1. (b) $\sin \theta-\cos \theta=0$

Or, $\sin \theta=\cos \theta$
$\therefore \theta=\frac{\pi}{4}$
$\sin ^{4}\left(\frac{\pi}{4}\right)+\cos ^{4}\left(\frac{\pi}{4}\right)$
$\frac{1}{4}=\frac{1}{4}=\frac{1}{2}$
2. (b) $\sqrt{3+\sqrt{5}}=x$

Multiple both side by $\sqrt{2}$,
$(\sqrt{2})(\sqrt{3+\sqrt{5}})=\sqrt{2} x$
$\sqrt{6+2 \sqrt{5}}=\sqrt{2} x$
$\Rightarrow \sqrt{(\sqrt{5}+\sqrt{1})^{2}}=\sqrt{2} x$
$\Rightarrow \sqrt{5}+\sqrt{1}=\sqrt{2} x$
$\sqrt{\frac{5}{2}}+\sqrt{\frac{1}{2}}=x$
3. (b) $2 x+3 y=7$ $\qquad$
$2 p x+(p-q)=28$
If two equation have infinite solution then, they satisfy the condition
$\frac{2}{2 p}=\frac{3}{(p-q)}=\frac{7}{28}$
Therefore $\frac{2}{2 p}=\frac{7}{28} \Rightarrow \mathrm{p}=4$
Also, $\frac{3}{(p-q)}=\frac{7}{28} \Rightarrow \frac{3}{4-q}=\frac{1}{4} \Rightarrow q=-8$
$\Rightarrow(\mathrm{p}, \mathrm{q}) \rightarrow(4,-8)$
4. (d) (A) Tangent touches the circle at exactly one point. So, statement A should be false.
(B) Statement B must be true.
(C) Statement $C$ must be true because A tangent only touches the circle
Ans. Option (d).
5. (d) Statement I :-

We know Men $\times$ Days $=$ Work.
Applying this concept, we get
$(4 \mathrm{~B}+8 \mathrm{G}) \times 5=\frac{1}{3}$ work .........(1)
$((4+3) B+(8+3) G) \times 3=\frac{1}{3}$ work
RHS is equal so equating LHS, we get
$(4 B+8 G) \times 5=(7 B+11 G) \times 3$
$7 \mathrm{G}=1 \mathrm{~B}$. $\qquad$ ..(3)
We know that $(7 B+11 G)$ can do $\frac{1}{3}$ work in 3 days
i.e. $49 \mathrm{G}+14 \mathrm{G}=60 \mathrm{G}$ (using eq. 3 ) can do $\frac{1}{3}$ work in 3 days
To complete $\frac{1}{3}^{\text {rd }}$ work in 2 days we require
$60 \mathrm{G} \times \frac{3}{2}=90 \mathrm{G}$.
It mean 30 more girls will be required and not 32 .
So, statement I is false.
Statement II :- Ratio of time taken by A and C is
$\mathrm{T}_{\mathrm{A}}: \mathrm{T}_{\mathrm{C}}=1: 2$
Therefore the ratio of their efficiencies
$e_{A}: e_{C}=2: 1$
Given, $e_{B}=266 \frac{2}{3} \% e_{C}$ or $e_{B}=\frac{8}{3} e_{C}$
Or, $\frac{e_{B}}{e_{C}}=\frac{8}{3}$
$\therefore e_{A}: e_{B}: e_{C}=6: 8: 3$
Given A can complete $6 \%$ work in 6 days. It means $100 \%$ work (complete work) in 100 days

If we assume his efficiency, $e_{A}$ to be 6 unit/day.
Therefore in 100 days total work done by him will be $=6 \times 100=600$ units
B \& C together can complete this work in $\left(\frac{600}{8+3}\right)$ days
$\frac{600}{11}=54 \frac{6}{11}$ days.
Statement II is correct.
6. (c) Let Radii be $2 x \& 3 x$,

Volume be $1 \mathrm{y} \& 3 \mathrm{y}$,
Height be $\mathrm{h}_{1} \& \mathrm{~h}_{2}$
$\frac{v_{1}}{v_{2}}=\frac{\frac{1}{3} x x_{1}^{2} h_{1}}{\frac{1}{3} x x_{2}^{2} h_{2}}$
$\frac{4}{3 y}=\frac{4 x^{2} \times h_{1}}{4 x^{2} \times h_{2}}$
$\frac{3}{4}=\frac{h_{1}}{h_{2}}$
7. (d) Diameter of a circle inscribe in square
$=6$
Radius $=3 \mathrm{~cm}$
Area $=\pi r^{2}$
$=(3)^{2} \pi=9 \pi$
8. (b) Mean of 25 observation be 36

Which mean sum $=36 \times 25$
$=900$
Mean of 1 st 13 observation be 32
which means sum $=32 \times 13$
= 416
Now, sum of 10st 12 observation $=900-416$
$=484$
Also, mean of lost 13 observation be 39 .
Which means sum $=39 \times 13$
= 507
Now, sum of 10st 12 ${ }^{\text {th }}$ observation $=900-507$
= 393
Subtract sum of $1^{\text {st }} 12$ observation of sum of lost 12 observation from the total sum to get term- - 13,
900-393-484
900-877
$23 \rightarrow$ term $-13^{\text {th }}$
9. (c) $P(A \cup B)=P(A)+P(B)-P(A \cap B)$.
$=0.25+0.50-0.14$
$=0.61$
Neither A or $\mathrm{B}=1-\mathrm{P}(\mathrm{AUB})$
$=1-0.61$
$=0.39$
10. (b) For the value of $y$, we need to check the sum of the divisor of 220 should be equal to the sum of the divisor of $y$.
Sum of all the divisor of 220
$=\left(\frac{2^{3}-1}{2-1}\right)\left(\frac{5^{3}-1}{5-1}\right)\left(\frac{11^{3}-1}{2-1}\right)$
$=\left(\frac{7}{1}\right)\left(\frac{24}{4}\right)\left(\frac{120}{10}\right)=504$
Therefore sum of all the proper divisors will be $=$
$504-220=284$
Thus the value y must be 284 . Thus option (b).
11. (b) One dimension of the resultant cuboid will be

Length $\rightarrow 10$
Breadth $\rightarrow 5$
Height $\rightarrow 5$
Total surface area $=2(\mathrm{lb}+\mathrm{bh}+\mathrm{lh})$
$2(50+25+50)=250 \mathrm{~cm}^{2}$
Option $=b$
12.
(b) $7200 \rightarrow 2^{5} \times 3^{2} \times 5^{2}$

Total number of factors $=(5+1)(2+1)(2+1)$
$=6 \times 3 \times 3$
$=54$
But we don't have to include $1 \& 7200$
$54-2=52$
13. (d) According to the question,

Let distance be D,
Let Upstream speed be ( $x-y$ )
Downstream speed be ( $x+y$ )
Then, according to the question,
$\left[\frac{D}{x+y}\right]=\left[\frac{D}{x-y}\right] \frac{1}{2}$
Statement I : speed of boat: speed of water
= $2: 1$
$\left[\frac{D}{2+1}\right] \neq\left[\frac{D}{2-1}\right] \frac{1}{2}$
Statement II : speed of boat : speed of water $=6: 2$
$\left[\frac{D}{6+2}\right]=\frac{1}{2}\left[\frac{D}{6-2}\right]$ which equal.
Statement I is false
Statement II is true
14. (b)

|  | Sol. | Un. |
| :--- | :--- | :--- |
| A | $\frac{1}{3}$ | $\frac{2}{3}$ |
| B | $\frac{1}{3}$ | $\frac{1}{3}$ |
| C | $\frac{1}{4}$ | $\frac{2}{4}$ |

Probability that only two of hence one able to solve the problem
$=\mathrm{A}_{s} \mathrm{~B}_{\mathrm{S}} \mathrm{C}_{\mathrm{U}}+\mathrm{A}_{\mathrm{s}} \mathrm{B}_{\mathrm{u}} \mathrm{C}_{\mathrm{s}}+\mathrm{A}_{\mathrm{u}} \mathrm{B}_{\mathrm{S}} \mathrm{C}_{s}$
$=\frac{1}{3} \times \frac{1}{3} \times \frac{3}{4}+\frac{1}{3} \times \frac{2}{3} \times \frac{1}{4}+\frac{2}{3} \times \frac{1}{3} \times \frac{1}{4}$
$=\frac{7}{36}$
15. (b) We know that,

Let $\mathrm{y}+\frac{1}{y}=\mathrm{p}$
Squaring both sides : $y^{2}+\frac{1}{y^{2}}=p^{2}-2$
$7\left(y+\frac{1}{y}\right)-2\left(y+\frac{1}{y}\right)=9$
$7 p-2\left(p^{2}-2\right)=9$
$2 p^{2}-7 \mathrm{p}+5=0$
$(2 p-5)(p-1)=0$
$\mathrm{p}=\frac{5}{2}$ or $\mathrm{p}=1$
$y+\frac{1}{y}=1$ No real values of $y$ exists for this
equation.
Now, $\mathrm{y}+\frac{1}{y}=\frac{5}{2}$
$2 y^{2}+2=5 y=2 y^{2}-5 y+2=0$
$(y-2)(2 y-1)=0$
$y=2 \quad y=\frac{1}{2}$
So only one integral solution.
16. (d) (I) $x^{2}+3 x+1=(x-2)^{2}$
$x^{2}+3 \mathrm{x}+1=x^{2}+4-4 x$
$7 \mathrm{x}-3=0$
The given equation in statement (I) is not quadratic.
So the statement I is true.
Statement II : Given $x^{2}+2 x \sqrt{3}+3=0$
For roots to be real \& equal
D $=0$

$$
\begin{aligned}
& (2 \sqrt{3})^{2}-4(1)(3) \\
& 12-12 \\
& =0 \\
& \text { LHS = RHS }
\end{aligned}
$$

Statement II is true
17. (d) $\mathrm{P}+60 \mathrm{P}+3600 \mathrm{P}+24 \times 3600 \mathrm{P}+24 \times 7 \times 3600 \mathrm{P}$
$P(1+60+3600+24 \times 3600+24 \times 7 \times 3600)$
P x 694861 . Ans.
18. (b) $k^{2}-1$ is divisible by 8 .

Put $\mathrm{k}=1, k^{2}-1$ is div. by 8
$\mathrm{k}=3, k^{2}-1$ is div. by 8
That means, $k^{2}-1$ is divisible by 8
when $k$ is an odd number.
19. (c) Statement I: difference : sum : product

1:5:12
Let take the values as $1 \mathrm{x}, 5 \mathrm{x}, 12 \mathrm{x}$.
Given, $12 \mathrm{x}=18$
$12 x=18$
$\mathrm{x}=1.5$
But difference of two number can never be 1.5.
Statement II: Unit digit of $2^{91}$ will be 8 not 6
$\therefore$ Both statement (I) \& statement (II) are false.
20. (a) Statement (I) Volume $=\pi r^{2} h$
$\mathrm{V}=\frac{22}{7} \times 7 \times 7 \times 10$
$\mathrm{V}=1540$
I is correct
Statement (II) TSA $=2 \pi r h+2 \pi r^{2} h$
TSA $=2 \pi r(h+r)$
$=2 \times \frac{22}{7} \times 14(14+30)$
$=3872$
$\therefore$ Both statements (I) \& (II) are true.
21. (a) Cost price

| $A$ | $B$ |
| :---: | :---: |
| $5 x$ | $6 x$ |

$10 \%$ profit on $A=0.5 x$
$10 \%$ profit on $B=0.6 x$
Total profit on both $=1.1 \mathrm{x}$
$1.1 x=22$
$\mathrm{X}=20$
A, cost price $=100$
B, cost price $=120$
Now 20\% loss on A = 20
$30 \%$ profit on $B=36$
Over all profit = 16
Ans. a
22. (b) $\mathrm{F}(\mathrm{x})=2 x^{3}+a x^{2}+b x+3$
$\mathrm{F}(\mathrm{x})=0$ at $\mathrm{x}=1$
$0=2(1)^{3}+a(1)^{2}+b(1)+3$
$-5=a+b \ldots \ldots \ldots,(i)$
$15=2(-2)^{2}+a(-2)^{2}+b(-2)+3$
$15=-16+\_4 a-2 b+3$
$28=4 \mathrm{a}-2 \mathrm{~b}$
$14=2 a-b-$ $\qquad$
Solve eq (i) \& (ii),
You will get $\mathrm{a}=3$
b=-8
Ans. b
23. (b) Volume of a well $=$ volume of the platform
$\pi r^{2} h=1 \times \mathrm{b} \times \mathrm{h}$
$\frac{22}{7} \times 3.5 \times 3.5 \times 30=22 \times 14 \times h$
$3.75 \mathrm{~m}=\mathrm{h}$
24. (a) (i) The probability of getting even sum on the throw of 2 dies
$=\frac{18}{36}=\frac{1}{2}=0.5$
(i) is correct
(ii) the probability of getting product as even
$(1,2),(1,4),(1,6)$
$(2,1),(2,2),(2,3),(2,4),(2,5),(2,6)$
$(3,2),(3,4),(3,6)$
$(4,1),(4,2),(4,3),(4,4),(4,5),(4,6)$
$(5,2),(5,4),(5,6)$
$(6,1),(6,2),(6,3),(6,4),(6,5),(6,6)$
Favourable outcomes $=27$
$\frac{27}{36}=\frac{3}{4}=0.75$
Both (i) \& (ii) one true
25. (a) 5 a 32465 b

For divisible by 88 . The numbers should by divisible by $8 \& 11$.
For last 3 digit to be divisible by
8 the last these numbers should be 656
Now, the numbers become $=5$ a324656.
Sum of energy alternate digits starting from $\mathrm{a}=14$
$+a$
\& sum of every remaining numbers will be 17
Now, their difference should be divisible by 11
$17-(14+a)$
$17-14-\mathrm{a}=3$-a
For $(3-a)$ to be divisible by 11
Only a $=3$ is possible
Now, $2 \mathrm{a}+5 \mathrm{~b}$
$2 \times 3+5 \times 6$
$=36$
Ans. a
26. (d) (i) sum of 1 st hundred multiples of 5 ,
$5+10+15+$. $\qquad$ + 500
$\mathrm{S}_{\mathrm{n}}=\frac{100}{2}[5+500]$
$=25,250$ (I is false)
(ii) this is true as this is the simple sum formula of an A.P
Option D
27. (b) No. of intersection with $x$-axis $=3$ so, number of zeros will be equal to 3 .
28. (c)

$\mathrm{A}=\mathrm{P}\left(1+\frac{r}{100}\right)^{\mathrm{E}}$
$\mathrm{A}=27,000\left(1+\frac{15}{100}\right)^{2}$
$27,000 \times\left(\frac{23}{20}\right)^{2}$
$\mathrm{A}=35,707.5$
The 63,000 will becomes $80 \%$ of itself of 2 years
$63,000 \times \frac{80}{100}=50400$
Total amount after 2 years $=$
$35,707.5+50,400=86107.5$

Total percentage change $=\frac{3892.5}{90,000} \times 100$
$=4.325 \%$ decrease
29. (d) By using the information available


All A, B \& C are correct
Ans. d
30. (d)

$A C=A B+1$
Which means
Only triplets which
Satisfied the given conditions
$(5,12,13)=(\mathrm{BC}, \mathrm{AB}, \mathrm{AC})$

| $\operatorname{Sin} \mathrm{C}=\frac{12}{13}$ | $\operatorname{Cos} \mathrm{C}=\frac{5}{13}$ |
| :--- | :--- |
| $\frac{1+12}{1+\frac{12}{13}}=\frac{25}{13} \times \frac{13}{18}$ |  |
| $\frac{15}{13}$ |  |

31. (c) Circumference - Radius $=37$
$2 \pi r-r=37$
$\mathrm{r}\left(2 \times \frac{22}{7}-1\right)=37$
$\mathrm{r}=\frac{37}{37} \times 7$
$\mathrm{r}=7$
Circumference $=2 \mathrm{rr}$
$=2 \times \frac{22}{7} \times 7$
$=44 \mathrm{~cm}$
32. (d) (A) this statement is true because if y is the average.

It means $x, y, z$ are in A.P.
Means $2 \mathrm{y}=\mathrm{x}+\mathrm{z}$
(B) this statement is also true because the median of given expression $=43$
(C) This statement is true mode $=3$

All A, B \& C one correct.
33. (c) Total number of matches $=$

Total numbers of players -1
= 300-1
$=299$
Total numbers of matches $=299$

Hint (Q. 34 - Q.37):

| Student | Subject (Maximum Marks ) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Physics (120) | Biology (120) | Maths (120) | Geology (120) | Economics (120) | English (120) |
| A | $70 \% \%(84)$ | $75 \%(90)$ | $70 \%(84)$ | $65 \%(78)$ | $60 \%(72)$ | $70 \%(84)$ |
| B | $80 \%(96)$ | $70 \%(84)$ | $75 \%(90)$ | $68 \%(72)$ | $50 \%(60)$ | $75 \%(90)$ |
| C | $75 \%(90)$ | $72 \%(86.4)$ | $71 \%(85.2)$ | $70 \%(84)$ | $60 \%(72)$ | $65 \%(75)$ |
| D | $60 \% \%(72)$ | $70 \%(84)$ | $65 \%(78)$ | $55 \%(66)$ | $60 \%(72)$ | $70 \%(54)$ |
| E | $70 \% \%(84)$ | $75 \%(90)$ | $65 \%(78)$ | $50 \%(60)$ | $55 \%(66)$ | $60 \%(72)$ |
| F | $65 \%(78)$ | $70 \%(84)$ | $60 \%(72)$ | $65 \%(78)$ | $50 \%(60)$ | $60 \%(72)$ |

34. (a) For $65 \%$ overall in all subjects.
$65 \%$ of $720=468$ (Minimum marks)
Student A $\rightarrow 84+90+84+78+72+84=492$
Student B $\rightarrow 96+84+90+72+60+90=492$
Student $C \rightarrow 90+86.4+85.2+84+72+78=495.6$.
3 students A, B, C
(Option a)
35. (b) Use above DI
$\mathrm{A} \rightarrow 84+90+84+78+72+84=\frac{492}{720} \times 100=68.33$
B $\rightarrow 96+84+90+72+60+90=\frac{492}{720} \times 100=68.33$
$C \rightarrow 90+86.4+85.2+884+72+78=\frac{495.6}{720} \times 100=68.83$
Option (c) is closest.
36. (a) Biology $\Rightarrow 90+84+86.4+84+90+84=518.4$
(Biology \%) $\frac{518.4}{720} \times 100=72 \%$
(Option a)
37. (d) Economics $\rightarrow 72+60+72+72+66+60=\frac{402}{6}=$ 67
Physics $\rightarrow 84+96+90+72+84+78=\frac{504}{6}=84$
(Option d)
38. 

(c) $\mathrm{A} \rightarrow 45 \%$ (2005)

Sales of A increased by $50 \%$ in 2006
A sales (2006=67.5)
$\mathrm{E} \rightarrow 22 \%$ (2005)
$\mathrm{E}($ Increased sales $)=24.2 \%$
Now overall sales in $2006 \Rightarrow 124.7 \%=216000$
$45 \%=\frac{45 \times 216000}{124.7}$
$=77947$ (approx) (Option c)
39. (c) Increased sales of $A=67.5 \%$

Increased sales of $\mathrm{E}=24.2$ \%
So overall increased in sales $(2006)=124.7$
sales in (2005) - 100\%
$24.7 \%$ increased. (Option c)
40. (b) $\mathrm{B}(2005)=15 \% \quad \mathrm{~A}(2005)=45 \%$
$B(2006)=16.5 \% B(2006)=40.5 \%$
Increased $=1.5 \% \quad$ Decreased $=4.5$
Net Decreased by $=1.5 \%-4.5 \%$
$=-3 \%$ decreased (Option b)
41. (c)


Similarly,


Hence option c.
42. (c) As per given information, we get following order of people

$$
B>D>E>C>A
$$

Hence, B ran at the fastest speed
43. (b) week $\rightarrow 28.3+15-4+40.2=83.9$
week $2 \rightarrow 24.5+12.3+36.1=72.9$
week $3 \rightarrow 20.4+14.2+42.9=77.5$
week $4 \rightarrow 24.4+15.7+39.8=79.9$
Second Highest week 4
(Option b)
44. (d) $\rightarrow 28.3+24.5+20.4+24.4$
$\rightarrow \frac{9760}{4}=2440$
(Option d)
45. (c)

(Starting From 4)
If we check the number in the form of series, if will be easy to decode the logic. Check -

$38+33=71$ will be the missing number.
Hence, correct option is (c)
46. (c)

| Person | Game | City |
| :--- | :--- | :--- |
| P | Chess | Bombay |
| Q | Football | Calcutta |
| R | Cricket | Ahmedabad |
| S | Tennis | Jaipur |

Hence, option (c) is correct answer.
47. (d) when we the letter to get meaningful word as-

1. SPARROW
2. PIGEON
3. PARROT
4. BRINJAL

Clearly, BRINJAL is different from first three words, as this is vegetable but first three are 'birds' hence. Optional is (d) correct.
48. (b) After unscramble the letters in the given words in order to get meaningful words, we get-

1. WINTER
2. CLOUD
3. SUMMER
4. SPRING

As we know that WINTER, SUMMER and SPRING one season homes while CLOUD is different.
Hence. Optional is (b) correct.
49. (c)


Hence, Sham is uncle of Sita. So option (c) is correct answer.
50. (c) Ecology is the study of the environment, and it helps as understand how organisms live with each other
in unique physical environments. Histology is the as understand how organisms live with each other
in unique physical environments. Histology is the study of tissues and their structure. Hence. Optional is (c) correct.
51. (d) I did not play a game implies that the game was not interesting Hence. Optional is (d) correct.
52. (d)
(d)
)


Hence, stadium is in North-East from house of the boy.
Hence. Optional is (d) correct.
53. (c) According to both Sham and Shalini, The common dates of Ram's birthday may be-16, 17, 18, 19 October.
As this is given that this year, his birthday falls on 'Wednesday'
Now, if $2^{\text {nd }}$ Oct. is Monday so $4^{\text {th }}$ Oct will be Wednesday $11^{\text {th }}, 18^{\text {th }}$ Oct will also be Wednesday.
Hence. Optional is (c) correct.
54. (c) As per given information

| Environment Science |
| :--- |
| Statistics |
| Commerce |
| Botany |
| Electronics |
| Chemistry |

So Environment science is on the top
Hence. Optional is (c) correct.
55. (d)


Hence. Optional is (d) correct.
56. (a) We can arrange the given data as


So ' C can $\mathrm{F}^{\prime}$ sit between G and A Hence. Optional is (a) correct.
57. (c)


So Q is between U and R .
Hence. Optional is (c) correct.
58. (d) 10111317253237

We can get next term by adding sum of digit of number in number itself as-
$10+$ sum of digit of $10=10+(1+0)=11,11+$ sum of
digit of $11==11+(1+1)=13$
$13+(1+3)=17$ ，
$17+(1+7)=25$ ，
$25+(2+7)=32$ ，
$32+(3+2)=37$ ，
$37+(3+7)=47$ ，
Hence．Optional is（d）correct．
59．（b）When the hour hand moves 135 degrees is to use the fact that the hour hand covers 0.5 for every minute． Given that the hour hand needs to move 135 degrees，we can set up the equation：
Angle covered by hour hand $=0.5^{\circ} \times$ Number of minutes
Let
Number of minutes be the time in minutes after
3：00 p．m．
$135^{\circ}=0.5^{\circ} \times$ Number of minutes
Now，solve for the number of minutes：
Number of minutes $=135^{\circ} / 0.5^{\circ}=270$
So，the hour hand will take 270 minutes to move 135 degrees．Now，add these minutes to the initial time of 3：00 p．m．：
3：00 p．m．+270 minutes $=7: 30 \mathrm{p} . \mathrm{m}$ ．
60．（a）The correct option is（a）．
2008 was a leap year．
A leap year has two odd days．
Suppose year 2008 starts with Monday．
Then the first day of 2009 was Wednesday．
Now，
First day of $2010 \rightarrow$ Thursday
First day of $2011 \rightarrow$ Friday
First day of $2012 \rightarrow$ Saturday
Because 2012 was a leap year，First day of $2013 \rightarrow$ Monday．
First day of $2014 \rightarrow$ Tuesday
First day of $2015 \rightarrow$ Wednesday
Thus，the calendar for the year 2009 was the same as that of the year 2015
61．（a）

$\therefore 90+42=132$
Hence，option（1）is correct answer．
62．（d）Word＇SALUTE＇can not be formed from the letters of the word＇CONSULTATION＇as letters＇E＇not in it．
Hence，option（d）is correct answer．
63．（d）Logic：we can get code by multiplying place value of opposite letters，as

| H | E | Similarly |
| :--- | :--- | :--- |
| S | V | G O |
| 19 | 22 | T L |
| And $19 \times 22=418$ | 2012 |  |
|  | And $20 \times 22=240$ |  |

Hence，option（d）is correct answer．
SO，S H E
H S V
and $8 \times 19=22=334$
$8 \quad 19 \quad 22$
64．（d）Here，two series are together at alternate place，as－
15，18，17，


So， $30+6=36$
Hence，option（d）is correct answer．
65．（a）


Similarly


Hence，option（a）is correct answer．
66．（a）At $7: 15=$
Minute Hand $=15 \mathrm{~min} \xrightarrow{\times 6^{\circ}} 90^{\circ}$
Hour Hand $=7 \mathrm{Hr} 15 \mathrm{~min} \longrightarrow 24.5^{\circ}$
Difference $=217.5^{\circ}-90^{\circ}=127.5^{\circ}$
At 9： $15=$
Minute Hand $=15$ min $\xrightarrow{\times 6^{\circ}} 90^{\circ}$
Hour Hand $=9 \mathrm{Hr} 15$ min $\longrightarrow 277.5^{\circ}$
Difference $=277.5^{\circ}-90^{\circ}=187.5^{\circ}$
At 4：30＝
Minute Hand $=30 \mathrm{~min} \xrightarrow{\times 6^{\circ}} 180^{\circ}$
Hour Hand $=4 \mathrm{Hr} \mathrm{30} \mathrm{min} \longrightarrow 135.5^{\circ}$
Difference $=180.5^{\circ}-145^{\circ}=45^{\circ}$
At 2 ： $30=$
Minute Hand $=30 \mathrm{~min} \xrightarrow{\times 6^{\circ}} 180^{\circ}$
Hour Hand $=2 \mathrm{Hr} 30 \mathrm{~min} \longrightarrow 75^{\circ}$
Difference $=105^{\circ}$
So option（a）is the correct answer．
67．（a）This sentence is in the correct past perfect tense structure．The use of＇Hardly had＇is the correct inversion for expressing a sense of surprise or rarity in the past．With＇hardly＇we use either＇had＇or＇did＇ as helping verbs．＇The function got over＇is the correct past tense form of the verb＇get over，and＇the crowd dispersed＇is the correct past tense form of the verb＇disperse＇．The other options have grammatical errors or incorrect tense structures．
68．（d）＇Who replaced the player＇should be written in simple past tense to inquire about a specific action in the past．＇After she was injured＇is also in the correct past tense to indicate the sequence of events．
Option（a）The use of＇had replaced＇suggests the action is in past perfect tense，which is not necessary in this context．

Option (b) 'She were injured' is incorrect; it should be 'she was injured' because we always use singular verb with singular subject.
Option (c) 'Who was replacing the player' is in the past continuous tense, which is not what the sentence is conveying.
69. (c) The word 'ostensible' means something that appears or seems to be true or real, but may not actually be the case. Among the given options, 'apparent' is the most suitable synonym for 'ostensible' as it also carries the meaning of something that is visible, evident, or perceived, but not necessarily true. The other options do not convey the same meaning as 'ostensible'.
Option (a) 'strong' means having power or physical strength.
Option (b) 'desirable' means worth having or seeking.
Option (d) 'fateful' means having significant consequences or being important in a significant way.
70. (b) The word 'communicable' refers to a disease or infection that can be transmitted from one person or organism to another through direct or indirect contact. A synonym for 'communicable' in this context is 'contagious', which means capable of being transmitted from person to person through contact.
Option (a) 'Communication' refers to the exchange of information or messages.
Option (c) 'Commutation' refers to the act of changing or substituting.
Option (d) 'Understandable' means easy to comprehend or perceive.
71. (b) The word 'famished' means extremely hungry or starving. Among the given options, 'hungry' is the most suitable synonym for 'famished' as it carries the same meaning of experiencing a strong need for food due to extreme hunger.
Option (a) 'Agricultural' pertains to farming or related to agriculture.
Option (c) 'Prestigious' means having high status or reputation.
Option (d) 'Feasible' means possible or practical.
72. (d) The correct form is 'not to contradict'. The sentence is stating that the purpose is not to contradict, nor to believe, but to weigh and consider.
Option (a) 'to not contradict' is grammatically incorrect.
Option (b) 'contradict not to' is not the correct order and doesn't fit the sentence context.
Option (c) 'to contradictory' is not the correct phrase to complete the sentence properly.
73. (a) In the sentence, the word 'expedite' is used to describe the attorney's action regarding the process. The context clues provided are 'wanted to' and 'because her client was becoming impatient'. These clues suggest that the attorney is taking action to speed up or make the process faster. The word 'expedite' means to accelerate or speed up a process, which aligns with the context of the sentence.
Option (b) 'evaluate' means to assess or judge, which not the same as making a process faster is.

Option (c) 'reverse' means to go backward or undo, which is opposite in meaning to the context of making something faster.
Option (d) 'justify' means to provide reasons or explanations for something, which is not the same as accelerating a process.
74. (d) The paragraph emphasizes the demanding nature of critical reading and provides instructions on how to engage in it. The phrases 'slow down reading', 'perform specific operations on the text', 'Mark-up the text with your reactions, conclusions and questions', and 'you become an active participant' all highlight the need for thoughtful and careful attention when engaging in critical reading. This supports the idea that critical reading requires focused and careful consideration.
Option (a) The paragraph doesn't suggest that critical reading is dull; rather, it highlights the need to slow down and engage actively.
Option (b) While questioning what is read is part of critical reading, the paragraph is broader in scope and discusses various actions involved in critical reading.
Option (c) The paragraph doesn't mention critical times in a person's life; it focuses on the process of critical reading itself.
75. (d) The original sentence is in the active voice: 'He will finish the work in a fortnight'. To convert this into the passive voice, the structure should be - Subject + will be + past participle + by + agent.
In option (d), the sentence 'The work will be finished by him in a fortnight' maintains the passive voice while accurately reflecting the original sentence's meaning. The other options either have incorrect passive constructions or do not match the original sentence's tense and structure:
Option (a) Incorrect passive construction.
Option (b) The passive voice construction is correct, but the tense is not the same as the original sentence. Option (c) The passive construction is correct, but the tense is changed from future to past, altering the meaning of the sentence.
76. (b) Meaningful sentence: When I was young, shopkeepers would cycle around the town delivering food to customers.
Explanation: The correct order forms a coherent sentence that conveys a clear meaning. The sentence talks about a past practice where shopkeepers would use bicycles to deliver food to customers around the town.
77. (c) The original sentence is in passive voice - Why was such a letter written by your father? To convert this into active voice, the sentence should be in the form 'subject + verb + object'.
In option (c), the sentence 'Why did your father write such a letter?' maintains the active voice and accurately reflects the original sentence's meaning. The other options have incorrect active constructions or do not match the original sentence's structure.
Option (a) Incorrect active construction.
Option (b) 'did your father wrote' is incorrect; it should be "did your father write."

Option (d) This option changes the tense and structure, and it's not a proper conversion of the original passive sentence to active voice.
78. (c) The correct structure in this case uses the base form of the verb 'get' after 'like'. The auxiliary verb 'does' is already in the present tense, so the verb that follows it should be in its base form, 'get', without the addition of ' -s ' as in the third person singular.
Option (a) 'gets' should be 'get'.
Option (b) 'likes' should not have the '-s' ending after 'doesn't'.
Option (d) 'likes' should not have the '-s' ending after 'doesn't' and the structure is not correct with 'getting up'.
79. (b) The word 'palpable' means something that is easily perceptible, noticeable, or able to be felt. Among the given options, 'perceivable' is the most suitable synonym for 'palpable' as it also refers to something that can be perceived or easily detected.
Option (a) 'visible' refers to something that can be seen, but 'palpable' encompasses more than just visual perception.
Option (c) 'audible' refers to something that can be heard, which is not synonymous with 'palpable'.
Option (d) 'presentable' refers to something that is suitable for being presented, which is not synonymous with 'palpable'.
80. (d) The paragraph discusses the advantages of mediation as an alternative approach to resolving conflicts compared to litigation. It highlights that mediation can be faster, less expensive, and can lead to creative solutions not always achievable in a court of law. The statement 'Mediation can be faster, less expensive and can lead to create solutions not always possible in a court of law', directly supports the idea that mediation can be an effective way to resolve conflicts.
Option (a) The paragraph doesn't specifically state that there is 'too much reliance' on litigation.
Option (b) While the paragraph mentions limitations of litigation, it does not explicitly mention that litigation is expensive, slow, and limited by following the letter of the law.
Option (c) The paragraph does not claim that mediation is the absolute best way to resolve a crisis, but rather that it is an effective alternative to litigation.
81. (b) The correct spelling is - Documentation

Option (a) - Disaster
Option (c) - Deviation
Option (d) - Dormitory
82. (b) The original sentence is in direct speech, and the reported version should be changed to indirect speech. The key elements to remember are the change of pronouns and the appropriate reporting verbs. In this case, 'proposed' is the suitable reporting verb, and the pronoun 'us' should change to 'they'.
The correct indirect narration is: He proposed that they should wait for the award.
The other options have errors in reporting or incorrect changes of pronouns:

Option (a) Incorrect: The reported version uses 'proposed' correctly, but the pronouns are incorrect. Option (c) Incorrect: This option changes the meaning by introducing 'agreed to wait', which is not the same as the original sentence's meaning.
Option (d) Incorrect: The reported version has incorrect changes of pronouns and a mismatch in the reporting verb.
83. (c) The original sentence is in direct speech, and the reported version should be changed to indirect speech. The reporting verb 'said' is changed to 'requested', and the pronouns and tenses are modified accordingly. In the reported version, 'him' remains the same, 'wait here' becomes 'wait there', and 'I return' becomes 'she returned'.
The correct indirect narration is: She requested him to wait there till she returned.
Option (a) The pronoun change is correct, but the tenses are incorrect.
Option (c) The tenses are incorrect; 'she returns' should be changed to 'she returned'
Option (d) The tenses are incorrect; 'she had returned' is not needed.
84. (b) The correct sentence is: He put off his departure for a week.
The phrase 'put off' means to postpone or delay something. In this context, it means that he delayed his departure for a week.
Option (a) 'put down' means to place something on a surface, but it doesn't convey the idea of postponing.
Option (c) 'put of' is not a correct phrase.
Option (d) 'put on' means to wear something, but it doesn't convey the idea of postponing.
85. (a) The word 'reproach' means to express disapproval or disappointment, often in a critical or blameful manner. 'Reprimand' is a synonym for 'reproach' as it also refers to a rebuke or criticism, indicating disapproval or scolding.
Option (b) 'appreciate' means to value or recognize the worth of something.
Option (c) 'understand' means to comprehend or grasp the meaning of something.
Option (d) 'to approach again' is a different phrase and does not carry the same meaning as 'reproach.'
86. (b) The word 'gullible' refers to someone who is easily deceived or fooled, often due to a lack of critical thinking or skepticism. Among the given options, 'naïve' is the most suitable synonym for 'gullible' as it carries the same meaning of being easily influenced or deceived due to a lack of experience or sophistication.
Option (a) 'intelligent' means having a high level of mental ability or understanding.
Option (c) 'dishonest' means not truthful or lacking integrity.
Option (d) 'critical' means expressing disapproval or making judgments, which is not synonymous with 'gullible'.
87. (d) The word 'considerate' means being thoughtful, caring, and showing concern for the feelings and needs of others. The opposite of being considerate is
being 'indifferent', which means lacking interest, concern, or empathy for others.
Option (a) 'Comprehensive' means complete or including a wide range of subjects.
Option (b) 'Atrocious' means extremely bad or horrifying, not opposite to 'considerate'.
Option (c) 'Malignant' means harmful or malevolent, not opposite to 'considerate'.
88. (d) The phrase 'A bird in the hand is worth two in the bush' is a common idiom, meaning that it's better to have something certain or real (the bird in your hand) than to risk losing it by trying to get something else that seems better but is uncertain (the two birds in the bush).
89. (c) The correct sentence is: While going to Chandigarh, our car broke down in midway.
The phrase 'broke down' is used to describe the situation when a vehicle stops working suddenly or experiences a mechanical failure. In this context, the correct preposition to use is 'down'.
Option (a) 'broke apart' means to separate into pieces, which is not the same as a mechanical failure. Option (b) 'broke up' typically refers to the end of a relationship, not the situation of a car breaking down.
Option (d) 'broke into' means to forcibly enter a place.
90. (d) The correct answer is (d) refused to yield.

The idiom "put her foot down" in this context means that she firmly and decisively refused to change her decision or yield to the request.
91. (c) The monkeys were running through the forest because they were in search of a warm shelter. This is evident from the passage where it is mentioned, "Worried monkeys looked everywhere for shelter."
92. (b) In the above passage, night is described as cold \& stormy. This is evident from the passage where it mentions, "The night was cold and dark. There was a great storm, thunder and lightning also."
93. (c) When you try to help a fool, you may invite danger for yourself. This is evident from the passage where the bird, out of kindness, tried to help the monkeys by correcting their misunderstanding about the fireflies, but it ended up being pulled out of its nest by an angry monkey, which put the bird in danger.
94. (b) No The correct answer is (b) she was kind and felt sorry for them.
The bird tried to help the monkeys out of kindness and sympathy for their situation. The text mentions that the bird had a kind heart and felt sorry for the monkeys who were cold and looking for shelter. The bird attempted to guide them by informing them that the light they saw was not a real fire, but rather
fireflies that give no heat. Unfortunately, the monkeys reacted with anger and did not appreciate the bird's advice, leading to an unfortunate outcome.
95. (b) is the correct answer.
96. (d) The sentence is logically and grammatically correct.
97. (b) In this sentence, the correct structure is 'he decided not to perform on the stage'. The placement of the word 'not' is important; it should come after the verb 'decided'. This creates the correct negative form of the sentence.
Option (a) 'to not perform' is not the correct structure; it should be 'not to perform'.
Option (c) 'did not decided' is incorrect; it should be 'did not decide'.
Option (d) 'decide not to perform' is the correct structure, but the verb tense should be in the past, 'decided', to match the context.
98. (a) Meaningful sentence: This card entitles you to take an extra person with you free.
The correct order forms a coherent sentence that conveys a clear meaning. The sentence talks about a card that grants the holder the privilege to bring an extra person along for free.
99. (a) The correct sentence is: Time and tide waits for none. The phrase 'Time and tide waits for none' is a wellknown proverb, and in this context, the correct form of the verb to use is 'waits'. The proverb suggests that time and opportunities do not wait for anyone; they keep moving forward regardless of our actions. Option (b) 'wait' is the base form of the verb, but the correct form here is the third person singular 'waits'. Option (c) 'waiting' is the present participle form of the verb, which is not the correct form for the proverb.
Option (d) 'had waited' is the past perfect tense, which is not the correct tense for this context
100. (c) The correct sentence is: There are more things in heaven and earth than are dreamt of in our philosophy.
The phrase 'more things in heaven and earth than' is part of a famous quote from William Shakespeare's play 'Hamlet'. In this context, 'than' is the correct word to use, indicating a comparison between the number of things in heaven and earth and the things that are dreamt of in philosophy.
Option (a) 'then' is used to indicate a sequence of events or time, which is not appropriate here.
Option (b) 'thin' is an adjective meaning having little thickness or being slim, and it does not fit the context.
Option (d) 'where' indicates a location or place, which does not make sense in this context.

Notes:

