquad$ .(i)
and, $\mathrm{a}+5=\mathrm{b}+1=\mathrm{c}-3=\mathrm{d}-7=\mathrm{x}$ (let)
$\therefore \mathrm{a}=\mathrm{x}-5 ; \mathrm{b}=\mathrm{x}-1$,
$\mathrm{c}=\mathrm{x}+3, \mathrm{~d}=\mathrm{x}+7$
From equation (i),
$\mathrm{x}-5+\mathrm{x}-1+\mathrm{x}+3+\mathrm{x}+7=48$
$\Rightarrow 4 \mathrm{x}+4=48$
$\Rightarrow 4 \mathrm{x}=48-4=44$
$\Rightarrow \mathrm{x}=\frac{44}{4}=11$
फ्याप्षिय
$\therefore a=x-5=11-5=6$
$\mathrm{b}=\mathrm{x}-1=11-1=10$
$\mathrm{c}=\mathrm{x}+3=11+3=14$
$\mathrm{d}=\mathrm{x}+7=11+7=18$
3. (c) Let the number be $x$.
$\therefore$ According to question,
$\frac{x}{5}-\frac{x}{7}=10 \Rightarrow \frac{7 x-5 x}{35}=10$
$\Rightarrow \frac{2 \mathrm{x}}{35}=10 \Rightarrow \mathrm{x}=\frac{10 \times 35}{2}=175$
क्याप্仑ির্জ
4. (a) HCF of two-prime numbers $=1$
$\therefore$ Product of numbers $=$ their $\mathrm{LCM}=117$
$117=13 \times 9$ where $13 \& 9$ are co-prime.
L.C.M $(13,9)=117$.
5. (c) LCM of 4, 5, 6, 7 and 8

$=$| 2 | $4,5,6,7,8$ |
| :--- | :--- |
| 2 | $2,5,3,7,4$ |
|  | $1,5,3,7,2$ |

$=2 \times 2 \times 2 \times 3 \times 5 \times 7=840$.
let required number be $840 \mathrm{~K}+2$ which is multiple of 13.
Least value of K for which ( $840 \mathrm{~K}+2$ ) is divisible by 13 is $\mathrm{K}=3$
$\therefore$ Required number $=840 \times 3+2$
$=2520+2=2522$
6. (d) LCM of $6,9,15$ and 18

$=$| 2 | 6, | 9, | 15, | 18 |
| :---: | :---: | :---: | :---: | :---: |
| 3 | 3, | 9, | 15, | 9 |
| 3 | 1, | 3, | 5, | 3 |
|  | 1, | 1, | 5, | 1 |

$\therefore \mathrm{LCM}=2 \times 3 \times 3 \times 5=90$
$\therefore$ Required number $=90 \mathrm{k}+4$, which must be a multiple of 7 for some value of $k$.
For $\mathrm{k}=4$,
Number $=90 \times 4+4=364$, which is exactly divisible by 7 .
7. (b) $2=\mathrm{x}+\frac{1}{1+\frac{1}{3+\frac{1}{4}}}$

खुणिির্स
$\Rightarrow 2=x+\frac{1}{1+\frac{1}{\frac{12+1}{4}}} \Rightarrow 2=x+\frac{1}{1+\frac{4}{13}}$
$\Rightarrow 2=\mathrm{x}+\frac{1}{\frac{13+4}{13}} \Rightarrow 2=\mathrm{x}+\frac{1}{\frac{17}{13}}$
$\Rightarrow 2=x+\frac{13}{17} \Rightarrow \mathrm{x}=2-\frac{13}{17}$
$=\frac{34-13}{17}=\frac{21}{17}$
ऊुणाভির্स
8. (a) Expression $=1+\frac{1}{1+\frac{1}{5}}=1+\frac{1}{\frac{5+1}{5}}=1+\frac{5}{6}$

$$
=\frac{6+5}{6}=\frac{11}{6}
$$

9. (c) $80 \times \sqrt{\mathrm{P}}=1120$

$$
\begin{aligned}
& \Rightarrow \sqrt{P}=\frac{1120}{80}=14 \\
& \Rightarrow P=(14)^{2}=196
\end{aligned}
$$

10. (b) Required average $=\frac{32 \times 60+33 \times 40}{72}$

$$
=\frac{1920+1320}{72}=\frac{3240}{72}=45
$$

11. (a) Average of all numbers

## mাভিষর্ম

$$
=\frac{30 \times 40+40 \times 30}{70}=\frac{2400}{70}=34 \frac{2}{7}
$$

12. (b) $x+x+1+x+2+x+3+x+4+x+$
$5+x+6+x+7$
$=6.5 \times 8=52$
$\Rightarrow 8 \mathrm{x}+28=52$
$\Rightarrow 8 x=52-28=24$
$\Rightarrow \mathrm{x}=3$
ঋাড্ভির্জ
$\therefore$ Required average $=\frac{3+10}{2}=6.5$
13. (b) $\mathrm{a}: \mathrm{b}=\frac{2}{9}: \frac{1}{3}=2: 3$
$\mathrm{b}: \mathrm{c}=\frac{2}{7}: \frac{5}{14}=4: 5$
$\mathrm{d}: \mathrm{c}=\frac{7}{10}: \frac{3}{5}=7: 6$
$\Rightarrow \mathrm{c}: \mathrm{d}=6: 7$
Thus,
खुप্ভির্स
$\mathrm{a}: \mathrm{b}=2: 3$
b:c $=4: 5$
$\frac{\mathrm{c}: \mathrm{d}=6: 7}{\mathrm{a}: \mathrm{b}: \mathrm{c}: \mathrm{d}=(2 \times 4 \times 6):(3 \times 4 \times 6):}$
$(3 \times 5 \times 6):(3 \times 5 \times 7)$
$=48: 72: 90: 105$
= $16: 24: 30: 35$
14. (c) $\mathrm{A}: \mathrm{B}=3: 4$
$\mathrm{B}: \mathrm{C}=6: 5$
A : B : C $=(3 \times 6):(4 \times 6):(4 \times 5)$
$=18: 24: 20)$
9: 12: 10
$\Rightarrow \mathrm{A}:(\mathrm{A}+\mathrm{C})$
$=9:(9+10)$
= $9: 19$
15. (d) $x: y=3: 4=9: 12$

खुापिিन
$y: z=3: 4=12: 16$
$\therefore \mathrm{x}: \mathrm{y}: \mathrm{z}=9: 12: 16$
$\therefore \frac{\mathrm{x}+\mathrm{y}+\mathrm{z}}{3 \mathrm{z}}=\frac{9 \mathrm{k}+12 \mathrm{k}+16 \mathrm{k}}{3 \times 16 \mathrm{k}}=\frac{37}{48}$
16. (b) $20 \%$ of $\mathrm{A}=50 \%$ of B
$\Rightarrow 2 \mathrm{~A}=5 \mathrm{~B} \Rightarrow \mathrm{~A}=\frac{5 \mathrm{~B}}{2}$
Let B is $\mathrm{x} \%$ of A .
$\therefore \frac{5 \mathrm{~B}}{2} \times \frac{\mathrm{x}}{100}=\mathrm{B}$
$\Rightarrow \mathrm{x}=\frac{200}{5}=40 \%$
फुापिर्स
17. (d) Required number $=\frac{240 \times 25}{100}-\frac{160 \times 15}{100}$

$$
=60-24=36
$$

18. (b) Required number $=60 \%$ of $90=\frac{90 \times 60}{100}=54$
19. (d) Let the C.P. of article be ' $x$ '
$\because(100-7) \% \mathrm{x}=651$
$\because \mathrm{x}=\frac{651}{93} \times 100=₹ 700$
फुाডिির্জ
20. (c) S.P. of the fan $=\frac{150 \times 80}{100}=₹ 120$
21. (c) Loss per cent $=\frac{400-320}{400} \times 100$
$=\frac{80}{400} \times 100=20 \%$
22. (d) Equivalent discount $=30+10-\frac{30 \times 10}{100}=37 \%$
23. (b) Single equivalent discount for successive discounts of $10 \%$ and $20 \%$.
$=\left(10+20-\frac{20 \times 100}{100}\right) \%=28 \%$
Single equivalent discount for $28 \%$ and $30 \%$.
$=\left(28+30-\frac{28 \times 30}{100}\right) \%=49.6 \% \quad$ फाणिएन
24. (c) Let the cost price be $x$

Mark Price $=\left(1+\frac{20}{100}\right) \mathrm{x}=1.2 \mathrm{x}$
Cash price $=\left(1-\frac{30}{100}\right) 1.2 \mathrm{x}$
$=0.7 \times 1.2 \mathrm{x}=0.84 \mathrm{x}$
Net Loss $=\mathrm{x}-0.84 \mathrm{x}=0.16 \mathrm{x}$
$\therefore$ Net $\operatorname{loss} \%=\frac{0.16 \mathrm{x}}{\mathrm{x}} \times 100=16 \%$
25. (c) Principal $(\mathrm{P})=₹ 1600$

फ़ाप्रिस
T = 2 years 3 months

$$
=\left(2+\frac{3}{12}\right) \text { yrs. }=\left(2+\frac{1}{4}\right) \text { yrs. }=\frac{9}{4} \text { yrs. }
$$

S.I = ₹ 252
$\mathrm{R}=\%$ rate of interest per annum
$\Rightarrow \mathrm{R}=\frac{100 \times \text { S.I. }}{\mathrm{P} \times \mathrm{t}}=\frac{100 \times 252}{1600 \times \frac{9}{4}}$
फ़ाजिएर्न
Rate of interest $=7 \%$ per annum.
26. (a) Time $=\frac{\text { SI } \times 100}{\text { Principal } \times \text { Rate }}$
$=\frac{1080 \times 100}{3000 \times 12}=3$ years
27. (c) Let the principal be $x$.

## Case-I

$$
\begin{aligned}
& 2 \mathrm{x}=\frac{\mathrm{x} \times \mathrm{R} \times 15}{100} \\
& \Rightarrow \mathrm{R}=\frac{2 \times 100}{15}=\frac{40}{3} \%
\end{aligned}
$$

## Case-II

SI $=4 x$

$$
\begin{aligned}
& \therefore 4 \mathrm{x}=\frac{\mathrm{x} \times 40 \times \mathrm{T}}{300} \\
& \Rightarrow \mathrm{~T}=\frac{4 \times 300}{40}=30 \text { years }
\end{aligned}
$$

28. (c) According to question,

$$
\begin{aligned}
& 2420=2000\left(1+\frac{10}{100}\right)^{t} \\
& =\frac{2420}{2000}=\left(\frac{11}{10}\right)^{t}
\end{aligned}
$$

$$
\text { or, }\left(\frac{11}{10}\right)^{t}=\frac{121}{100} \text { or, }\left(\frac{11}{10}\right)^{t}=\left(\frac{11}{10}\right)^{2}
$$

$$
\therefore \mathrm{t}=2 \text { years }
$$

29. (c) $\mathrm{CI}=\mathrm{P}\left[\left(1+\frac{\mathrm{R}}{100}\right)^{\mathrm{T}}-1\right]-\frac{\mathrm{PR}}{100}$

$$
\begin{aligned}
& \Rightarrow 420=\mathrm{P}\left[\left(1+\frac{5}{100}\right)^{2}-1\right]-\frac{\mathrm{P} \times 5}{100} \\
& \Rightarrow 420=\mathrm{P}\left[\left(\frac{21}{20}\right)^{2}-1\right]-\frac{5 \mathrm{P}}{100} \\
& \Rightarrow 420=\frac{41 \mathrm{P}}{400}-\frac{5 \mathrm{P}}{100}=\frac{21 \mathrm{P}}{400} \\
& \Rightarrow \mathrm{P}=\frac{420 \times 400}{21}=₹ 8,000
\end{aligned}
$$

30. (d) If the sum be P, then

$$
\begin{aligned}
& \text { C.I. }=\mathrm{P}\left[\left(1+\frac{\mathrm{R}}{100}\right)^{\mathrm{T}}-1\right] \\
& \Rightarrow 102=\mathrm{P}\left[\left(1+\frac{4}{100}\right)^{2}-1\right] \\
& \Rightarrow 102=\mathrm{P}\left[\left(\frac{26}{25}\right)^{2}-1\right] \\
& \Rightarrow 102=\mathrm{P}\left(\frac{676}{625}-1\right)
\end{aligned}
$$

$\Rightarrow 102=\mathrm{P}\left(\frac{676-625}{625}\right)$
$\Rightarrow 102=\mathrm{P} \times \frac{51}{625}$
क्ञाप्षिज्य
$\Rightarrow \mathrm{P}=\frac{102 \times 625}{51}=₹ 1250$
$\therefore$ S.I. $=\frac{1250 \times 2 \times 4}{100}=₹ 100$
31. (c) According to question,

A can finish the whole work in 6 days.
$\therefore$ A's one day's work $=\frac{1}{6}$
Similarly,
B's one day's work $=\frac{1}{9}$
( $\mathrm{A}+\mathrm{B}$ )'s one day's work
$=\left(\frac{1}{6}+\frac{1}{9}\right)=\left(\frac{3+2}{18}\right)=\frac{5}{18}$
Therefore, $(\mathrm{A}+\mathrm{B})$ 's can finish the whole work in $\frac{18}{5}$ days i.e., 3.6 days.
32. (c) C alone can do in

खुण্ভির্স
$=\frac{2 \times 10 \times 12 \times 15}{10 \times 12-12 \times 15+10 \times 15}$
$=\frac{240 \times 15}{120-180+150}=\frac{240 \times 15}{90}=40$ days
33. (d) (A+B)'s 2 days' work
$=2\left(\frac{1}{12}+\frac{1}{18}\right)=\frac{10}{36}$
Remaining work $=1-\frac{10}{36}=\frac{26}{36}$
Time taken by B to complete $\frac{26}{36}$ part of work
$=\frac{26}{36} \times 18=13$ days
खुणिিर्स
34. (c) Hours/day Days

Pumps

| $6 \uparrow$ | $15 \uparrow$ | 12 |
| :---: | :---: | :---: |
| 9 | 12 |  |

Let x be number of pumps
$\therefore 9: 6:: 12: x=12: 15:: 12: x$
$\Rightarrow 9 \times 12 \times \mathrm{x}=6 \times 12 \times 15$
$\Rightarrow \mathrm{x}=\frac{6 \times 12 \times 15}{9 \times 12}=10$
35. (c) Let the capacity of the tank be $x$ litres.

According to the question,
$\frac{3 x}{4}=30$
$\Rightarrow 3 \mathrm{x}=30 \times 4$
$\Rightarrow \mathrm{x}=\frac{30 \times 4}{3}=40$ litres
फुप्विणन्य
36. (d) Work done in 1 hour by the filling pump $=\frac{1}{2}$

Work done in 1 hour by the leak and the
filling pump $=\frac{3}{7}$
$\therefore$ Work done by the leak in 1 hour
$=\frac{1}{2}-\frac{3}{7}=\frac{7-6}{14}=\frac{1}{14}$
Hence, the leak can empty the tank in 14 hours.
37. (d) Let the required speed is $x \mathrm{~km} / \mathrm{hr}$

Then, $240 \times 5=\frac{5}{3} \times x$
फাভিভির্स
$\therefore \mathrm{x}=720 \mathrm{~km} / \mathrm{hr}$.
38. (a) 30.6 kmph
$=\left(30.6 \times \frac{5}{8}\right) \mathrm{m} / \mathrm{sec} .=8.5 \mathrm{~m} / \mathrm{sec}$
39. (b) When a train crosses a tunnel, it covers a distance equal to the sum of its own length and tunnel.
Let the length of tunnel be x Speed $=78$ kmph
$=\frac{78 \times 1000}{60 \times 60} \mathrm{~m} / \mathrm{sec} .=\frac{65}{3} \mathrm{~m} / \mathrm{sec}$.
आাভ্ভির্स
$\therefore$ Speed $=\frac{\text { Distance }}{\text { Time }}$
$\Rightarrow \frac{65}{3}=\frac{800+\mathrm{x}}{60}$
$\Rightarrow(800+\mathrm{x}) \times 3=65 \times 60$
$\Rightarrow 800+x=65 \times 20 \mathrm{~m}$
$\Rightarrow \mathrm{x}=1300-800=500$
$\therefore$ Length of tunnel $=500$ metres.
40. (a) Let the speed of boat in still water be $x \mathrm{kmph}$ and that of stream be $y \mathrm{kmph}$.

फাডিির্स
$\therefore \frac{20}{x+y}=2$
$\Rightarrow \mathrm{x}+\mathrm{y}=10$
$\therefore \frac{20}{x-y}=5$
$\Rightarrow \mathrm{x}-\mathrm{y}=4$
On adding, $2 \mathrm{x}=14 \mathrm{kmph}=7 \mathrm{kmph}$
41. (d) Speed of boat in still water $=x \mathrm{kmph}$ (let)

Speed of current $=y \mathrm{kmph}$
Rate downstream $=(x+y) \mathrm{kmph}$ फुाரिির্स
Rate upstream $=(x-y) \mathrm{kmph}$
Distance $=$ Speed $\times$ Time
$\therefore(\mathrm{x}-\mathrm{y}) \times 2 \mathrm{t}=(\mathrm{x}+\mathrm{y}) \times \mathrm{t}$
$\Rightarrow 2 \mathrm{x}-2 \mathrm{y}=\mathrm{x}+\mathrm{y}$
$\Rightarrow 2 \mathrm{x}-\mathrm{x}=2 \mathrm{y}+\mathrm{y} \Rightarrow \mathrm{x}=3 \mathrm{y}$
$\Rightarrow \frac{\mathrm{x}}{\mathrm{y}}=\frac{3}{1}=3: 1$
42. (b) Let the speed of stream be $x \mathrm{kmph}$, then speed of boat in still water $=4 \mathrm{x} \mathrm{kmph}$
$\therefore$ Rate downstream $=4 \mathrm{x}+\mathrm{x}=5 \mathrm{x}$ kmph
Rate upstream $=4 \mathrm{x}-\mathrm{x}=3 \mathrm{x} \mathrm{kmph}$
$\therefore \frac{30}{3 \mathrm{x}}+\frac{30}{5 \mathrm{x}}=8 \Rightarrow \frac{10}{\mathrm{x}}+\frac{6}{\mathrm{x}}=8$
$\Rightarrow \frac{16}{\mathrm{x}}=8 \Rightarrow \mathrm{x}=\frac{16}{8}=2 \mathrm{kmph}$
43. (d) Side of the first square

खाড্ভির্শ
$=\frac{1}{\sqrt{2}} \times 4 \sqrt{2}=4 \mathrm{~cm}$.
Its area $=(4)^{2}=16 \mathrm{~cm}^{2}$.
$\therefore$ Area of second square $=2 \times 16=32 \mathrm{~cm}^{2}$.
Its side $=\sqrt{32}=4 \sqrt{2} \mathrm{~cm}$.
$\therefore$ Required diagonal $=\sqrt{2} \times 4 \sqrt{2}=8 \mathrm{~cm}$.
44. (d) Let the breadth of rectangular hall $=\mathrm{x} \mathrm{m}$.
$\therefore$ length $=(x+5) \mathrm{m}$.
Area of hall $=$ Length $\times$ Breadth
खुप्ञियन
$\Rightarrow 750=(x+5) x$
$\Rightarrow \mathrm{x}^{2}+5 \mathrm{x}-750=0$
$\Rightarrow \mathrm{x}^{2}+30 \mathrm{x}-25 \mathrm{x}-750=0$
$\Rightarrow \mathrm{x}(\mathrm{x}+30)-25(\mathrm{x}+30)=0$
$\Rightarrow(\mathrm{x}-25)(\mathrm{x}+30)=0$
$\Rightarrow \mathrm{x}=25$, as x cannot be negative.
$\therefore$ Length of hall $=\mathrm{x}+5$
$=25+5=30 \mathrm{~m}$.
45. (b) For the equilateral triangle of side a,

In radius $=\frac{a}{2 \sqrt{3}}$
Circum-radius $=\frac{\mathrm{a}}{\sqrt{3}}$
खुण্ভির্स
$\therefore$ Required ratio
$=\pi\left(\frac{\mathrm{a}}{\sqrt{3}}\right)^{2}: \pi\left(\frac{\mathrm{a}}{2 \sqrt{3}}\right)^{2}=\frac{1}{3}: \frac{1}{12}=4: 1$
46. (c)


Let $\mathrm{AB}=\mathrm{BC}=\mathrm{AC}=2 \mathrm{x}$ units
कुप्डिएन
$\mathrm{AD}=\sqrt{4 \mathrm{x}^{2}-\mathrm{x}^{2}}=\sqrt{3 \mathrm{x}}$
$\mathrm{OD}=\frac{1}{3} \times \sqrt{3} \mathrm{x}=\frac{\mathrm{x}}{\sqrt{3}}$
$\therefore \mathrm{OB}=\sqrt{\mathrm{x}^{2}+\frac{\mathrm{x}^{2}}{3}}$
$=\frac{2 \mathrm{x}}{\sqrt{3}}=$ Circum radius
$\therefore \triangle \mathrm{ABC}$ : Area of circum-circle
खुप্िির্W
$=\frac{\sqrt{3}}{4} \times 4 \mathrm{x}^{2}: \pi \times \frac{4 \mathrm{x}^{2}}{3}$
$=3 \sqrt{3}: 4 \pi$
47. (c) Ratio of area $=\frac{225}{256}$
$\Rightarrow$ Ratio of side $=\sqrt{\frac{225}{256}}=\frac{15}{16}$
$\therefore$ Ratio of perimeter $=\frac{4 \times 15}{4 \times 16}=\frac{15}{16} \Rightarrow 15: 16$
48. (c)

$\mathrm{AQ} \| \mathrm{CB}$, and $\mathrm{AC} \| \mathrm{QB}$
खुাভির্র
$\therefore \mathrm{AQBC}$ is a parallelogram
$\Rightarrow \mathrm{BC}=\mathrm{AQ}$
Again, $\mathrm{AR}|\mid \mathrm{BC}$ and AB$| \mid \mathrm{RC}$
$\therefore \mathrm{ARCB}$, is a parallelogram.
$\Rightarrow \mathrm{BC}=\mathrm{AR}$
$\Rightarrow A Q=A R$
$\Rightarrow \mathrm{AQ}=\mathrm{AR}=\frac{1}{2} \mathrm{QR}$
$\Rightarrow \mathrm{BC}=\frac{1}{2} \mathrm{QR}$
खाভ্ভির্स
Similarly, $\mathrm{AB}=\frac{1}{2} \mathrm{PR}$ and $\mathrm{AC}=\frac{1}{2} \mathrm{PQ}$
$\therefore$ Required ratio
$=(\mathrm{PQ}+\mathrm{QR}+\mathrm{RP}):(\mathrm{AB}+\mathrm{BC}+\mathrm{CA})$
$=2: 1$
49. (a) Maximum expenditure of the family is on food, i.e., $23 \%$.
50. (b) Expenditure on the education of children $=12 \%$ of $₹ 100000$
$=₹ \frac{12 \times 100000}{100}=₹ 12000$
ऊাড্ভির্স
51. (d) Editor supervises magazine in the same way as director does in the case of drama and film also.
52. (b) The foot of human being is analogus to the hoof of cow.
53. (a) The ocean contains a large number of drops of water. Similarly, several stars twinkle in the sky.
54. (c) Doctor cures patients in the hospital. Similarly, priest offers prayer and worships god in the temple.
55.(b) $\sqrt{169}=13$

Therefore, $\sqrt{289}=17$
आাভিভর্র
56. (d)


Similarly,

57. ${ }^{3}+6=222$

Similarly,
$(7)^{3}+7=350$
फुणिির্स
58. (d) A is the brother of B.

Therefore, A is a male.
C is the father of D .
Therefore, C is a male.
E is the mother of B .
Therefore, E is a female.
A and D are brothers.
Therefore, D is a male.

## Deductions

(i) A and D are brothers of B .
(ii) C is the father of $\mathrm{A}, \mathrm{B}$ and D .
(iii) $C$ is the mother of $A, B$ and $D$.
(iv) E is the wife of C .
59. (a) $\mathrm{P} \xrightarrow{\text { Husband }} \mathrm{O}^{+}$


ख্যাভ্ভির্ন

Obviously, O is the husband of P , hence P is wife of $O$. Now $M$ is son of $P$. So M's parents are P (mother) and O (father).
Hence M is O's son.
60. (b) Husband of Suresh's mother means father of Suresh.
Mother of Suresh's father means grandmother of Suresh.
The son of grandmother means either father or uncle.
Therefore, Suresh is the son of that man.
[Note : Nephew is not mentioned in the options]
61. (c)

| $\times \Rightarrow-$ | $-\Rightarrow \div$ |
| :---: | :---: |
| $+\Rightarrow \times$ | $\div \Rightarrow+$ |

खुप্িির্স
Given expression
$16 \times 8 \div 4-3+9=$ ?
After conversion
? $=16-8+4 \div 3 \times 9$
or, $?=16-8+\frac{4}{3} \times 9$
or, ? $=16-8+12=20$
62. (c)

| $-\Rightarrow \div$ | $+\Rightarrow x$ |
| :---: | :---: |
| $\div \Rightarrow-$ | $x \Rightarrow+$ |

Option (a)
$19+5-4 \times 2 \div 4=11$
$\Rightarrow 19 \times 5 \div 4+2-4=11$
$\Rightarrow \frac{95}{4}+2-4 \neq 11$

## Option (b)

$19 \times 5-4 \div 2+4=16$
$\Rightarrow 19+5 \div 4-2 \times 4=16$
$\Rightarrow 19+\frac{5}{4}-8 \neq 16$
Option (c)
$19 \div 5+4-2 \times 4=13$
$\Rightarrow 19-5 \times 4 \div 2+4=13$
$\Rightarrow 19-5 \times 2+4=13$
$\Rightarrow 19-10+4=13$
63. (a)

| $\times \rightarrow+$ | $\div \rightarrow-$ |
| :--- | :--- |
| $-\rightarrow \times$ | $+\rightarrow \div$ |

Given expression
$54 \div 16-3 \times 6+2=$ ?

After conversion
? $=54-16 \times 3+6 \div 2$
or, $?=54-48+3=9$
64. (c) Except February, all other months have 31 days each. There are 28 or 29 days in the month of February.
65. (c) Except Panchsheel, all others are holy books. Panchsheel is a set of principles to be followed in relation with other countries.
66. (d) Dilution is different from the others. Dilution means the process of making a liquid weaker by adding water.
67. (d) Except 3375, all others are perfect squares.
$625=25 \times 25$
$50625=225 \times 225$
$225=15 \times 15$
68. (a) $16 \times 4-1=063$
$91 \times 4-1=363$
$64 \times 4-1=255$
But,
$36 \times 4+1=145$
69. (b)


फسাভির্स

Now the man is facing towards south.
70. (c)


फुण্ভির্স

He is towards north from his original position
71. (b)


Now she if facing towards west.
72. (b) Today is Saturday.

Tomorrow will be Sunday.
Sunday $+4=$ Thursday.
73. (d) Today is Wednesday $+2=$ Friday

Therefore, Day after tomorrow will be Sunday.
74. (c) Last Monday was December 29, 1975.

Tuesday $\rightarrow$ December 30,1975
Wednesday $\rightarrow$ December 31, 1975
Thursday $\rightarrow$ January 1, 1976
Friday $\rightarrow$ January 2, 1976
आাভ্ভির্स
75. (c)

76. (b) The given number series is based on the following pattern :
$2 \times 2+1=5$
$5 \times 2-1=9$
$9 \times 2+1=19$
$19 \times 2-1=37$
$37 \times 2+1=75$
फறভ্ভির্স
77. (b)

78. (c) The given number series is based on the following pattern :
$3+7=10 ; 10+10=20$
$20+13=33 ; 33+16=49$
$49+19=68 ; 68+22=90$
79. (c) $\mathrm{D}=4$ and


खुাঙিির্স
Similarly,

```
A N T
    \downarrow \downarrow \downarrow
    1+14+20=35
```

80. (b) R A M A N

| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 2 | 5 |

And

| D | I | N | E | S | H |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| 6 | 7 | 5 | 4 | 8 | 9 |

Therefore,

| H | A | M | A | M |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |  |
| 9 | 2 | 3 | 2 | 3 |  |
| 4 | 0 | 8 | 9 | 2 | 7 |
| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| E | U | R | B | S | A |



## खुप्ञिय

82. (b) There is no letter ' $S$ ' in the keyword.
83. (d) There is no $G$ letter in the given word.
84. (d) There is no ' $H$ ' letter in the given word.
85. (b) First premise is Particular Affirmative (I-type)

Second premise is Universal Affirmative (Itype).
Both the premises are already aligned. Thus,
Some doctors are teachers


All teachers are counsellors.
We know that,
I $+\mathrm{A} \Rightarrow$ I-type conclusion.
Therefor, our derived conclusion would be :
"Some doctors are counsellors".
Thus, only conclusion II follows. फुणाष্যিন্ম
86. (b)


All student of a particular class (without any exception) are bright. And, Sarla is not bright. Therefore, Sarla cannot be the student of that particular class.
87. (b) All men (without exception) are mortal. And, Ramu is a man. Therefore, Ramu is mortal.
88. (b) $\mathrm{B}>\mathrm{A}>\mathrm{E}$,
$\mathrm{C}>\mathrm{B}, \mathrm{B}>\mathrm{D}>\mathrm{A}$
$\therefore \mathrm{C}>\mathrm{B}>\mathrm{D}>\mathrm{A}>\mathrm{E}$
89. (b) The rank of Suresh $=28$ th

| 13th |  |
| :---: | :---: |
| R | 14 Students |

90. (c) Total number of trees in the row
$=14+7-1=20$

ख्याप्जियन
91. (a) First figure
$15+16=22+9$
or, $31=31$

## Second figure

$13+7=11+9$
or, $20=20$
Third figure
$21+15=?+13$
or, ? $=36-13=23$
खुण্ভির্জ
92. (c) $22+42=64$
$27+52=79$
Therefore, ? $=91-18=73$
93. (b) The upper numbers are multiples of the lower number.
94. (c) $13 \times 17=221$
$12 \times 19=228$
$13 \times 18=234$
95. (b) The sum of the top numbers is equal to the bottom number.

## 1st Figure

$42+39=81$
2nd Figure
$22+36=58$

## 3rd Figure

$17+43=60$
96. (c) The meaningful order would be :

ख्यापि४र्य
(d) Jungle
$\downarrow$
(c) Timber
(b) Pulp
$\downarrow$
(e) Paper

(a) Book
97. (d) Meaningful order of words:

(c) Soil
$\downarrow$
(a) Seed
$\downarrow$
(d) Plant
$\downarrow$
(b) Flower
$\downarrow$
(e) Fruit
98. (c) Meaningful order of words:

खाप्ञिजर्य
(b) Fever
$\downarrow$
(a) Doctor
(d) Diagnose
$\downarrow$
(c) Prescribe
$\downarrow$
(e) Medicine
99. (b) When both 6 and 4 are in the same position of cube, 5 should be opposite to 1. ऊुणाष्डिन्य
100.(d) There are respectively one, three, five and six dots on faces adjacent to the face having two dots. So, four dots lies on the face opposite to the two dots. Therefore, six dots are on the face opposite to one dot.

