

"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 CHSL Pre

Solution

SHP-9I266424I-E

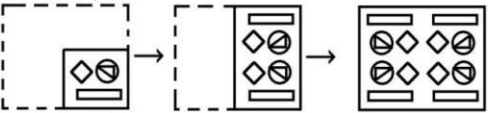


Scholars Academy

Download Our APP
Scholars Academy



General Intelligence and Reasoning

1. **Solution: B**
Given series:
6 _ 2 9 _ _ 1 6 8 _ 9 _ 4 1 6 _ _ 9 3 _ 1
The complete series will be:
6 8 2 9 3 4 1 / 6 8 2 9 3 4 1 / 6 8 2 9 3 4 1
So, '8, 3, 4, 2, 3, 8, 2, 4' will complete the series.
2. **Solution: C**
Given word: 'RESTORATION'.
'ARREST' can be formed using the letters of the word 'RESTORATION'.
'ORIENT' can be formed using the letters of the word 'RESTORATION'.
'ARTISTS' cannot be formed using the letters of the given word, as there is only one 'S' in 'RESTORATION'.
'ORATOR' can be formed using the letters of the word 'RESTORATION'.
3. **Solution: A**
The logic followed here is:
For every pair in the form of 'AB: CD',
 $CD = (A + B)^2$
In '67: 169',
 $= (6 + 7)^2$
 $= (13)^2$
 $= 169$
In '99: 324':
 $= (9 + 9)^2$
 $= (18)^2$
 $= 324$
Similarly, in 789: ?
 $= (7 + 8 + 9)^2$
 $= (24)^2$
 $= 576$
So, 576 will come in place of '?'.
Solution: D
All, except 'Archaeologist' are different fields for study. Archaeologists are experts who study and analyse human history and prehistory through excavation and artefacts.
5. **Solution: A**
Here, the pattern is:
Second row - 261 244 289
 $261 - 244 = 17$ and $17 \times 17 = 289$.
Third row - 542 523 361
 $542 - 523 = 19$ and $19 \times 19 = 361$.
First row - ? 114 169
So, $\sqrt{169} = 13$.
Thus, $114 + 13 = 127$.
6. **Solution: A**
The piece of paper will appear as follows when unfolded,

7. **Solution: D**
Clues:
1) N is taller than only three persons.
2) O is taller than P, who is not the shortest.
3) O is shorter than N.
4) Q is taller than S.
5) Q is not the tallest.
Inferences:

From clue 1, clue 2 and clue 3, N, O and P are the 3rd tallest, the 4th tallest and the 5th tallest persons respectively.

From clue 4 and clue 5, Q is the 2nd tallest person while S is the shortest person.

The only person remaining is R, who is the tallest person.

The final arrangement is as follows:

$R > Q > N > O > P > S$

Five persons are shorter than R.

8. **Solution: C**

$B + 1 = C$

$O + 2 = Q$

$W + 1 = X$

$L + 2 = N$

$E + 1 = F$

$R + 2 = T$

After reversing letters code is TFNXQC.

Similarly;

$B + 1 = C$

$O + 2 = Q$

$W + 1 = X$

$M + 2 = O$

$A + 1 = B$

$N + 2 = P$

After reversing letters code is PBOXQC.

9. **Solution: A**

The relationship is: Mouse is an input device for a computer. The input device for a television is a remote. So, Answer is remote.

10. **Solution: C**

Navneet's sister's mother is also Navneet's mother.

So, the lady in the photo is the sister of Navneet's mother, which makes her Navneet's maternal aunt. The correct answer is option C (Maternal aunt).

11. **Solution: A**

We can see that the series can be split into four distinct groups of letters:

$R_Y_F_M_ \rightarrow$ this group increases by 7 letters each time: $R(+7) \rightarrow Y(+7) \rightarrow F(+7) \rightarrow M$

$Q_V_A_F_ \rightarrow$ this group increases by 5 letters each time: $Q(+5) \rightarrow V(+5) \rightarrow A(+5) \rightarrow F$

$M_V_E_N_ \rightarrow$ this group increases by 7 letters each time: $M(+9) \rightarrow V(+9) \rightarrow E(+9) \rightarrow N$

$R_C_N_Y_ \rightarrow$ this group increases by 8 letters each time: $R(+11) \rightarrow C(+11) \rightarrow N(+11) \rightarrow Y$

Following the same pattern for the missing term:

$M(+7) \rightarrow T$

$F(+5) \rightarrow K$

$N(+9) \rightarrow W$

$Y(+11) \rightarrow J$

The missing term is "TKWJ". Therefore, the correct answer is option A.

12. **Solution: A**

The pattern appears to be an alternation of adding 39 and 78:

$48 + 39 = 87$

$87 + 78 = 165$

$165 + 39 = 204$

$204 + 78 = 282$

$282 + 39 = 321$

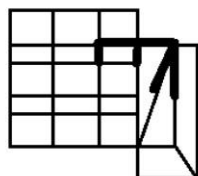
Following the pattern, the next step is to add 78:

$321 + 78 = 399$

The missing number is 399.

13. **Solution: B**

Option (b) is embedded in the given figure.



14. **Solution: C**

After replacing the numbers given in option 'A' with the letters given in the table, we get:

2	6	5	3	1	7	4
G	R	I	V	A	T	Y

'GRIVATY' is not a meaningful word.

After replacing the numbers given in option 'B' with the letters given in the table, we get:

3	1	2	6	5	7	4
V	A	G	R	I	T	Y

'VAGRITY' is not a meaningful word.

After replacing the numbers given in option 'C' with the letters given in the table, we get:

2	6	1	3	5	7	4
G	R	A	V	I	T	Y

'GRAVITY' is a meaningful word.

After replacing the numbers given in option 'D' with the letters given in the table, we get:

1	6	7	2	5	3	4
A	R	T	G	I	V	Y

'ARTGIVY' is not a meaningful word.

15. **Solution: D**

The logic followed here is:

The second number is the 2.5 times of the first number.

So, 2.5 times of '98' (98×2.5) is '245'.

16. **Solution: B**

Given equation: $154 \div 3 \times 9 \div 100 \times 4 \div 62$

Substituting the symbols given in option 'A',

$154 \div 3 \times 9 \div 100 = 4 \times 62$

LHS:

$= 154 \div 3 \times 9 \div 100$

$= 281$

RHS:

$= 4 \times 62$

$= 248$

LHS $\neq$ RHS

Substituting the symbols given in option 'B',

$154 \div 3 \times 9 - 100 \times 4 = 62$

LHS:

$= 462 - 400$

$= 62$

LHS = RHS

Substituting the symbols given in option 'C',

$154 \div 3 \times 9 - 100 \div 4 = 62$

LHS:

$= 154 \div 3 \times 9 - 25$

$= 154 + 27 - 25$

$= 156$

LHS $\neq$ RHS

Substituting the symbols given in option 'D',

$154 \div 3 \times 9 = 100 \times 4 - 62$

LHS:

$= 154 \div 3 \times 9$

$= 462$

RHS:

$= 100 \times 4 - 62$

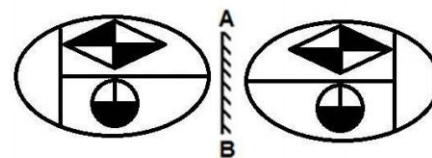
$= 400 - 62$

$= 338$

LHS $\neq$ RHS

17. **Solution: C**

The mirror image of the given combination when the mirror is placed at 'AB' is as follows:



18. **Solution: B**

I. All butterflies are parrots. (Not true, since only some birds are butterflies)

II. Some parrots are butterflies. (Not true, since we don't know if parrots are among the birds that are butterflies)

Neither conclusion logically follows the given statements.

19. **Solution: C**

By interchanging which two signs and two numbers according to option;

a. + and -, 12 and 7

$13 \times 7 \div 36 - 11 + 12 \neq 35$ (Incorrect)

b. + and $\times$, 36 and 7

$13 + 12 \div 7 \times 11 - 36 \neq 35$ (Incorrect)

c. $\times$ and $\div$, 11 and 7

$13 \div 12 \times 36 + 7 - 11 = 35$ (Correct)

d. $\times$ and $\div$, 13 and 36

$36 \div 12 \times 13 + 11 - 7 \neq 35$ (Incorrect)

20. **Solution: C**

Pattern is: Sum of numerical value - Number of letters in word

DRAMA $\Rightarrow 4 + 18 + 1 + 13 + 1 - 5 = 32$

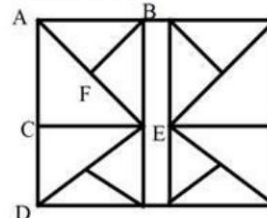
PLAY $\Rightarrow 16 + 12 + 1 + 25 - 4 = 50$

Similarly;

THEATRE $\Rightarrow 20 + 8 + 5 + 1 + 20 + 18 + 5 - 7 = 70$

21. **Solution: B**

Lets take one section of the square. It has four triangles i.e.: ABF, FBE, ACE, AEB. So in four sections, we will have 16 triangles. Also we have two more triangles, i.e. AED and similar triangle on the other side.



22. **Solution: B**

In figure 'a' and 'b', the common word is 'BLUE'.

In clockwise direction, the sequence will be (BLUE, PURPLE, GREEN) in figure 'a'.

In clockwise direction, the sequence will be (BLUE, YELLOW, RED) in figure 'b'.

So, we get, 'PURPLE' is opposite to 'YELLOW', 'GREEN' is opposite to 'RED'.

Thus, clearly, 'BLUE' is opposite to 'ORANGE'.

23. **Solution: C**

In the given options, three groups consist of letters that have a difference of 2 between each letter, while the odd group does not.

CEG - C+2 = E, E+2 = G

QSU - Q+2 = S, S+2 = U

HJI - H+2 = J, J - 1 = I (odd)

UWY - U+2 = W, W+2 = Y

24. **Solution: C**

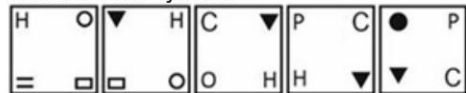
By interchanging the given two signs + and -;

I. $11 + 16 \times 3 \div 4 - 12 = 11$ (Correct)

II. $15 \times 3 + 45 \div 5 - 30 \neq 28$ (Not correct)

25. **Solution: A**

Each Text/Symbol is rotating 90° clockwise but at last (text/symbol from left below corner) changing to another Text/Symbol.



Quantitative Aptitude

26. **Solution: A**

$\cos 240^\circ - \sin 300^\circ$

$= \cos (180^\circ + 60^\circ) - \sin (270^\circ + 30^\circ)$

Using, $\cos (180^\circ + A) = -\cos A$ and $\sin (270^\circ + A)$

$= -\cos A$

$= -\cos 60^\circ + \cos 30^\circ$

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

$= \frac{\sqrt{3}-1}{2}$

27. **Solution: B**

Unit digit of $25^{31} = \text{Unit digit of } 5^4 \times 7^3 = \text{Unit digit of } 5^3 = \text{Unit digit of } 125 = 5$

Unit digit of $14^{51} = \text{Unit digit of } 4^4 \times 12^3 = \text{Unit digit of } 4^3 = \text{Unit digit of } 64 = 4$

Unit digit of $33^{47} = \text{Unit digit of } 3^4 \times 11^3 = \text{Unit digit of } 3^3 = \text{Unit digit of } 27 = 7$

required unit digit $= 5 + 4 - 7 = 9 - 7 = 2$

28. **Solution: C**

$x^2 - 2x + 1 = 0$

$x^2 + 1 = 2x$

By dividing both side by 'x' we get,

$(x + \frac{1}{x}) = 2$

So, $x = 1$ [Since we know if $(x + \frac{1}{x}) = 2$, then the value of 'x' is 1]

Now, $(x^2 + x^{-2})(x^3 + x^{-3}) = (x^2 + \frac{1}{x^2})(x^3 + \frac{1}{x^3}) = (1 + 1)(1 + 1) = 2 \times 2 = 4$

29. **Solution: A**

Percentage corresponding to population of 'Q' and 'R' together $= 24 + 20 = 44\%$

Required central angle $= (44/100) \times 360 = 158.4^\circ$

30. **Solution: C**

Let the length of the rectangular floor be L and its breadth be B.

We know that $B = \frac{3}{5}L$ and the area of the floor is 60 m²

So, $L \times B = 60$

Or, $L \times (\frac{3}{5}L) = 60$

Or, $3L^2/5 = 60$

Or, $L^2 = 100$

So, $L = 10$

Now, $B = \frac{3}{5}L = \frac{3}{5} \times 10 = 6$

Required difference $= 10 - 6 = 4$ meters

31. **Solution: D**

$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$

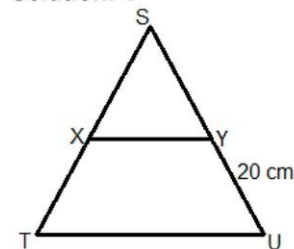
$0 = 40 + 2ab + 2bc + 2ca$

Or, $2ab + 2bc + 2ca = -40$

Or, $4ab + 4bc + 4ca = -80$

32.

Solution: C



SY: YU = SX: XT = 2:5

Given YU = 20

Then, SY = $20 \times \frac{2}{5} = 8$ cm

So, SU = $20 + 8 = 28$ cm

33.

Solution: D

Initially, the total weight of 15 persons

$= 15 \times 30 \text{ kg} = 450 \text{ kg}$.

After the new person joins, the total weight

$= 450 + 78 \text{ kg} = 528 \text{ kg}$.

Therefore, the new average weight of the group $= 528 \text{ kg}/16 = 33 \text{ kg}$

34.

Solution: D

Let the cost price of the article = ₹100

Loss = 5% = ₹5

So, selling price = $100 - 5 = ₹95$

Let marked price be x.

As there are 20% discount on marked price.

So, 80% of x = 95

So, $x = 95 \times 100/80 = 118.75$

If shopkeeper sell it on marked price, then selling price = 118.75

So, profit = 18.75

And, profit percent $= 18.75/100 \times 100 = 18.75\%$

35.

Solution: B

Let the total work = 72 units (LCM of 18 and 72)

So, combined efficiency of 'M' and 'S' $= (72/72)$

$= 1$ unit/day

Combined efficiency of 'M', 'S', and 'R' $= (72/18)$

$= 4$ units/day

So, efficiency of 'R' $= 4 - 1 = 3$ units/day

So, time taken by 'R' to complete the work alone

$= (72/3) = 24$ days

36.

Solution: D

$a + 12 = 60\%$ of 30

Or, $a + 12 = 18$

Or, 'a' = 6

Required value $= 3 \times 6^3 - 8 \times 6^2 - 35 \times 6 - 96$

$= 3 \times 216 - 8 \times 36 - 210 - 96$

$= 648 - 288 - 306 = 54$

37.

Solution: B

Number of trees cut in 2018 $= (540/0.75) = 720$

Number of trees cut in 2024 $= 1.4 \times 900 = 1,260$

Required average $= (720 + 1,260) \div 2 = 990$

38.

Solution: C

$(124 - 14 \times 6) \div 0.5 + 18 \times 8 \div (32 - 26) - 256 \div 4$

$= (124 - 84) \div 0.5 + 18 \times 8 \div 6 - 64$

$= 40 \div 0.5 + 24 - 64$

$= 80 - 40 = 40$

39.

Solution: A

If the difference between the sum of odd digits and sum of even digits of a number is 0 or multiple of 11, then the number is divisible by 11.

For the given number,

Sum of odd digits = 13

Sum of even digits = 17 + X + Y

Difference = 17 + X + Y - 13 = 4 + X + Y, to be divisible by 11, (X + Y) is either 7 or 18.

Now required sum = 7 + 18 = 25.

40. **Solution: B**

Let the total number of votes be represented by x.

As per the given information, Party A got 30% of x votes and Party B got 25% of x votes.

So, Party C got = 100% - 30% - 25% = 45% of the total votes.

The number of votes Party A got = 30% of x = 0.3x

The number of votes Party B got = 25% of x = 0.25x

The number of votes Party C got = 45% of x = 0.45x

Also, it is given that Party C got 9000 more votes than Party A. So, we can write:

$$0.45x - 0.3x = 9000$$

Simplifying the above equation, we get:

$$0.15x = 9000$$

$$x = 9000/0.15$$

$$x = 60000$$

The number of votes Party B got = 25% of 60000

$$= 0.25 \times 60000 = 15000.$$

41. **Solution: B**

The sum of the angles of a triangle is 180°. So, third angle = 180° - (40° + 62°) = 78°

42. **Solution: B**

Given, principal (P) = ₹6000, rate of interest (R) = 10%, time (T) = 2 years.

I. SI = PRT/100,

$$SI = 6000 \times 10 \times 2 / 100 = ₹1200$$

Hence, statement I is correct.

II. CI = P(1 + R/100)^T - P

$$CI = 6000(1 + 10/100)^2 - 6000 = ₹1260$$

Hence, statement II is also correct.

Therefore, both statements I and II are correct.

43. **Solution: D**

Total number of people = 8 + 2 + 1 + 6 + 10 + 8 + 12 + 3 = 50

Number of people like black colour = 10

$$\text{Required percentage} = 10/50 \times 100 = 20\%$$

44. **Solution: C**

Total surface area of box = 2 × (length × breadth + breadth × height + length × height)

$$= 2 \times (25 \times 20 + 20 \times 15 + 25 \times 15)$$

$$= 2 \times (500 + 300 + 375) = 2,350 \text{ cm}^2$$

Therefore, required number of cans = (2,350/25) = 94

45. **Solution: A**

$$\frac{1}{2} + \frac{3}{4} \div \frac{1}{4} + \frac{3}{4} \div \frac{1}{2} + \frac{1}{4}$$

$$\frac{3}{4} \times \frac{1}{4} \div \frac{1}{2} - \frac{1}{2} \div \frac{3}{4} \times \frac{1}{4}$$

$$\frac{1}{2} + \frac{3}{4} \times 4 + \frac{3}{4} \times 2 + \frac{1}{4}$$

$$= \frac{3}{4} \times \frac{1}{4} \times 2 - \frac{1}{2} \times \frac{4}{3} \times \frac{1}{4}$$

$$\frac{1}{2} + 3 + \frac{3}{2} + \frac{1}{4}$$

$$= \frac{3}{8} - \frac{1}{6}$$

$$\frac{2 + 12 + 6 + 1}{4}$$

$$= \frac{9 - 4}{24}$$

$$\frac{21}{4}$$

$$= \frac{5}{24}$$

$$= \frac{21}{4} \times \frac{24}{5} = 126/5$$

46. **Solution: C**

The diameter of the circle will be equal to the side of the square.

Therefore, the diameter of the circle will be 18 cm.

So, radius = 9 cm.

$$\text{So, Area} = \pi r^2$$

$$\text{Area} = \pi \times 9^2$$

$$\text{Area} = 81\pi$$

47. **Solution: (B)**

Let speed of car = x km/h

Time taken to travel 60 km = 60/x

After increasing speed,

New speed = x + 8

New time = 60/x - 2

$$\frac{60}{x+8} = \frac{60}{x} - 2$$

$$\frac{x+8}{60} = \frac{x}{60-2x}$$

$$\text{Or, } 60x = 60x - 2x^2 + 480 - 16x$$

$$\text{Or, } 2x^2 + 16x - 480 = 0$$

$$\text{Or, } x^2 + 8x - 240 = 0$$

$$\text{Or, } x^2 + 20x - 12x - 240 = 0$$

$$\text{Or, } x(x+20) - 12(x+20) = 0$$

$$\text{Or, } (x+20)(x-12) = 0$$

$$\text{So, } x = 12 \text{ km/h}$$

48. **Solution: D**

Let the age of 'M' and 'N', four years ago from now be '5y' and '6y' years, respectively.

ATQ;

$$(5y+9):(6y+9) = 8:9$$

$$\text{Or, } 9 \times (5y+9) = 8 \times (6y+9)$$

$$\text{Or, } 45y + 81 = 48y + 72$$

$$\text{Or, } 3y = 9$$

$$\text{So, } y = 3$$

Present age of 'M' = 5 × 3 + 4 = 19 years

Present age of 'N' = 6 × 3 + 4 = 22 years

Present age of 'O' = 22 + 7 = 29 years

Therefore, required average = (19 + 29) ÷ 2 = 24 years

49. **Solution: A**

Let the smaller number be x and the larger number be y.

20% of x = 14 % of y

$$\text{So, } x:y = 7:10$$

Given that x + y = 8942

$$\text{So, } y = 10/17 \times 8942 = 5260$$

50. **Solution: D**

Given expression: $\sin^2 5X + \cos^2 3.75X - \tan^2 2.5X$

Required value = $\sin^2 (5 \times 12) + \cos^2 (3.75 \times 12) - \tan^2 (2.5 \times 12)$

$$= \sin^2 60^\circ + \cos^2 45^\circ - \tan^2 30^\circ$$

$$= (\sqrt{3}/2)^2 + (1/\sqrt{2})^2 - (1/\sqrt{3})^2$$

$$= (3/4) + (1/2) - (1/3) = (11/12)$$

General Awareness

51. **Solution: D**

The 390-year-old Deepastambham (lamp post) was found on the banks of the River Krishna in Mudimanikyam village, Nalgonda district, Telangana.

Archaeologists working in the area found the 20-foot tall pillar with hollows for lamps and a multi-lingual inscription in Mudimanikyam village of Nalgonda in Telangana.

It casts a fresh light on trade ties in the region in early medieval times.

52. **Solution: C**
· The headquarters of Ghadr Party was located in **San Francisco, USA**.
· It was founded in 1913 by Sohan Singh Bhakna.
· The Ghadar Party was an international political movement consisting of expatriate Indians to overthrow British rule in India.
· The Ghadar Movement was formed in 1913 by expatriate Punjabis in the United States with shared leadership from Sikhs, Hindus, and Muslims.
53. **Solution: C**
Fundamental duties are statutory duties, not enforceable by law, but a court may take them into account while adjudicating on a matter. The idea behind their incorporation was to emphasize the moral obligation of the citizen in exchange for the Fundamental Rights that he or she enjoys. The concept of Fundamental Duties is taken from the Constitution of the USSR.
54. **Solution: A**
Longitudinal waves need a bulk modulus of elasticity. Therefore, they can travel in all media, solids, liquids and gases. These waves cannot travel through a **vacuum**.
A vacuum is an area where there are no liquids, gases or solids of any kind.
55. **Solution: B**
Skeletal muscles are intimately linked with the skeletal structures of the body. They appear striped under a microscope; hence they are known as **striated muscles**. Being under the voluntary control of the nervous system, these muscles are also called voluntary muscles. Their primary functions include facilitating movement and altering body postures.
Hence, Option B is the correct answer.
56. **Solution: B**
The Balti dance is a traditional folk dance of **Ladakh**, a Union Territory of India.
The Balti Dance is performed by the Muslim communities of Kargil and Turtuk. The dance is unique with its own attire and music, accompanied by songs in the Balti language. It's performed on special occasions like festivals or ceremonies. Some of its variants are reserved only for religious occasions to pay homage to their lords and messiahs.
Hence, option B is the correct answer.
57. **Solution: B**
The Vedas, particularly the **Rigveda** and the **Atharvaveda**, contain references to the use of plants and natural procedures for treatment. These ancient texts, composed between 5000 and 1000 BC, include hymns and mantras that mention various medicinal plants and herbs used for healing purposes.
The reference of medicine and surgery are found in Indian epics like Ramayana and Mahabharata.
Hence, Option B is the correct answer.
58. **Solution: C**
The simplest hydroxy derivative of benzene is known as **phenol**. Phenol is made up of a benzene ring with one of its hydrogen atoms replaced by an OH group. They are more acidic than aliphatic alcohols and water, but less acidic than carboxylic acids. They are often used as disinfectants and antiseptics.
Hence, Option C is the correct answer.

59. **Solution: B**
The **larynx**, also known as the voice box, has vocal cords which help in producing sounds for speech. It is a cylindrical grouping of cartilages, muscles, and soft tissue that contains the vocal cords. The larynx is the upper opening into the windpipe (trachea), the passageway to the lungs. In males, the larynx increases in size during the adolescence period because of changes due to puberty.
Hence, Option B is the correct answer.
60. **Solution: A**
Myndoli is a variety of **bananas**. It is also known as the Moira banana.
This native banana is cultivated in Pernem, Bardez, and Bicholim talukas in the North Goa district. They are long and tusk-shaped and easily stand apart from other bananas due to their larger size and shape.
Hence, Option A is the correct answer.
61. **Solution: C**
Members have a right to get information from the Government on any matter of public concern by means of questions to Ministers. When a member feels that the answer given to a question, Starred or Unstarred or Short Notice, is not complete or does not give the desired information or needs elucidation on a matter of fact, he may be allowed by the Speaker to raise a discussion in the House for half an hour. The procedure is termed as '**Half-an-Hour Discussion**'.
The following conditions are required to be fulfilled for the admissibility of Half-an-Hour Discussion:
· It should be based on an answer to a recent question in Lok Sabha.
· It should be intended to get elucidation on matters of fact and should **not** seek to revise the policy of Government.
· It should relate to a matter of sufficient public importance.
Hence, Option C is the correct answer.
62. **Solution: D**
The SI system has seven base units. These units pertain to the seven fundamental scientific quantities. The other physical quantities, such as speed, volume, density, etc., can be derived from these quantities.
Hence, Option D is the correct answer.
63. **Solution: A**
- | Zonal Cultural Centres | Headquarters |
|------------------------------------|--------------|
| North Zone Cultural Centre | Patiala |
| North Central Zone Cultural Centre | Prayagraj |
| West Zone Cultural Centre | Udaipur |
| Eastern Zonal Cultural Centre | Kolkata |
| South Central Zone Cultural Centre | Nagpur |
| South Zone Cultural Centre | Thanjavur |
- Hence, Option A is the correct answer.
64. **Solution: C**
World Computer Literacy Day is celebrated on **December 2** every year to celebrate and promote computer education worldwide. The day aims to raise awareness about the importance of digital skills and computer literacy in today's rapidly evolving technological landscape.
The day **was started in 2001** by the Indian computer company NIIT on its 20th anniversary.

- Hence, option C is the correct answer.
65. **Solution: C**
Free fall describes the motion of an object when it is moving solely under the influence of gravity. In this scenario, other forces such as air resistance are either minimal or considered negligible. The absence of air resistance means that the only force acting on the object is gravity. This results in a consistent rate of acceleration downward, unaffected by the shape, size, or mass of the object.
Hence, Option C is the correct answer.
66. **Solution: C**
Article 43: The State shall endeavor to secure to all workers a living wage and a decent standard of life.
Article 43A: The State shall take steps to secure the participation of workers in the management of industries.
67. **Solution: B**
- Qutubuddin Aibak, a ruler of medieval India, was the first ruler of the Delhi Sultanate and also the founder of the Slave dynasty.
- He was captured in his childhood and sold as a slave to the chief Qazi of Nishapur, a town situated in the northeastern Iran.
- He was purchased by the ruler of Ghor in central Afghanistan, Sultan **Muhammad Ghori**. Qutubuddin Aibak, gradually rose to the rank of General and became one of the most trusted nobles of Sultan Ghori.
68. **Solution: C**
The growth of GDP increased from 5.6 per cent during 1980-91 to 6.4 per cent during 1992-2001. This shows that there has been an increase in the overall GDP growth in the reform period. During the reform period, the growth of agriculture and industrial sectors has declined whereas the growth of service sector has gone up. This indicates that the growth is mainly driven by the growth in the service sector.
Source: NCERT- Indian Economic Development
69. **Solution: C**
The ratio of people to units of the land area is generally known as the 'Density of Population'. It is calculated on the basis of the total population of a country divided by the total area of the country. According to the census 2011, Bihar is the most thickly populated state (1106 persons/sq km.) followed by **West Bengal (1028)** and Kerala (860).
70. **Solution: A**
Shahid Bhagat Singh was a revolutionary freedom fighter. He founded a socialist youth organisation called the **Naujawan Bharat sabha** with himself as its founding secretary in 1926. This was formed as an open wing of the revolutionaries to carry out political work among the students, the peasants and the workers.
71. **Solution: C**
India has ranked 39th out of 133 economies in the Global Innovation Index (GII) 2024, according to a report by the Geneva-based World Intellectual Property Organization. This marks an improvement from last year, when the country was ranked 40th. The Global Innovation Index (GII) was launched in 2007 through a collaboration between INSEAD, a prominent business school, and World Business, a British magazine.

72. **Solution: D**
- The ozone layer protects us from harmful ultraviolet rays of the sun.
- The pollutants such as chlorofluorocarbons (CFCs) which are used in refrigerators, air conditioners and aerosol sprays.
- Efforts like the Montreal Protocol have been successful in phasing out the use of CFCs globally.
- **CFCs** damage the ozone layer of the atmosphere.
- Nitrogen itself does not directly damage the ozone layer. However, nitrogen oxides from industrial emissions and supersonic aircraft can participate in ozone depletion.
- Argon is an inert noble gas and does not react with ozone or contribute to its depletion.
- Sulfur compounds can contribute to air pollution and acid rain but are not primary contributors to ozone layer damage.
73. **Solution: B**
Uttarakhand has received funding of ₹1,910 crore (about \$191 million) from the European Investment Bank (EIB) to improve urban infrastructure and services. This funding is part of the Uttarakhand Liveability Improvement Project, which also includes a \$200 million loan from the Asian Development Bank (ADB). The total cost of the project is \$465.9 million.
74. **Solution: D**
Madhya Pradesh has taken a historic initiative in the field of forest conservation by launching India's first AI-powered real-time forest alert system. This state-of-the-art system combines satellite imagery, machine learning algorithms and mobile app-based field feedback to quickly identify encroachment in forests, land use change and forest degradation.
75. **Solution: B**
Union Minister of Rural Development Shivraj Singh Chauhan has reviewed various works of the ministry in New Delhi. He also highlighted the achievements of **Pradhan Mantri Awas Yojana Gramin** from June 2024 to December 2024. Some are:
- The scheme has been extended for the next five years in August 2024, under which the target is to build **2 crore additional houses** for the financial year **2024-29**. Three major changes have also been made in the eligibility rules in the Pradhan Mantri Awas Yojana, so that additional eligible families can be given the benefit of this scheme and the target of housing for all can be achieved.
- The **Awas Plus-2024** mobile app was launched by the Prime Minister in **September 2024**.
- The **Awas Sakhi app** was launched by the Minister in **October 2024**.
- There has been a continuous increase in the year-wise budget in the housing scheme and the highest budget of **₹54,500 crore** was allocated for the financial year 2024-25.
- As against the target of 42 lakh under the housing scheme, 31.65 lakh houses were sanctioned and 4.19 lakh houses were completed from June to December 2024, which includes 71 thousand houses of PM Janman.
In **January 2025**, emphasis will be laid on sanctioning the pending **10 lakh houses** against the target allocated earlier in the year 2024-25 and the first instalment will also be released to the beneficiaries.
Hence, Option B is the correct answer.

English Language

- 76. Solution: D**
GEESE is a plural verb and therefore the plural verb COMPETE should be used instead of the singular verb COMPETES to agree with it. Thus, D is the right answer.
All the other parts are correct in the sentence but are erroneous in the options.
A is incorrect as it uses the preposition ON instead of the preposition IN to refer to the place where something happens or exists.
B is incorrect as it uses the adjective USUAL instead of the adverb USUALLY to modify the verb COMPETE.
C is incorrect as it uses the preposition OF instead of the preposition FOR to indicate the purpose because of which Canada geese compete with native wildfowl.
- 77. Solution: C**
The given sentence is in the passive voice. To change it to the active voice, follow the given steps:
I. The preposition BY will be removed and THE KITTEN will become the subject of the sentence.
II. The passive voice verb WAS BEING NUDGED will change to WAS NUDGING in the active voice.
III. The subject THE BALL OF YARN will become the object of the verb WAS NUDGING.
Thus, C is the right answer.
- 78. Solution: B**
DECIPHER means to succeed in reading or understanding something that is not clear. INTERPRET (to clarify or explain the meaning of something that is not understandable). Thus, B is the right answer.
Organise - to plan or arrange an event, activity, etc.
Allocate - to give something to someone as their share of a total amount. Perceive - to notice or realise something.
- 79. Solution: D**
CBAD is the correct sequence. CB begins as a mandatory pair. C begins by introducing us to the fearless daughter of famed explorers and B reveals her name Gemma. She and her pet lemur named Milo, are on a treasure hunt that she has always dreamt of. A follows B to describe how when she gets chased by the mysterious Chuck Bucket and his pet jaguar she realises that her life has a much bigger purpose than just being adventurous as described in D. Thus, D is the right answer.
- 80. Solution: A**
The correct homonym of CELLAR (an underground room that is used for storing things) is SELLER (a person who exchanges goods or services for money) as the two words have the exact same pronunciation. Thus, A is the right answer.
The other options are not the homonyms of the given word:
Sealer - a substance that is put on the surface of something to protect it from air, water etc. Sailor - a person who works on a ship or a person who sails a boat. Solar - connected with the sun.
- 81. Solution: B**
The sentence is in direct speech. Follow the instructions to change the sentence to indirect speech:
I. Remove the comma and inverted commas.
- II. SAID TO ME will become TOLD ME. The simple present tense verb NEED will change into the simple past tense verb NEEDED.
- III. Add THAT after the reporting speech clause, "SMITA TOLD ME."
- IV. The first person pronoun I will change into the singular third person pronoun SHE and MY will change into HER.
Thus, B is the right answer.
- 82. Solution: A**
The correct sequence of the given sentences in the paragraph is DCBA. D begins the paragraph by telling us about a general perception that if a person wants to get fit, he needs to spend a lot of time in the gym. C follows D to suggest that this perception is wrong as per many fitness influencers who believe that not working out after every six to eight weeks is actually good for health. This time period is known as a deload week. B follows C to suggest that this concept mainly focuses on reducing the intensity of workouts. A concludes by telling us that this reduction in the intensity of workouts is to give the body time to recover from fatigue and damage that can be caused by periods of intense training. Thus, A is the right answer.
- 83. Solution: A**
The idiom KEEP SOMEONE AT ARM'S LENGTH means to avoid becoming friendly with someone. Thus, A is the right answer.
The remaining options do not convey the correct meaning of the idiom.
- 84. Solution: B**
The word 'frugal' means 'sparing or economical as regards money or food'.
Let's look at the meanings of the given options.
Imprudent: not showing care for the consequences of an action; rash.
Economical: giving good value or return in relation to the money, time, or effort expended.
Negligent: failing to take proper care over something.
Honest: free of deceit; truthful and sincere.
Among the given options, 'economical' is the most appropriate synonym of the underlined word.
Hence, option (b) is the correct answer.
- 85. Solution: A**
INVINCIBLE means too strong to be defeated. Thus, A is the right answer.
INARTICULATE: unable to express ideas or feelings clearly.
INAUDIBLE: unable to be heard.
INANIMATE: lifeless.
- 86. Solution: A**
The subject of the Active Voice is changed into the object of the Passive voice. Also, the object of the Active Voice is changed into the subject of the Passive Voice.
The Active voice in this question is in Past Indefinite. Thus, the Passive voice will also be in Past Indefinite.
The format of Active voice is: Subject + V2 + Object.
Thus, in Passive voice, the format will be: Subject (a cruel trick) + was/were + V3 + by + Object (the boys).
Option b) is incorrect as it changes the tense to past continuous. Option c) is incorrect as it

changes the tense to simple present. Option d) is incorrect as it changes the tense to past perfect. Option a) follows the same structure. Hence, option a) is the right answer.

87. **Solution: C**

'Enormous' means extremely large. 'Minuscule' means very small or tiny. So, the two words can be used as antonyms of each other. Hence, (c) is the correct answer.

'Colossal' means extremely large or on a great scale.

'Gigantic' means a great size like a giant.

'Huge' means very large.

88. **Solution: D**

The segment that contains a grammatical error is 'They should considered'.

The error is related to the verb "considered". The verb "considered" is in the past tense form, but it should be in the base form ("consider") after the modal verb "should".

When using the modal verb "should", we need to follow it with the base form of the main verb.

Therefore, the correct phrase should be "They should consider," indicating a recommendation or suggestion. Hence, (d) is the correct answer.

The correct sentence is: They should consider the long-term effects of their decision.

89. **Solution: B**

DBAC is the correct sequence of the given jumbles. D begins the paragraph by telling us that experts sometimes say that inflammation is important. B follows D to indicate the reason behind this: it helps a person stay safe and heal from illness. A follows B to introduce us to the negative side of inflammation by suggesting that when inflammation levels in the body remain high for a long time, it can lead to health issues such as increased risk of cancer, cardiovascular disease, arthritis and metabolic conditions like Type 2 diabetes, as described in C. Thus, B is the right answer.

90. **Solution: D**

The correct spelling of the underlined word is REPERCUSSIONS (consequences).

Thus, D is the right answer.

91. **Solution: B**

PSYCHOLOGY is incorrectly spelled. The correct spelling of the word is PSYCHOLOGY (the study of mind and behaviour). Thus, B is the right answer.

The remaining words are correctly spelled.

SEIZE: to take something quickly and hold it.

OSCILLATE: to move or swing back and forth.

ENGINEER: a person who designs and builds engines, machines, roads, bridges, etc.

92. **Solution: A**

The word 'friendly' describes someone who is kind and pleasant. The opposite of 'friendly' is 'hostile', which describes someone who is unfriendly and antagonistic.

Hence, option (a) is the correct answer.

Hostile: unfriendly; antagonistic.

Amiable: having or displaying a friendly and pleasant manner.

Affable: friendly, good-natured, or easy to talk to.

Congenial: pleasing or liked on account of having qualities or interests that are similar to one's own.

93. **Solution: C**

TO BE IN A TIGHT CORNER means to be in a difficult situation.

Thus, C is the right answer.

The remaining options do not convey the correct meaning of the given idiom.

94. **Solution: A**

The word NEGLECT means to fail to look after someone. The sentence seeks to convey that some people may also fail to look after their own personal care and hygiene. CHERISH (to love, protect, and care for someone or something that is important to you) is its antonym. Thus, A is the right answer.

Placate - to make someone less angry or hostile. Motivate - to cause somebody to act in a particular way. Unify - to join separate parts together to make one unit.

95. **Solution: B**

The phrase NOT ONLY will come before the verb REDUCE, as NOT ONLY..BUT ALSO is a correlative conjunction and the phrases are used before identical parts of speech. Since BUT ALSO is used before a verb, NOT ONLY will also be used before a verb. Thus, B is the right answer.

96. **Solution: B**

"Retracted" means to formally withdraw a statement, especially a confession, which fits perfectly here.

"Repeated" means said again, opposite of what is meant.

"Denied" is vague and not the same as withdrawing an earlier statement.

"Admitted" is clearly the opposite.

97. **Solution: B**

"Appeal the conviction" is the correct legal term for formally requesting a higher court to review and reverse a decision.

"Repeal" is used for laws, not convictions.

"Overturn" is the desired outcome, not the action taken.

"Review" is not a specific legal term in this context.

98. **Solution: C**

"Basis" fits perfectly with "no credible basis on which the appeal can be opposed" — a standard legal phrase.

"Chance" doesn't fit grammatically.

"Claim" is inaccurate in legal terms here.

"Proof" refers to evidence, not reasoning or justification.

99. **Solution: B**

The phrase "cast doubt" is a well-known idiom meaning to raise suspicion or uncertainty — appropriate for legal concerns.

"Express doubt" is less idiomatic.

"Produce doubt" is not natural.

"Raise doubt" is close, but "cast" is the preferred legal usage.

100. **Solution: A**

"Signal" here means to indicate or mark an important change or moment — suitable for "a landmark moment."

"Ensure" means to guarantee something will happen, not correct here.

"Disrupt" has a negative connotation.

"Declare" would require a direct object like "declare it a landmark."