

"Your commitment paired with our coaching is a path of your success"

Join Us Now

And Start Your Success Journey

☎ 01141676717

✉ info@scholarssacademy.in

🌐 www.scholarssacademy.in



Rajnish Bhatnagar

SSC CGL Pre

Solution

SCP-9I36046I2-E



Scholars Academy

Download Our APP
Scholars Academy



General Intelligence and Reasoning

1. Solution: B
The logic followed here is:
3rd number: The square of the sum of the 1st and 2nd digits of 1st number is added to the square of the sum of the 1st and 2nd digits of 2nd number.
For 54 # 38,
[(5 + 4)² + (3 + 8)²] = [81 + 121] = 202
For 35 # 77,
[(3 + 5)² + (7 + 7)²] = [64 + 196] = 260
Similarly,
For 67 # 59,
[(6 + 7)² + (5 + 9)²] = [169 + 196] = 365
2. Solution: A

Clues:
1) Q sits second to the right of U.
2) Only one person sits between Q and P.
3) As many persons sit to the right of P as to the left of Q.
Inference:
From Clue 1 and 2, we get Q sits 2nd to the right of U and P sits 2nd to the right of Q.
From Clue 3, we get P sits 3rd from the extreme right end and U sits at the extreme left end.

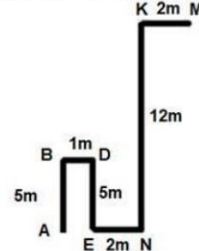
Table with 5 columns and 1 row: U, Q, P, ,

Clues:
1) V sits second to the right of T.
2) V doesn't sit adjacent to Q.
3) S sits to the left of R.

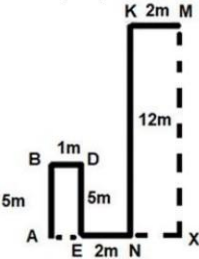
Inference:
From Clue 1 and 2, we get T sits immediate left of P and V sits immediate right of P.
From Clue 3, we get S sits immediate left of Q and R sits immediate right of V.
Therefore, the final arrangement is:

Table with 7 columns and 1 row: U, S, Q, T, P, V, R

3. Solution: B
Given: A 5@ B 1\$ D 5# E 2\$ N 12@ K 2\$ M
On decoding the given statements, we get,
A is 5m south of B, B is 1m west of D, D is 5m north of E, E is 2m west of N, N is 12m south of K, K is 2m west of M.
The following arrangement can be drawn from the given statements:



Draw perpendiculars from A and M which meet at X.



4. Solution: C
The logic followed here is:
The order of the letters in the words is reversed and then the sum of the digits of the place value of each letter is the coded number.
For 'JOINTS':

Table with 6 columns and 4 rows: J, O, I, N, T, S; S, T, N, I, O, J; 19, 20, 14, 9, 15, 10; 10, 2, 5, 9, 6, 1

So, 'JOINTS' is written as '1025961'.
For 'SLOGAN':

Table with 6 columns and 4 rows: S, L, O, G, A, N; N, A, G, O, L, S; 14, 1, 7, 15, 12, 19; 5, 1, 7, 6, 3, 10

So, 'SLOGAN' is written as '5176310'.
Similarly, for 'RAISED':

Table with 6 columns and 4 rows: R, A, I, S, E, D; D, E, S, I, A, R; 4, 5, 19, 9, 1, 18; 4, 5, 10, 9, 1, 9

So, 'RAISED' is written as '4510919'.

5. Solution: A
Given: 52 - 15 + 270 ÷ 8 × 3
Expression after interchanges,
270 ÷ 15 + 52 - 8 × 3
= 18 + 52 - 24
= 70 - 24
= 46
So, the value of the given expression after interchanges is 46
6. Solution: C
The logic followed here is as follows,
From the left end, alternately replace the letters with third succeeding letter as per English alphabetical order and the letter having same place value as the given letter when the letter are written as per reverse English alphabetical order.
For MOUTH,

Table with 5 columns and 3 rows: M, O, U, T, H; +3, Opposite, +3, Opposite, +3; P, L, X, G, K

For ARTICLE,

Table with 7 columns and 2 rows: A, R, T, I, C, L, E; +3, Opposite, +3, Opposite, +3, Opposite, +3

D	I	W	R	F	O	H
For DENTIST,						
D	E	N	T	I	S	T
+3	Opposite	+3	Opposite	+3	Opposite	+3
G	V	Q	G	L	H	W

So, 'DENTIST' is coded as 'GVQGLHW'.

7.

Solution: D

The logic followed here is the difference between the numbers are consecutive prime numbers starting from 17.

$$117 + 17 = 134$$

$$134 + 19 = 153$$

$$153 + 23 = 176$$

$$176 + 29 = 205$$

$$205 + 31 = 236$$

$$236 + 37 = 273$$

8.

Solution: C

The logic followed here is as follows,

First number $\times$ (Sum of the digits of second number) = Third number

For 31:23: 155,

$$31 \times (2+3) = 31 \times 5 = 155$$

For 47: 29: 517,

$$47 \times (2+9) = 47 \times 11 = 517$$

For 37: 19: ?

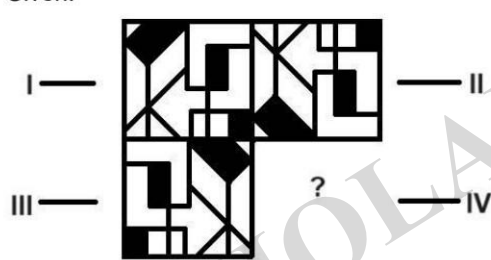
$$37 \times (1+9) = 37 \times 10 = 370$$

Thus 370 will replace the question mark.

9.

Solution: C

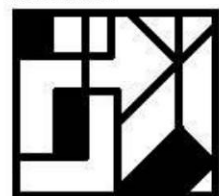
Given:



The logic followed here is as follows,

Figure II is the mirror image of figure I, when the mirror is kept horizontally. Similarly, fig IV will be the mirror image of figure I, when the mirror is kept horizontally.

Thus, the figure that will replace the question mark is as follows:



The complete figure is as follows-

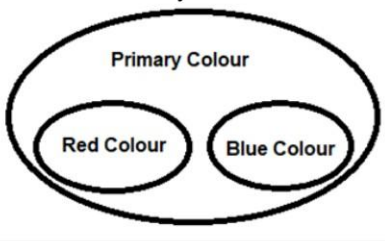


10.

Solution: A

The relationship is as below:

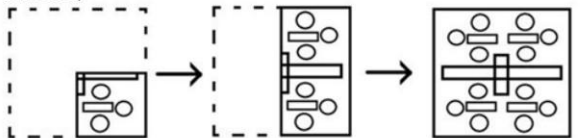
All Red colour are Primary colours, and All Blue colour are Primary colours.



11.

Solution: A

The piece of paper when unfolded will appear will as follows,



12.

Solution: C

The logic followed here s as follows,

For NER: RHT,

N	E	R
+4	+3	+2
R	H	T

In option a:

B	G	Q
+4	+3	+2
F	J	S

In option b:

J	K	I
+4	+3	+2
N	N	K

In option c:

S	D	F
+4	+3	+2
W	G	H

In option d:

K	N	Q
+4	+3	+2
O	Q	S

So, SDF: WGH is the pair of letter clusters which is not related in the same way as the pair of letter cluster NER: RHT.

13.

Solution: B

Pattern is: Square of first number $\times$ (First number - last number) = middle number

$$14 \times (14 - 6) = 14 \times 8 = 112$$

$$17 \times (17 - 5) = 17 \times 12 = 204$$

Similarly;

$$21 \times (21 - 12) = 21 \times 9 = 189$$

14.

Solution: A

The logic followed here is as follows,

$$C + 3 = F, F + 3 = I, I + 3 = L, L + 3 = O, O + 3 = R$$

$A + 3 = D, D + 3 = G, G + 3 = J, J + 3 = M, M + 3 = P$
 $T - 2 = R, R - 2 = P, P - 2 = N, N - 2 = L, L - 2 = J$
So, 'RPJ' will replace the question mark in the given series.

15. **Solution: D**

The relationship between the numbers in the given set is:

$(8, 63, 81): (8 + 1) \times (8 - 1) = 63, (8 + 1)^2 = 81$

$(11, 120, 144): (11 + 1) \times (11 - 1) = 120, (11 + 1)^2 = 144$

Applying the same pattern to the options:

$(9, 80, 100): (9 + 1) \times (9 - 1) = 80, (9 + 1)^2 = 100$

16. **Solution: A**

The logic followed here is:

In such questions, first consider common side in all the figures.

Here, '41' is the common side in all of the above figures.

In clockwise direction, the sequence will be '41, 36, 37' in figure 'a'.

In clockwise direction, the sequence will be '41, 39, 40' in figure 'b'.

In clockwise direction, the sequence will be '41, 36, 40' in figure 'c'.

So, '36' is opposite to '39', '37' is opposite to '40'.

Clearly, '41' must be opposite to '38'.

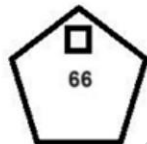
17. **Solution: D**

The pattern followed here is:

From the left end, in the 1st, the 3rd and the 5th figure, the square inside the pentagon is moving in clockwise direction from one corner to the next corner. Similarly, in the 2nd and the 4th figure, the square inside the pentagon is moving in clockwise direction from one corner to the next corner.

The number is increasing in this order: '+1', '+2', '+3', '+4'.

So, the figure given in option 'd' completes the figure series.



The complete series is:



18. **Solution: D**

The logic followed here is:

2nd number is the cube of the sum of the digits of the 1st number.

In option 'A',

1st number = 125, 2nd number = $(1 + 2 + 5)^3 = 512$

In option 'B',

1st number = 432, 2nd number = $(4 + 3 + 2)^3 = 729$

In option 'C',

1st number = 511, 2nd number = $(5 + 1 + 1)^3 = 343$

In option 'D',

1st number = 216, 2nd number = $(2 + 1 + 6)^3 = 729 \neq 125$

So, the pair given in option 'D' is the odd number pair.

19. **Solution: C**

Given series:

_ p _ q _ r r _ _ s p _ q q q _ _ r s _ p p _ _ q _ r r _ _

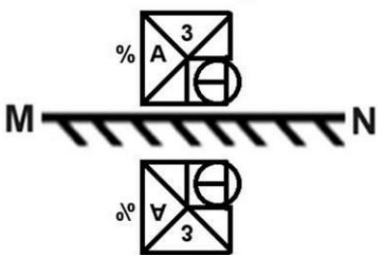
The series is:

ppqqrrrrss/ppqqrrrrss/ppqqrrrrss

'p q q r s p r r s q q r s s' will complete the given series.

20. **Solution: A**

The correct mirror image is shown below:



21. **Solution: B**

Clues:

1) U is the father of P.

2) O, who is married to N, is the only son of U.

3) Q is the nephew of P.

4) L, who is not mother of N, is the grandmother of Q.

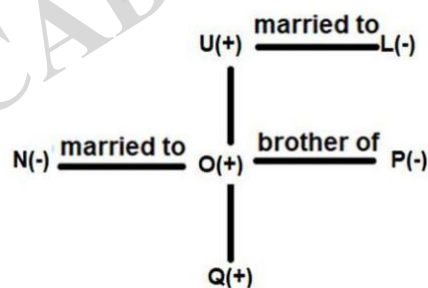
Inferences:

From clue 1 and clue 2, O is the husband of N. Also, P is the daughter of U.

From clue 3, Q is the son of O.

From clue 4, L is wife of U.

The following family tree can be drawn from the given statements,



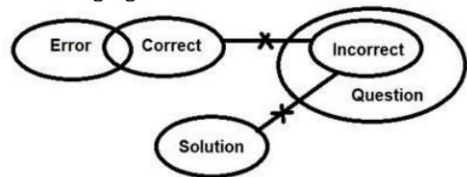
Thus, P is the daughter of L.

22. **Solution: B**

Tea is served in a cup. Similarly, food is served on a plate. So, the correct answer is 2. **Food : Plate.**

23. **Solution: B**

Following figure can be formed:



I. Some Correct is Incorrect. This definitely doesn't follow as no Correct is Incorrect.

II. Some Question is not Solution. This definitely follows as All Incorrect is Question and No Incorrect is Solution.

III. No Error is Incorrect. This definitely doesn't follow as the relation between Error and Incorrect cannot be determined.

IV. Some Question is Incorrect. This definitely follows as All Incorrect is Question.

From the above figure, only conclusions II and IV follow.

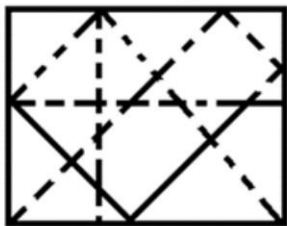
24. **Solution: C**

The correct dictionary order will be:

5) Adaptor, 3) Admission, 6) Advent, 1) Adventure, 2) Adversity, 4) Advocate
So, "5, 3, 6, 1, 2, 4" represent the correct dictionary order.

25. **Solution: D**

The embedded figure is shown below:



Quantitative Aptitude

26. **Solution: A**

Let the present ages of Shivang and Kanika be '8x' years and '7x' years, respectively.
Sum of present ages of Shivang and Kanika = $30 \times 2 = 60$ years

So, $8x + 7x = 60$

So, $x = 60 \div 15 = 4$

Present ages of Shivang and Kanika are 32 years and 28 years, respectively.

2 years hence from now, age of Dibashi = $(28 + 2) \times (4/5) = 24$ years

So, present age of Dibashi = $24 - 2 = 22$ years

2 years ago from now, ratio of age of Dibashi to that of Shivang = $(22 - 2):(32 - 2) = 20:30 = 2:3$

27. **Solution: B**

Let the quantity of honey in the mixture = 'x' litres

Then, quantity of milk in the mixture = $x + x \times 0.3 = 1.3x$ litres

Quantity of water in the mixture = $1.3x + 1.3x \times 0.4 = 1.82x$ litres

So, $x + 1.3x + 1.82x = 309$

Or, $x = 309 \div 4.12 = 75$

Quantity of milk in the mixture = $75 \times 1.3 = 97.5$ litres

28. **Solution: A**

Number of students who obtained less than 50 marks = $16 + 44 + 30 = 90$

Number of students who obtained at least 50 marks and at most 80 marks = $112 + 71 + 57 = 240$

So, required ratio = $90:240 = 3:8$

29. **Solution: D**

Area of triangle = $(1/2) \times \{x_1 \times (y_2 - y_3) + x_2 \times (y_3 - y_1) + x_3 \times (y_1 - y_2)\}$

Given = $x_1 = -2, x_2 = -3, x_3 = 2, y_1 = 0, y_2 = 2$ and $y_3 = 4$

= $(1/2) \times \{-2 \times (2 - 4) + (-3) \times (4 - 0) + 2 \times (0 - 2)\}$

= $(1/2) \times \{(-2) \times (-2) + (-3 \times 4) + 2 \times (-2)\}$

= $(1/2) \times \{4 - 12 - 4\}$

= $(1/2) \times 12 = 6$

30. **Solution: C**

Number of zeros depends on the number of 10s.

Since, $10 = 5 \times 2$, number of 10s depends on number of 5s. (Since, number of 2s will always be more)

So, number of fives at the end of $72! = [72/5] + [72/25]$ {Where $[]$ is greatest integer}

= $14 + 2 = 16$

Therefore, there are 16 zeroes at the end of $72!$

31. **Solution: D**

Volume of pyramid = $(1/3) \times \text{base area} \times \text{height}$

= $(1/3) \times 21 \times 16 \times 15$

= $1,680 \text{ cm}^3$

32. **Solution: A**

Total number of outcomes = $6 \times 6 = 36$

Favourable outcomes = $(1, 2), (1, 3), (1, 5), (2, 1), (2, 4), (2, 6), (3, 1), (3, 4), (3, 6), (4, 2), (4, 3), (4, 5), (5, 1), (5, 4), (5, 6), (6, 2), (6, 3), (6, 5)$

Probability = $(\text{Number of favourable outcomes}) \div (\text{Total number of outcomes})$

Therefore, required probability = $(18/36) = (1/2)$

33. **Solution: A**

$$x = \frac{1}{3 + \frac{4}{5 + \frac{4}{5}}}$$

$$x = \frac{1}{3 + \frac{4 \times 5}{29}}$$

$$x = \frac{29}{87 + 20}$$

$$x = \frac{29}{107}$$

$$\text{So, } y = \frac{29}{107} \times \left(\frac{214}{29}\right) = 2$$

So, required value = $2^2 + 107 \times (29/107) = 4 + 29 = 33$

34. **Solution: D**

$$\begin{aligned} & 3\sin^2 60^\circ + \cos^2 45^\circ + \frac{1}{3}\operatorname{cosec} 30^\circ - \frac{1}{12}\sin 90^\circ \\ &= \frac{5\tan 37^\circ \tan 63^\circ + \cot^2 30^\circ}{3 \times \left(\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{\sqrt{2}}\right)^2 + \frac{1}{3} \times 2 - \frac{1}{12} \times 1} = \frac{3 \times \frac{3}{4} + \frac{1}{2} + \frac{2}{3} - \frac{1}{12}}{5 \times \cot(90 - 37)^\circ \tan 63^\circ + (\sqrt{3})^2} \\ &= \frac{\frac{9}{4} + \frac{1}{2} + \frac{2}{3} - \frac{1}{12}}{\frac{27 + 6 + 8 - 1}{12}} = \frac{3 \times \frac{3}{4} + \frac{1}{2} + \frac{2}{3} - \frac{1}{12}}{5 \times \cot 63^\circ \tan 63^\circ + 3} \\ &= \frac{\frac{4}{2} + \frac{3}{3} - \frac{1}{12}}{5 \times 1 + 3} = \frac{\frac{12}{12}}{5 \times 1 + 3} = \frac{40}{8} = \frac{5}{12} \end{aligned}$$

35. **Solution: C**

Let the sum invested (first part) = ₹100x'

Then, sum invested (second part) = ₹(30000 - 100x)

Interest received from first part = $100x \times 6.5 \times (46/3) \div 100$

= ₹(299x/3)

Interest received from second part = $(30000 - 100x) \times 4.25 \times (25/3) \div 100$

= ₹{10625 - (425x/12)}

According to the question,

$10625 - (425x/12) = (299x/3) \times 0.25 - 235$

Or, $10625 - (425x/12) = (299x/12) - 235$

Or, $127500 - 425x = 299x - 2820$

Or, $130320 = 724x$

So, $x = 130320 \div 724 = 180$

Therefore, sum invested in the first part = $180 \times 100 = ₹18000$

36. **Solution: A**

Required ratio = $(20 + 45 + 24):(15 + 20 + 24) = 89:59$

37. **Solution: B**

We have AB is parallel to DC and AD is parallel to BC,

So, ABCD is a parallelogram

Also, AB = BC, so ABCD is a rhombus

So, area of the rhombus = $(1/2) \times \text{product of the length of the diagonals}$

= $(1/2) \times 9 \times 14 = 63 \text{ cm}^2$

The area of a triangle on the same base and between the same parallels lines is half the area of the parallelogram

So, area of $\triangle ECD = (1/2) \times 63 = 31.5 \text{ cm}^2$

38. **Solution: A**

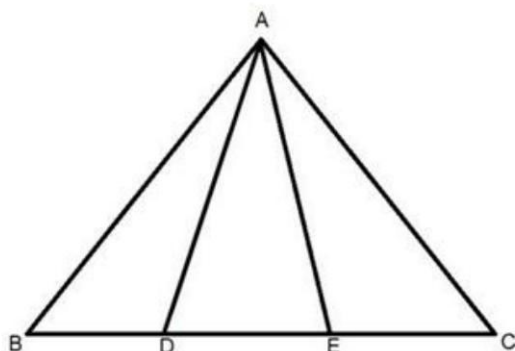
Marked price of the watch = $980 \times 1.4 = ₹1,372$

Selling price of the watch = $1372 \times 0.85 - 54$

= ₹1,112.20

So, profit earned on selling the watch = $1112.20 - 980 = ₹132.20$

39. **Solution: D**



In the above given figure,

In $\triangle ADE$,

$\angle ADE = \angle AED$ [As $AD = AE$ and angles opposite to equal sides are equal]

So, $180^\circ - \angle ADE = 180^\circ - \angle AED$

Or, $\angle BDA = \angle CEA$

Also, $\angle BAD = \angle CAE$

So, $\triangle ABD \sim \triangle ACE$ [A - S - A property of similarity]

So, $(AB/AC) = (BD/CE) = (AD/AE)$

Or, $\{(2p + 3)/(3q - 1)\} = (2p/q) = 1$ {Since, $AD = AE$, therefore $(AD/AE) = 1$ }

So, $(2p/q) = 1$

Or, $2p = q$

Again,

For $\{(2p + 3)/(3q - 1)\} = 1$

Or, $2p + 3 = 3q - 1$

Or, $3q - 2p = 4$

Or, $3q - q = 4$ (Since, $2p = q$)

Or, $2q = 4$

Or, $q = 2$

So, $p = (q/2) = (2/2) = 1$

Therefore, $(p + q) = 2 + 1 = 3$

40.

Solution: C

We know that $a^3 - b^3 = (a - b) \times (a^2 + ab + b^2)$

So, $(x - y) \times (x^2 + xy + y^2) = 98$

Since, $(x - y) = 2$

So, $(x^2 + xy + y^2) = 49$ (I)

Also, $x = 2 + y$ (II)

Using equation (I) and (II), we have;

$(y + 2)^2 + (y + 2)y + y^2 = 49$

Or, $y^2 + 4 + 4y + y^2 + 2y + y^2 = 49$

Or, $3y^2 + 6y - 45 = 0$

Or, $y^2 + 2y - 15 = 0$

Or, $y^2 + 5y - 3y - 15 = 0$

Or, $y(y + 5) - 3(y + 5) = 0$

Or, $(y + 5)(y - 3) = 0$

So, $y = -5$ or $y = 3$

But since $x, y > 0$. So, $y = 3$

So, $x = 2 + 3 = 5$

Now, required value = $12 \times 5 - 8 \times 3 = 60 - 24 = 36$

41.

Solution: A

Let the length of the train be 'x' metres

Let the speed of the train be 'y' m/s

ATQ;

$\{(x + 150)/y\} = 14$

Or, $x + 150 = 14y$

So, $x = 14y - 150$ (I)

$\{(x + 2x)/y\} = 24$

Or, $3x = 24y$

So, $x = 8y$

Using equation (I), we have;

So, $8y = 14y - 150$

Or, $6y = 150$

So, $y = 25$

So, $x = 8 \times 25 = 200$

So, required time = $200 \div 25 = 8$ seconds

42.

Solution: D

Given = $\{(\sec \theta + \tan \theta)/(\sec \theta - \tan \theta)\} = (8/5)$

On applying componendo and dividendo, we have;

$\{(\sec \theta + \tan \theta) + (\sec \theta - \tan \theta) \div (\sec \theta - \tan \theta) - (\sec \theta - \tan \theta)\} = \{(8 + 5)/(8 - 5)\}$

Or, $2\sec \theta \div 2\tan \theta = (13/3)$

Or, $\sec \theta \div \tan \theta = (13/3)$

So, $(1/\cos \theta) \div (\sin \theta/\cos \theta) = (13/3)$

Or, $(1/\sin \theta) = (13/3)$

So, $\csc \theta = (13/3)$

43.

Solution: B

We can see that both tangents MN and MO have a common point 'M'.

Therefore, $MO = MA = 25$ cm

44.

Solution: B

Number of four wheelers sold on Tuesday = $450 \times 0.58 = 261$

Number of four wheelers sold on Thursday = $360 \times 0.5 = 180$

Number of two wheelers sold on Wednesday = $325 \times 0.4 = 130$

So, required difference = $(261 + 180) - 130 = 311$

45.

Solution: B

$72 = 8 \times 9$

So, the given number must be divisible by both 8 and 9.

If the given number is divisible by 8, then $x52$ is divisible by 8

So, possible values of 'x' are 1, 3, 5 and 7.

If the given number is divisible by 9, then sum of the digits must be divisible by 9,

So, $4 + 5 + 7 + 8 + 0 + x + 5 + 2 = (31 + x)$ must be divisible by 9

So, only possible value of x is 5

So, required sum = 5

46.

Solution: D

Let the efficiency of each man and each woman be 'M' units/day, and 'W' units/day, respectively

ATQ:

$18 \times 10 \times 'M' = 24 \times 25 \times W$

Or, $180M = 600W$

Or, $(M/W) = (600/180) = (10/3)$

Let the actual value of 'M' and 'W' be '10x' and '3x', respectively

Required time = $\frac{18 \times 10 \times 10x \times \frac{1}{2}}{10x \times 6 + 3x \times 10} = \frac{900x}{90x} = 10$ days

47.

Solution: B

$(5/8)$ of 432 km = 270 km

So, time taken to travel 270 km = $270 \div 30 = 9$ hours

Remaining distance = $432 - 270 = 162$ km

Remaining time = $13.5 - 9 = 4.5$ hours

So, speed at which remaining distance is to be travelled = $162 \div 4.5 = 36$ km/h

48.

Solution: B

Time taken by 'A' and 'C' together to complete 100% of the work = $49.5 \times 2 = 99$ days

Let the total work = L.C.M of 110, 90 and 99

= 990 units

Then, combined efficiency of 'A' and 'B' = $990 \div 110 = 9$ units/day

Combined efficiency of 'B' and 'C' = $990 \div 90 = 11$ units/day

Combined efficiency of 'A' and 'C' = $990 \div 99 = 10$ units/day

So, $2 \times$ efficiency of 'B' = $(9 + 11) - 10 = 10$ units/day

So, efficiency of 'B' = $(10/2) = 5$ units/day
20% of the total work = $990 \times 0.2 = 198$ units
So, time taken by 'B' alone to complete 20% of the work = $198 \div 5 = 39.6$ days

49. **Solution: D**
Cost price of 15 kg of ghee bought = $15 \times 840 = ₹12,600$
Selling price of ghee per kg = $840 + 840 \times (50/700) = ₹900$
Selling price of the total quantity of ghee sold = $12600 \times 1.05 = ₹13,230$
So, quantity of ghee sold = $13230 \div 900 = 14.7$ kg
So, the faulty weight weighed (per kg) = $(14.7/15) \times 1000 = 980$ grams
So, 1 kg reads as 980 grams in the faulty weight scale.
50. **Solution: A**
Let the numbers 'A', 'B' and 'C' be '18k', '25k' and '30k', respectively.
Required ratio = $(0.875 \times 18k) : (1.12 \times 25k) : (0.875 \times 30k) = 9:16:15$

General Awareness

51. **Solution: D**
Indian cricketer Shikhar Dhawan has been named as one of the event ambassadors for the ICC Champions Trophy 2025, set to be held in Pakistan and Dubai from February 19 to March 9. Other ambassadors include Sarfaraz Ahmed, Shane Watson, and Tim Southee.
52. **Solution: A**
The Securities and Exchange Board of India (SEBI) has launched a new digital platform called Mutual Fund Investment Tracing and Retrieval Assistant (MITRA). It aims to help investors trace and retrieve inactive or unclaimed mutual fund folios. The platform is managed by Computer Age Management Services Ltd (CAMS) and KFIN Technologies Ltd.
53. **Solution: B**
The event is being organized by the Labour Ministry in collaboration with the Confederation of Indian Industry (CII) and the Employers' Federation of India (EFI).
54. **Solution: C**
Orville and Wilbur Wright The Wright brothers, Orville and Wilbur Wright invented the aeroplane.
55. **Solution: C**
"Viyahula Giddha" is a popular folk dance performed during marriages in Indian state of Punjab and also in Pakistan. Viyagula Giddha is danced in a circle. The girls form a ring. One of them uses a (dholki) while sitting in the centre.
56. **Solution: C**
Vitamin B12 also known as cobalamin, is a water-soluble vitamin involved in the metabolism of every cell of the human body: it is a cofactor in DNA synthesis, and in both fatty acid and amino acid metabolism.
57. **Solution: B**
The domestic goat or simply goat (Capra aegagrus hircus) is a subspecies of Cap Aegagrus domesticated from the wild goat of Southwest Asia and Eastern Europe.
58. **Solution: A**

A **thermal printer** is a type of printer that uses heat in order to produce an image on paper. It has grown in popularity as a result of improved print quality, speed, and technological advancements.
Hence, Option A is the correct answer.

59. **Solution: C**
Atacama Salt Flat:
· It is also known as Salar de Atacama.
· It is the biggest salt deposit in **Chile**.
· It has a rough white surface below which there is a large Salt Lake.
· The lake under the salt flat has one of the largest lithium reserves in the world.
· It lies in Chile's Atacama Desert, probably the driest place on the planet.
· The northern part of the basin is the San Pedro River delta.
Hence, Option C is the correct answer.
60. **Solution: A**
The famous patriotic song '**Vijayi vishwa tiranga pyara, Jhanda Uncha rahe hamara...**' was composed by **Shyam Lal Gupta**, also known by his pen name 'Parshad.'
He was imprisoned and fined ₹500 for composing the "Jhanda" song. The song became immensely popular, and among several patriotic songs written at that time, it was titled - 'Jhanda Geet'.
Hence, Option A is the correct answer.
61. **Solution: A**
The term broadband commonly refers to high-speed Internet access that is always on and faster than the traditional dial-up access.
It is offered in four different forms, DSL (or Digital Subscriber Line), also fiber-optic, cable, and satellite. The old **dial-up connection** is the only non-broadband internet service available.
Hence, Option A is the correct answer.
62. **Solution: A**
Properties of magnetic lines of force are
• The magnet lines of force are **closed curves**.
• Outside the magnet, they are from North to the South Pole and inside the magnet, they are from South to the North Pole.
• They originate from the North Pole and terminate at the South Pole.
• Two lines of force **never intersect** each other.
• If the lines of **force are crowded, the field is strong**.
• If the lines of force are parallel and equidistant the **magnetic field is uniform**.
Hence, Option A is the correct answer.
63. **Solution: A**
Ammonia (NH₃):
Ammonia is a colourless and pungent gas composed of nitrogen and hydrogen. It is produced in human body and is commonly found in soil. It is used in agriculture as fertilizer; manufacture of plastics, explosives, fabrics, pesticides, dyes and other chemicals. It is very corrosive and damages human cells.
Hence, Option A is the correct answer.
64. **Solution: B**

Modern names of Rivers	Ancient names of Rivers
Indus	Sindhu
Ganga	Padma (Bangladeshi name)
Yamuna	Kalindi

Jhelum	Vitasta
Chenab	Asikini
Ravi	Parusni
Beas	Vipasa
Sutlej	Sutudri
Brahmaputra	Dihang; Tsangpo (Tibetan name)
Krishna	Krsnavena, Krsnaveni, Kanhapenna
Narmada	Namade
Luni	Sagarmati, Lavanavati
Betwa	Vetravati
Chambal	Charmanvati
Gandak	Sadanira
Kosi	Kausika
Ghaghara	Karnali
Kabul	Kubha

Hence, Option B is the correct answer.

65. **Solution: D**

Anushilan Samiti:

It was established in 1902 by Satish Chandra Bose and Barrister Praanath Mitra in Kolkata.

The Samiti was strongly committed to the idea of a nationwide revolt to end the British Raj in India and soon came to be known as a radical thought. It focussed on effective training and capacity building of its members, equipping them with the requisite knowledge, skills, and strength to put up a strong fight against the British forces.

The Samiti also published its own newspaper, pamphlets, and books to propagate the idea of revolution across the country. One among them was the periodical Yugantar (Jugantar), which was very emphatic in preaching revolution.

The Samiti eventually dissolved into the Revolutionary Socialist Party before the Second World War.

Hence, Option D is the correct answer.

66. **Solution: B**

Electron affinity increases in a period and decreases in a group. But, fluorine atom, due to its small size cannot release high amount of energy. Hence, among halogens, chlorine atom has high value of electron affinity and the correct order is $I < Br < F < Cl$.

Hence, Option B is the correct answer.

67. **Solution: C**

- The electricity **built on the surface of a substance** is known as static electricity.
- Static electricity is generated when objects are rubbed against each other resulting in charge transfer.
- Static electricity is **uncontrolled**.
- The shock experienced while touching a doorknob is an example of static electricity.
- **Current electricity** is generated by power plants and batteries.

Hence, Option C is the correct answer.

68. **Solution: B**

Union Minister Annapurna Devi of the Ministry of Women and Child Development (MoWCD) launched the **SHe-Box portal**, a **centralized platform** for registering and monitoring complaints of **sexual harassment of women at the workplace**.

The new She-Box portal serves as a centralized repository of information related to Internal

Committees (ICs) and Local Committees (LCs) formed across the country, encompassing both the government and private sectors.

It offers a common platform to file complaints, track their status, and ensure time-bound processing of complaints by ICs.

It provides assured redressal of complaints and a streamlined process for all stakeholders.

The portal through a designated nodal officer will enable real-time monitoring of complaints.

Note: The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013, serves to protect women from sexual harassment in the workplace and address their grievances.

Hence, Option B is the correct answer.

69. **Solution: A**

Kodaikanal Solar Observatory is located in the Palani range of hills in **Tamil Nadu**. It was established in 1899 as a Solar Physics Observatory and all the activities of the Madras Observatory were shifted to Kodaikanal. It is operated by the Indian Institute of Astrophysics.

Hence, Option A is the correct answer.

70. **Solution: B**

The Law Commission of India is a non-statutory body constituted by a notification of the Ministry of Law and Justice. It aims to Reform the laws for maximizing justice in society and promoting good governance under the rule of law.

The Law Commission was first constituted in 1834 by the Governor-General (empowered by the Charter Act, 1833) under the Chairmanship of **Lord Macaulay**.

Hence, Option B is the correct answer.

71. **Solution: B**

Variable Costs are those that depend on the level of output. In contrast, fixed costs are those that do not depend on output. So, by definition, the fixed costs are those that are present even when production is zero, and therefore **variable cost is zero** when output is zero.

72. **Solution: B**

Jurist B. N. Rau was appointed constitutional adviser to the assembly; Rau prepared the original draft of the constitution.

73. **Solution: B**

Tax policy is a powerful tool of **Fiscal Policy** that governments use. In the case of income tax, the government taxes those earning higher incomes at higher rates, while those below a threshold are exempt from paying income tax. Wealth tax is also levied on wealth above a certain threshold.

The government may also use taxes on items that are consumed by the rich such as taxes on consumption in five-star hotels.

74. **Solution: A**

Mankidia is one of the seventy-five Particularly Vulnerable Tribes. They are a semi-nomadic section of the Birhor tribe. The community is famed for its skill in catching monkeys and trapping small birds and animals. They live in a dome-shaped leaf hut known as "**Kumbha**".

Hence, Option A is the correct answer.

75. **Solution: D**

The Swaraj Party was formed in 1923 after the Gaya session of the Indian National Congress in 1922. The organization included **Hakim Ajmal Khan**,

Chittaranjan Das, U. Rama Rao, Ranga Swami Iyengar, Bhagwandas, and Swami Satyadev, among others. They even contested elections to the Legislature Council and won several seats.

The Swaraj Party, as a whole, was eventually endorsed by the Congress and it managed to enter the Legislature under the leadership of Motilal Nehru. Hence, Option D is the correct answer.

English Language

76. **Solution: A**

In A, replace the singular noun CAUSE with the plural noun CAUSES as the structure ONE OF THE is followed by a plural noun. Thus, A is the right answer.

77. **Solution: C**

BDCA is the correct sequence of sentences. B begins the sentence by telling us that since ancient times, it is evident that the improvement and innovation of trade routes is important for promoting regional economic development. D follows B to describe how the collaboration between China and Russia on the Northern Sea Route is an example of this. C follows D to describe how it is the shortest maritime passage between northeast Asia and western Europe, so this Northern Sea route is significant for trade between China and Russia. At last, A tells us that along with China and Russia, it is also significant for East Asian economies and Europe. Thus, C is the right answer.

78. **Solution: A**

The sentence talks about how in China there are more people who are 65 years old or more than there are in any other country. The given sentence is grammatically and contextually correct, therefore, no substitution is needed. Thus, A is the right answer.

B is incorrect as TO has been used instead of THAN to show comparison between the aged people in China and in other countries. MORE is followed by THAN to show such comparisons.

C is incorrect as THEIR has been used instead of THERE to refer to any other country. THERE is used to refer to a specific location or place, whereas THEIR is a third person possessive pronoun.

D is incorrect as the singular verb IS has been used instead of the plural verb ARE to refer to the plural noun PEOPLE.

79. **Solution: D**

The sentence is in the simple past tense, and passive voice. To change the sentence to the active voice, follow the rules below:

I. The subject clause will become the object clause. The subject in the sentence, FLOWERS, will change to the object of the verb, the preposition BY will be omitted, and its object, HER, will become the subject SHE and begin the sentence.

II. The simple past passive voice construction WERE PRESENTED will be replaced by the simple past active voice construction PRESENTED.

Thus, D is the right answer.

80. **Solution: C**

We need an adjective to modify the noun PROTECTION. The sentence tells us how once a person damaged one of his eyes while he was trying to observe a solar eclipse without sufficient or proper protection. The word INADEQUATE (insufficient) will fit here. Thus, C is the right answer.

The remaining options are either contextually or grammatically incorrect.

Advent (noun) - the arrival of a notable person or thing. Breezy - pleasantly windy. Intact - not damaged or impaired in any way.

81. **Solution: A**

The error is in part A. Add the definite article THE before UNITED STATES because in cases, the name of a country starts with UNITED, it is preceded by the definite article THE. Thus, A is the right answer.

82. **Solution: C**

The sentence tells us how it would have been very painful and difficult for him to lose both of his parents within a year. TO LOSE BOTH OF HIS PARENTS can replace the highlighted phrase to convey the intended meaning. Thus, C is the right answer.

The highlighted phrase is incorrect as BOTH OF is used to refer to two people or things. Therefore, PARENT, a singular noun, does not fit here and should be replaced by PARENTS.

A and B are incorrect as base form verb LOSE should be used instead of the present participle verb LOSING and LOST respectively to fit in the infinitive structure TO + VERB 1. Also, in A, the objective pronoun HIM should be replaced with the possessive adjective HIS to modify the noun PARENTS.

83. **Solution: B**

The sentence tells us how a person should be careful about washing his hands before touching food. The word FASTIDIOUS means very attentive to and careful about accuracy and detail. The word SLOPPY (that shows a lack of care, thought or effort) is opposite in meaning to the underlined word. Thus, B is the right answer.

Lazy - not wanting to work. Doubtful - not sure about something. Nervous - worried or afraid.

84. **Solution: D**

The sentence is in the indicative mood, future perfect tense, and active voice. To change the sentence to the passive voice, follow the rules below:

I. The object clause will become the subject clause. The object ALL THE PAINTINGS will become the subject of the sentence and start the sentence.

II. The verb WILL HAVE SOLD will change to WILL HAVE BEEN SOLD, as the passive voice construction for the future perfect tense in the indicative mood is WILL + HAVE + BEEN + PAST PARTICIPLE.

III. The preposition BY will be added to the sentence, and I will change to ME and become its object.

Thus, D is the right answer.

85. **Solution: C**

The error is in option C. Replace the singular verb IS with the plural verb ARE to agree with the plural noun OPPORTUNITIES. Thus, C is the right answer.

86. **Solution: A**

CONTEMPORARY means belonging to the same time as somebody/something else. Thus, A is the right answer.

Devious - clever but not honest or direct. Tropical - extremely hot. Nemesis - a punishment or defeat that somebody deserves and cannot avoid.

87. **Solution: C**

We need a noun to be modified by the demonstrative pronoun THIS. TALE (story) will fit here as the sentence seeks to convey that every person used that story as an example of why nobody should ever lie. Thus, C is the right answer.

Teal - a dark greenish-blue colour. Toll - money paid to use a particular road or bridge. Tail - the part at the end of the body of an animal, bird, fish, etc.

88. **Solution: B**

We need a noun to function as the object of the verb CAUSED. CHAOS (complete disorder and confusion) will fit here as the sentence seeks to convey that the loss of electricity led to complete disorder in the city. Thus, B is the right answer.

Curious (adjective) - eager to know or learn something. Strand - a single thin length of something such as thread, fibre, or wire. Errand - a short trip to accomplish a specific purpose.

89. **Solution: A**

The word SUBLIME means of very high quality or great beauty. The word ORDINARY (of no special quality or interest) is opposite in meaning to the given word. Thus, A is the right answer.

Pleasant - nice, enjoyable or friendly. Hard - not easy to break or bend. Fruitful - producing good results.

90. **Solution: D**

The word ACCESS (the right or opportunity to use something) is incorrectly spelled in the given sentence. Thus, D is the right answer.

Concerns - worries. Potential - possible. Curbed - limited or controlled.

91. **Solution: A**

The sentence seeks to convey that every person in the group is crowned a king or queen for a day and then he is given the responsibility to give innovative approaches to solve problems. Out of all the given options, only the phrase in A can convey the required meaning while being grammatically correct. Thus, A is the right answer.

The remaining options are grammatically incorrect. The highlighted phrase and B are incorrect, as the present participle form verbs PROVIDING and OFFERING should be used to function as gerunds and be modified by the preposition WITH.

D is incorrect, as the singular verb WAS should be used instead of the plural verb WERE to refer to the singular subject EACH.

92. **Solution: A**

The idiom TO ADD INSULT TO INJURY means to make a situation worse. Thus, A is the right answer.

None of the other options convey the meaning of the given idiom.

93. **Solution: D**

The word VITAL means absolutely necessary; essential. The sentence seeks to convey that the agri startups and rural businesses are playing an increasingly important role in improving agriculture in India by solving key problems faced by the sector. TRIVIAL (of little value or importance) will be the antonym of the given word. Thus, D is the right answer.

94. **Solution: D**

The word mentioned in option D is incorrectly spelt. The correct spelling of the word is TYRANNICAL (using power or authority in a cruel and unfair way). Thus, D is the right answer.

Grumpy - bad-tempered. Hiatus - a pause in an activity when nothing happens. Dismissal - removal from a position or service.

95. **Solution: A**

BCAD is the correct sequence of sentences. B begins the paragraph by telling us that scientists are suggesting a new way of understanding the genetics of Alzheimer's disease and this would mean that there is a chance that around one-fifth of Alzheimer's patients got the disease genetically. C tells us how before this proposal there was no definite cause for it. A follows C to tell us that the new proposal could not only help in determining whether the disease is caused genetically but also it would help in creating effective treatments for it. Not only this, it could also mean that people could receive a diagnosis of the disease even before developing its symptoms, as mentioned in D. Thus, A is the right answer.

96. **Solution: B**

The passage talks about the universe as something that provides wealth and prosperity. A "resource" is something that can be used to generate wealth, making it the best choice. "Burden" and "wasteland" have negative connotations, which do not align with the context. "Illusion" does not fit either, as the passage presents the universe as a real provider of wealth.

97. **Solution: A**

The sentence emphasizes that the earth provides resources, making "giver" the most appropriate word. "Consumer" and "receiver" imply taking rather than giving, which contradicts the passage's message. "Destroyer" does not fit the positive tone of the passage.

98. **Solution: B**

The passage highlights how only humans take from the earth without giving back, whereas other species "contribute." "Extract" and "demand" imply taking rather than giving. "Refuse" does not make sense in this context.

99. **Solution: C**

The passage describes a person who always wants more as poor. "Infinite" (meaning never-ending) best describes such desires. "Finite" and "limited" mean the opposite, and "controlled" implies restraint, which contradicts the idea of insatiable desires.

100. **Solution: B**

The passage defines true poverty as never being satisfied. "Poor" best matches this definition. "Wealthy" and "generous" contradict the meaning. "Content" suggests satisfaction, which the person in question lacks.