

"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-9III54079-E



Scholars Academy

Download Our APP
Scholars Academy



General Intelligence and Reasoning

- Solution: C**
All, except 'm/s²', are base units.
- Solution: B**
The logic followed here is:
From the left end 1st and last letter is changed to 4th succeeding letter as per English alphabetical series and from the left end 2nd, 3rd and 4th letter are changed to 4th preceding letter as per English alphabetical series as shown below
In 'MUSIC: QQOEG':

M	U	S	I	C
+4	-4	-4	-4	+4
Q	Q	O	E	G

So, 'MUSIC' is related to 'QQOEG'.
Similarly, in 'EARTH :?':

E	A	R	T	H
+4	-4	-4	-4	+4
I	W	N	P	L

So, 'EARTH' is related to 'IWNPL'.
- Solution: D**
The logic followed here is:
Second number = (1st number + 7) × 7
In option 'A': '13 - 140',
First number = 13
Second number = (13 + 7) × 7
= 20 × 7
= 140
In option 'B': '15 - 154',
First number = 15
Second number = (15 + 7) × 7
= 22 × 7
= 154
In option 'C': '21 - 196',
First number = 21
Second number = (21 + 7) × 7
= 28 × 7
= 196
In option 'D': '65 - 514',
First number = 65
Second number = (65 + 7) × 7
= 72 × 7
= 504
504 ≠ 514
- Solution: C**
The pattern followed here is:
12 + (1 × 2) = 12 + 2 = 14
14 + (2 × 3) = 14 + 6 = 20
20 + (3 × 4) = 20 + 12 = **32 ≠ 30**
32 + (4 × 5) = 32 + 20 = 52
52 + (5 × 6) = 52 + 30 = 82
82 + (6 × 7) = 82 + 42 = 124
So, the wrong number in the series is '30'.
The correct series is:
12, 14, 20, **32**, 52, 82, 124
- Solution: D**
The logic followed here is as follows:
The third number is thrice the product of the 1st number and the 2nd number.
For example, in (A, B, C),
3 × A × B = C
In (8, 12, 288)
3 × 8 × 12 = 288
288 = 288
In option 'A', (5, 15, 225):

$$3 \times 5 \times 15 = 225$$

$$225 = 225$$

In option 'B', (6, 10, 180):

$$3 \times 6 \times 10 = 180$$

$$180 = 180$$

In option 'C', (9, 12, 324):

$$3 \times 9 \times 12 = 324$$

$$324 = 324$$

In option 'D', (8, 16, 394):

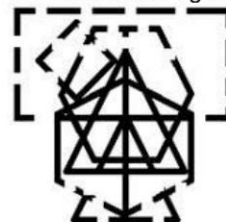
$$3 \times 8 \times 16 = 384$$

$$384 \neq 394$$

So, the number in the set '8, 16, 394' are not related in the same way as are the number of the given set.

6. Solution: A

The embedded figure is shown below:



7. Solution: C

The logic followed here is as follows:

Code: The sum of the three times of the place value of the consonants as per the English alphabetical series.

In 'JAIL'

J	A	I	L
10 × 3 = 30			12 × 3 = 36

$$\text{Code} = 30 + 36 = 66$$

So, 'JAIL' is coded as '66'.

In 'CAGE'

C	A	G	E
3 × 3 = 9		7 × 3 = 21	

$$\text{Code} = 9 + 21 = 30$$

So, 'CAGE' is coded as '30'

Similarly, in 'EQUAL'

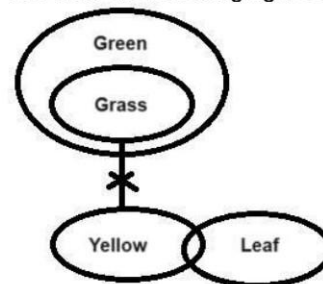
E	Q	U	A	L
	17 × 3 = 51			12 × 3 = 36

$$\text{Code} = 51 + 36 = 87$$

So, 'EQUAL' is coded as '87'.

8. Solution: C

We draw the following figures:



Conclusions:

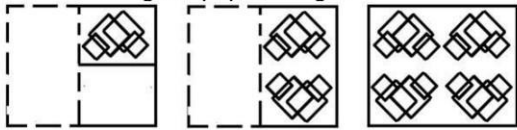
I. Some Leaf is not Green: This definitely doesn't follow as there is no direct relation between Leaf and Green, so, it could or couldn't be a possibility.

II. No Yellow is Green: This definitely doesn't follow as there is no direct relation between Yellow and Green, so, it could or couldn't be a possibility.

III. All Green is Grass: This definitely doesn't follow as all Grass is Green, but it doesn't imply that all Green is Grass.

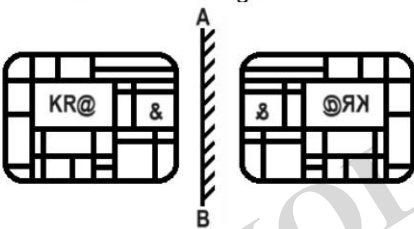
So, none of the conclusions follow.

9. **Solution: D**
After unfolding the paper, we get:



10. **Solution: B**
The logic followed here is the first number is multiplied by 7 and then 7 is subtracted from the obtained number to get the second number.
In option 'A', $37 - 252$
 $= 37 \times 7 - 7$
 $= 259 - 7$
 $= 252$
 $252 = 252$
In option 'B', $77 - 553$
 $= 77 \times 7 - 7$
 $= 539 - 7$
 $= 532$
 $532 \neq 553$
In option 'C', $17 - 112$
 $= 17 \times 7 - 7$
 $= 119 - 7$
 $= 112$
 $112 = 112$
In option 'D', $49 - 336$
 $= 49 \times 7 - 7$
 $= 343 - 7$
 $= 336$
 $336 = 336$

11. **Solution: B**
The correct mirror image is shown below.



12. **Solution: B**
The logic followed here is:
The middle number = (Product of the two numbers given in the horizontal rectangle) - (Absolute difference of the two numbers given in the vertical rectangle).
In figure A:
Middle number = 71
The numbers given in the vertical rectangles = 55 and 42
The numbers given in the horizontal rectangles = 14 and 6
 $= \{(14 \times 6) - (55 - 42)\}$
 $= \{84 - 13\}$
 $= 71$
In figure C:
Middle number = 62
The numbers given in the vertical rectangles = 148 and 84
The numbers given in the horizontal rectangles = 21 and 6
 $= \{(21 \times 6) - (148 - 84)\}$
 $= \{126 - 64\}$
 $= 62$
Similarly, in figure B:
Middle number = ?

The numbers given in the vertical rectangles = 120 and 80

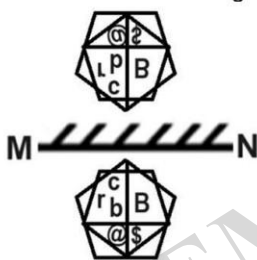
The numbers given in the horizontal rectangles = 33 and 4

$$= \{(33 \times 4) - (120 - 80)\}$$
$$= \{132 - 40\}$$
$$= 92$$

So, '92' will come in place of the question mark.

13. **Solution: B**
The correct dictionary order will be:
5- Analogy, 1- Analyse, 4- Anger, 2- Annum, 6- Ant, 3- Antenna
So, '5, 1, 4, 2, 6, 3' represents the correct dictionary order.

14. **Solution: A**
The correct mirror image is shown below:



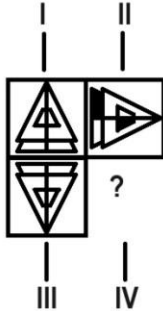
15. **Solution: A**
Given: TJE, QNZ, NRU, ?, HZK
The logic followed here is as follows:

T	J	E
-3	+4	-5
Q	N	Z
-3	+4	-5
N	R	U
-3	+4	-5
K	V	P
-3	+4	-5
H	Z	K

So, 'KVP' will come in place of '?'.
The complete series is as follows:

TJE, QNZ, NRU, **KVP**, HZK

16. **Solution: D**



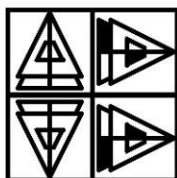
The pattern followed here is:

Figure III is the mirror image of figure I, similarly, figure IV will be the mirror image of figure II.

So, the figure that will come in place of question mark is:



So, the complete figure is:



17. **Solution: A**

The logic followed here is as follows:

In each figure, there is always a rectangle, a square, a triangle and a circle.

All the figures follow the above pattern, except for the figure in option 'A' as there is a rhombus in this figure.

18. **Solution: B**

The logic followed here is:

$$89 + (2)^3 = 89 + 8 = 97$$

$$97 + (3)^2 = 97 + 9 = 106$$

$$106 + (4)^3 = 106 + 64 = 170$$

$$170 + (5)^2 = 170 + 25 = 195$$

$$195 + (6)^3 = 195 + 216 = 411$$

So, '106' will replace the question mark.

The complete series will be:

89, 97, **106**, 170, 195, 411

19. **Solution: D**

Given equation:

'12 # 17 % 450 \$ 9 @ 134'

After decoding the code, we get:

$$12 \times 17 + 450 \div 9 - 134$$

On applying BODMAS

$$= 12 \times 17 + 450 \div 9 - 134$$

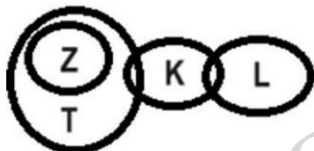
$$= 204 + 50 - 134$$

$$= 254 - 134$$

$$= 120$$

So, the value of the given expression is '120'.

20. **Solution: C**



Conclusions:

I. Some L are Z: Doesn't follow (As, there is no direct relation between L and Z, so, no definite conclusion follows)

II. All T are L: Doesn't follow (As, there is no direct relation between T and L, so, no definite conclusion follows)

So, neither conclusion I nor conclusion II follows

21. **Solution: C**

'Tim David' is a 'Cricketer' in the same way 'Bhavani Devi' is a 'Fencer'.

22. **Solution: A**

The number of odd days in a normal year is '1' and the number of odd days in a leap year is '2'.

There are 3 normal years (2025, 2026 and 2027), 1 leap year i.e., 2024 from February 8, 2024 to February 8, 2028

So, number of odd days will be:

From February 8, 2024 to February 7, 2025: 2

From February 8, 2025 to February 7, 2026: 1

From February 8, 2026 to February 7, 2027: 1

From February 8, 2027 to February 7, 2028: 1

So, total number of odd days = 5

Thus, on February 8, 2028 it will be Tuesday.

23. **Solution: B**

$$I. 22 \times 4 + 104 = 56 \div 4 - 6$$

After interchanging the signs and numbers in 'I', we get:

$$22 \times 4 - 56 = 104 \div 4 + 6$$

LHS:

$$= 88 - 56$$

$$= 32$$

RHS:

$$= 26 + 6$$

$$= 32$$

LHS = RHS

$$II. 266 + 56 = 104 \times 2 - 18$$

After interchanging the signs and numbers in 'II', we get:

$$266 - 104 = 56 \times 2 + 18$$

LHS:

$$= 266 - 104$$

$$= 162$$

RHS:

$$= 112 + 18$$

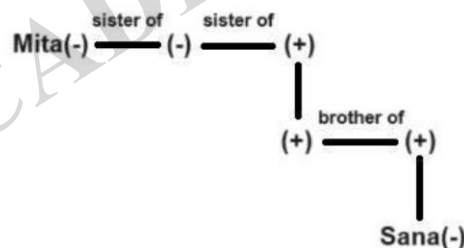
$$= 130$$

LHS $\neq$ RHS

Therefore, by interchanging the given two signs and numbers in both the equations, only II will not be correct.

24. **Solution: A**

From the information given in the question, we draw the following family tree:



So, Sana is the granddaughter of Mita's brother.

25. **Solution: D**

The pattern followed here is:

The number at the middle is the sum of two times of the number at the top left corner and sum of the digits of the number at the top left corner.

The number at the bottom right corner is the sum of the two times of number at the middle and the sum of digits of number at the middle.

All of the above figures, follow the above pattern except the figure in option 'D'.

Quantitative Aptitude

26. **Solution: C**

The population of the city in 1997 = $1.08 \times 0.92 \times 720000 = 7,15,392$

Alternate solution

If a quantity increases by 'x%' for the first interval and decreases by 'x%' for the next interval,

So, there will be a net decrease = $(x^2/100) \%$

So, the population of the city in 1997 = $720000 - (8^2/100) \times (1/100) \times 720000 = 720000 - 4608$

$$= 7,15,392$$

27. **Solution: D**

Side of the rhombus

$$= \frac{1}{2} \times \sqrt{d_1^2 + d_2^2}$$

$$= \frac{1}{2} \times \sqrt{16^2 + 30^2}$$

$$= \frac{1}{2} \times \sqrt{256 + 900}$$

$$= \frac{1}{2} \times \sqrt{1156}$$

$$= \frac{1}{2} \times 34$$

$$= 17 \text{ cm}$$

28. **Solution: D**

$$\text{Average} = \left(\frac{8+9+11+12+6+m}{6} \right) = \left(\frac{46+m}{6} \right)$$

$$\text{So, } \left(\frac{46+m}{6} \right) = 8$$

$$\text{Or, } (46 + m) = 48$$

$$\text{Or, } m = 2$$

29. **Solution: B**

Selling price (SP) of article when three successive discounts D1%, D2% and D3% are offered on marked price (MP) is given by:

$$\text{SP} = \left(\frac{100-D1}{100} \right) \times \left(\frac{100-D2}{100} \right) \times \left(\frac{100-D3}{100} \right) \times \text{MP}$$

So, Required Selling Price

$$= \left(\frac{100-20}{100} \right) \times \left(\frac{100-10}{100} \right) \times \left(\frac{100-25}{100} \right) \times 60,000 =$$

$$\left(\frac{80}{100} \right) \times \left(\frac{90}{100} \right) \times \left(\frac{75}{100} \right) \times 60,000 = \text{Rs. } 32,400$$

30. **Solution: A**

$$\left(\frac{512x^3 - 125y^3}{8x - 5y} \right) = \left(\frac{(8x)^3 - (5y)^3}{8x - 5y} \right)$$

$$= \left[\frac{(8x - 5y)((8x)^2 + (5y)^2 + (8x \times 5y))}{(8x - 5y)} \right] \quad \{ \text{since, } (a^3 - b^3) = (a - b)(a^2 + b^2 + ab) \}$$

$$= 64x^2 + 25y^2 + 40xy$$

On comparing above equation with $Ax^2 + By^2 + Cxy$, we get:

$$\text{Or, 'A' = 64, 'B' = 25 and 'C' = 40}$$

$$\text{Required value} = 64 - (25 + 40) = 64 - 65 = -1$$

31. **Solution: C**

Distance covered by Rahul when Pawan runs 1,000 m (1 km) = 1,000 - 50 = 950 m

Distance covered by Rahul when Pawan runs 200 m = $(1,000/200) \times 950 = 190$ m

Distance covered by Gagan when Rahul runs 500 m = $500 - 30 = 470$ m

Distance covered by Gagan when Rahul runs 190 m = $(470/500) \times 190 = 178.6$ m

Therefore, Pawan will beat Gagan by $(200 - 178.6 = 21.4$ m) in a 200 m race.

32. **Solution: D**

Let the angle be 'A°'.

Supplement of 'A' = $180^\circ - A^\circ$

ATQ:

$$\text{We have, } 180^\circ - A^\circ = 1.5A^\circ$$

$$\text{Or, } 180^\circ = 2.5A^\circ$$

$$\text{Or, 'A' = } (180^\circ/2.5)$$

$$\text{So, 'A' = } 72^\circ$$

$$\text{Complement of 'A' = } 90^\circ - 72^\circ = 18^\circ$$

33. **Solution: D**

Let the age of 'B' ten years ago from now be '5y' years

Age of 'A' ten years ago from now = $5y \times 1.2 = '6y'$ years

Age of 'B' four years hence from now = $5y + 10 + 4 = (5y + 14)$ years

age of 'A' four years hence from now = $(6y + 14)$ years

$$\text{We have, } (6y + 14) = (5y + 14) \times (8/7)$$

$$\text{Or } 42y + 98 = 40y + 112$$

$$\text{Or, } 2y = 14$$

$$\text{So, 'y' = } 7$$

$$\text{So, present age of 'B' = } (5 \times 7) + 10 = 45 \text{ years}$$

$$\text{Therefore, present age of 'C' = } 45 - 6 = 39 \text{ years}$$

34. **Solution: C**

Let number of students in section 'A' and section 'B' be '2x' and 'x', respectively.

Sum of marks of all students in section 'A' = $(2x) \times 50 = '100x'$

Sum of marks of all students in section 'B' = $(x) \times 80 = '80x'$

So, combined average marks of the class = $(100x + 80x) \div (2x + x) = 60$

35. **Solution: C**

$$1.8^2 + 2.4^2 + 1.5^2 - 1.8 \times 2.4 - 2.4 \times 1.5 - 1.8 \times 1.5$$

$$a^2 + b^2 + c^2 - ab - bc - ac = (1/2) \times [(a - b)^2 + (b - c)^2 + (c - a)^2]$$

$$\text{So, } 1.8^2 + 2.4^2 + 1.5^2 - 1.8 \times 2.4 - 2.4 \times 1.5 - 1.8 \times 1.5$$

$$= (1/2) \times [(1.8 - 2.4)^2 + (2.4 - 1.5)^2 + (1.5 - 1.8)^2]$$

$$= (1/2) \times (0.36 + 0.81 + 0.09)$$

$$= (1/2) \times (1.26) = 0.63$$

36. **Solution: D**

$A = P \left(1 + \frac{R}{100} \right)^T$, where 'A', 'P', 'R' and 'T' are Amount, sum rate and time, respectively.

$$\text{So, } 21,600 = 15,000 \times \left(1 + \frac{R}{100} \right)^2$$

$$\text{Or, } \left(1 + \frac{R}{100} \right)^2 = \frac{21,600}{15,000} = 1.44$$

$$\text{Or, } \left(1 + \frac{R}{100} \right) = 1.2$$

$$\text{Or, 'R' = } 100 \times (1.2 - 1) = 20$$

$$\text{So, Amount at end of 3rd year} = 15,000 \times \left(1 + \frac{20}{100} \right)^3 =$$

$$15,000 \times \left(\frac{6}{5} \right)^3 = \text{Rs. } 25,920$$

$$\text{Therefore, required interest} = 25,920 - 15,000 = \text{₹}10,920$$

37. **Solution: D**

Let the height up to which the cuboidal tank gets filled be 'H' metres.

Volume of cone = $(1/3) \times \pi \times r^2 \times h$, where 'r' and 'h' are the radius and height of cone, respectively.

$$\text{So, volume of conical tank} = (1/3) \times (22/7) \times 21^2 \times 45 = 22 \times 21 \times 45 = 20,790 \text{ m}^3$$

Volume of cuboid = length $\times$ width $\times$ height

Length of the cuboidal tank = $(2400/100) = 24$ metres

So, volume of water in cuboidal tank = $(24 \times 10.5 \times H) \text{ m}^3$

ATQ, Volume of water in cubical and cuboidal tank must be same.

$$\text{So, } 24 \times 10.5 \times H = 20,790$$

$$\text{Or, } 252 \times H = 20,790$$

$$\text{Or, 'H' = } 82.5 \text{ m}$$

38. **Solution: D**

Let the salary of Sakshi be ₹'100b'.

Salary of Sakshi after increment in 2019 = 138% of '100b' = $(1.38) \times 100b = \text{₹}'138b'$

Salary of Sakshi after decrement in 2020 = $(100 - 17)\%$ of '138b' = $(0.83) \times 138b = \text{₹}'114.54b'$

Net change in her salary = $\text{₹}(114.54b - 100b) = \text{₹}'14.54b'$

Net percentage change in her salary = $(14.54b/100b) \times 100 = 14.54\%$ increase

Alternate Solution

Equivalent percentage change for two successive percentage changes of a% and b% is

$$= a + b + (ab/100)$$

Required percentage change

$$= 38 - 17 - \{(38 \times 17)/100\} \dots (\text{negative sign due to decrease in salary})$$

$$= 38 - 17 - 6.46 = 14.54\% \text{ (increase)}$$

39. **Solution: B**

Let, the cost price of the article be ₹100x'.
Initial selling price of the article = $0.85 \times 100x = ₹85x'$
ATQ,
 $1.15 \times 100x = 85x + 1440$
Or, $115x = 85x + 1440$
Or, $30x = 1440$
Or, $x = 48$

So, the cost price of the article = $100x = 100 \times 48 = ₹4,800$

40. **Solution: A**

Statement (I) :

We know that even powers of 9 produce 1 as unit digit and odd powers produce 9 as unit digit.

So, unit digit of $129^{345} = 9$

So, statement (I) is false.

Statement (II) :

LCM of 84 and 96 = $12 \times 8 \times 7 = 672$

So, statement (II) is true.

41. **Solution: B**

Let the total work be 160 units (LCM of (160/9) and 32)

Combined efficiency of Alex and Bob = $160 \div (160/9) = 9 \text{ units/day}$

Efficiency of Bob = $(160/32) = 5 \text{ units/day}$

Efficiency of Alex = $9 - 5 = 4 \text{ units/day}$

Ratio of wages of Alex and Bob respectively = 4:5

Therefore, wages of Alex = $(8,100/9) \times 4 = ₹3,600$

42. **Solution: C**

Required angle = $(20 + 18 + 22) \div 100 \times 360^\circ$

= $(60/100) \times 360^\circ$

= 216°

43. **Solution: A**

Let perpendicular, base and hypotenuse of right-angled triangle be 'P', 'B' and 'H' units respectively.

We know that $\sec A = (H/B)$

So, $(H/B) = (17/15)$

Let 'H' = 17k units and 'B' = 15k units

So, $P' = \sqrt{\{(17k)^2 - (15k)^2\}}$

Or, $P' = \sqrt{(289k^2 - 225k^2)}$

Or, $P' = 8k$ or $P' = -8k$

But perpendicular cannot be negative. So, $P' = 8k$ units

So, $\sin A + \cot A = (P/H) + (B/P)$

= $(8k/17k) + (15k/8k)$

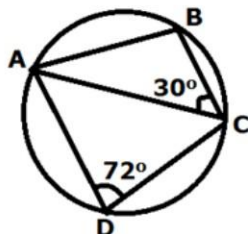
= $(64 + 255) \div 136$

= $(319/136)$

44. **Solution: C**

Required average = $(45 + 35 + 50 + 25 + 20) \div 5 = 35$

45. **Solution: D**



Sum of opposite angles of a cyclic quadrilateral is 180° .

So, $\angle ABC + \angle ADC = 180^\circ$

Or, $\angle ABC + 72^\circ = 180^\circ$

Or, $\angle ABC = 108^\circ$

Sum of each angle of a triangle is 180° .

So, $\angle BAC = 180^\circ - 108^\circ - 30^\circ$

Or, $\angle BAC = 42^\circ$

46. **Solution: A**

Length of each side of square = $(128/4) = 32 \text{ metres}$
Length of each edge of cube = $1.25 \times 32 = 40 \text{ metres}$
Total surface area of cube = $6 \times (\text{length of each edge of cube})^2$

$$= 6 \times (40)^2$$

$$= 6 \times 1,600 = 9,600 \text{ m}^2$$

47. **Solution: B**

$\tan 4\theta = \cot 14\theta$

Or, $\tan 4\theta = \cot (90^\circ - 4\theta)$ [because, $\tan A = \cot (90^\circ - A)$]

Or, $14\theta = 90^\circ - 4\theta$

Or, $18\theta = 90^\circ$

Or, $\theta = (90/18)^\circ = 5^\circ$

So, $\cos 9\theta = \cos 45^\circ = (1/\sqrt{2})$

48. **Solution: C**

$$4x^2 + y^2 + 12x + 6y + 18 = 0$$

$$\text{Or, } 4x^2 + 12x + 9 + y^2 + 6y + 9 = 0$$

$$\text{Or, } (2x)^2 + 2 \times (2x) \times (3) + 3^2 + y^2 + 2 \times y \times 3 + 3^2 = 0$$

$$\text{Or, } (2x + 3)^2 + (y + 3)^2 = 0 \text{ [because, } (a + b)^2 = a^2 + b^2 + 2ab]$$

The above equation is possible, when,

$$2x + 3 = 0 \text{ and } y + 3 = 0$$

$$\text{Or, } x = -(3/2) = -1.5 \text{ or, } y = -3$$

$$\text{So, } \frac{2x+y}{y-6x} = \frac{[2 \times (-1.5) - 3]}{[-3 + 6 \times (-1.5)]}$$

$$= \frac{-3-3}{-3-9}$$

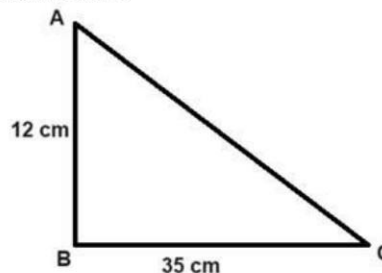
$$= \frac{-6}{-12}$$

$$= \frac{1}{2} = 0.5$$

49. **Solution: A**

Mean proportional of two numbers 'a' and 'b' = $\sqrt{ab}$
Required mean proportional = $\sqrt{2.56 \times 8.41} = \sqrt{(1.6)^2 \times (2.9)^2} = 1.6 \times 2.9 = 4.64$

50. **Solution: C**



By Pythagoras theorem.

$$\text{Hypotenuse}^2 = \text{perpendicular}^2 + \text{base}^2$$

$$\text{Or, } AB^2 + BC^2 = AC^2$$

$$\text{So, } AC^2 = 12^2 + 35^2$$

$$\text{Or, } AC^2 = 144 + 1,225 = 1,369$$

Or, $AC = 37 \text{ cm}$ (Since, length cannot be negative)

Inradius of a right angled triangle = $(P + B - H) \div 2$, where 'P' is the perpendicular, 'B' is the base and 'H' is the hypotenuse.

$$\text{So, inradius} = (12 + 35 - 37) \div 2 = (47 - 37) \div 2 = 5 \text{ cm}$$

Circumradius of a right angled triangle = $(H/2)$, where 'H' is the hypotenuse.

$$\text{So, circumradius} = (37/2) = 18.5 \text{ cm}$$

$$\text{Required difference} = 18.5 - 5 = 13.5 \text{ cm}$$

General Awareness

51. **Solution: D**
International Day of Action For Rivers, observed on **March 14** every year, is a day that is dedicated to saving, celebrating, and creating awareness about the importance of rivers.
Theme for International Day of Action For Rivers 2024: "**Water for all**"
"The International Day of Action and For Rivers" was approved at the first International Meeting of People Impacted by Dams in March **1997** in Curitiba, Brazil.
The year 2024 marks the **27th** anniversary of International Day of Action For Rivers.
Hence, Option D is the correct answer.
52. **Solution: B**
The scientific name of Rice is **Oryza sativa**.
Oryza sativa belongs to the genus Oryza and the BOP clade in the grass family Poaceae.
Hence, Option B is the correct answer.
53. **Solution: B**
Ottupulackal Velukkuty Vijayan, commonly known as **O. V. Vijayan**, was an Indian author and cartoonist, who was an important figure in modern Malayalam language literature.
He is best known for his first novel **Khasakkinte Itihasam** (1969).
Hence, Option B is the correct answer.
54. **Solution: B**
Morarji Ranchhodji Desai was an Indian independence activist and politician who served as the 4th Prime Minister of India between 1977 and 1979. He was awarded the Bharat Ratna in the year **1991**.
About Morarji Ranchhodji Desai:
Morarji Desai was born into a Gujarati Anavil Brahmin family. His father's name was Ranchhodji Nagarji Desai and his mother's name was Vajiaben Desai. Morarji Desai was born on February 29, 1896, in Bhadeli village, now in the Bulsar district of Gujarat.
Hence, Option B is the correct answer.
55. **Solution: B**
Pavuluri Subba Rao, founder, and CEO of Ananth Technologies Limited has been conferred with **Aryabhata Award** by the Astronautical Society of India. He was also presented with ASI's 'Distinguished Fellow' title.
The **Aryabhata Award** is an annual award, presented to individuals with notable lifetime contributions in the field of astronautics and aerospace technology in India.
Hence, Option B is the correct answer.
56. **Solution: D**
At the 81st Academy Awards also known as the Oscars, Gulzar won the **Oscar Award** for "Best Original Song" for "Jai Ho" (shared with A. R. Rahman), for the film **Slumdog Millionaire**.
Gulzar was also awarded the Padma Bhushan in 2004 for his contribution to the arts.
Hence, Option D is the correct answer.
57. **Solution: D**
Chaturvedi-mangalam refers to a place peopled by scholars who were conversant with the four Vedas. The deity was at that time known as Kailasadeva. This inscription refers to an organisation called Alum-ganam which was an administrative unit of the village.
Hence, Option D is the correct answer.
58. **Solution: D**
Rugby is a close-contact team sport that originated at Rugby School in England in the first half of the 19th century.
Rugby is simply based on running with the ball in hand.
In its most common form, a game is played between two teams of **15 players each**, using an oval-shaped ball on a rectangular field called a pitch. The field has H-shaped goalposts at both ends.
Hence, option D is the correct answer.
59. **Solution: C**
Malwa Plateau, plateau region in north-central India. It is bounded by the Madhya Bharat Plateau and Bundelkhand Upland to the north, the Vindhya Range to the east and south, and the Gujarat Plains to the west. Of **volcanic** origin, the plateau comprises central **Madhya Pradesh** state and southeastern **Rajasthan** state.
Hence, Option C is the correct answer.
60. **Solution: A**
Hamad International Airport, located in Doha, Qatar, has been awarded the "**World's Best Airport**" title by the esteemed **Skytrax World Airport Awards 2024**.
The ceremony was held at the Passenger Terminal Expo 2024 in Frankfurt, Germany.
The airport also received the title of '**World's Best Airport Shopping**' for the second consecutive year and was named "**Best Airport in the Middle East**" for 10 consecutive years.
Hence, Option A is the correct answer.
61. **Solution: C**
Mohanrao Shankarrao Kallianpurkar was a **Kathak** dancer and teacher from **Karnataka**, considered to be one of the greatest scholars and teacher of Kathak dance form. He belongs to Jaipur school of Kathak.
Hence, Option C is the correct answer.
62. **Solution: B**
Rukmini Devi Arundale was an Indian theosophist, dancer, and choreographer of the Indian classical dance form of **Bharatanatyam**, and an activist for animal welfare.
She was the first woman in Indian history to be nominated as a member of the **Rajya Sabha**, the upper house of the Parliament of India.
Awards:
· Padma Bhushan (1956)
· Sangeet Natak Akademi Award (1957)
Hence, Option B is the correct answer.
63. **Solution: D**
Pusapati Vijaya Ananda Gajapathi Raju or Vizzy was an Indian cricketer. **Vizzy Trophy**, an inter-zonal university **cricket** tournament is named after him.
Other Trophies associated with Cricket:
· Irani Trophy
· Dilip Trophy
· Ranji Trophy
· Deodhar Trophy
Hence, Option D is the correct answer.
64. **Solution: B**
Disguised Unemployment: This is a situation in which more people are available for work than shown in the unemployment statistics.
Hence, Option B is the correct answer.
65. **Solution: D**

Nicaragua has become the **first Spanish-speaking nation** to officially recognize the **Indian Pharmacopoeia (IP)** or Indian Pharma standards.

This development follows the signing of a Memorandum of Understanding (MoU) on Pharmacopoeia Cooperation between the Governments of India and Nicaragua.

The move is expected to foster stronger ties between the two nations in the areas of healthcare, encouraging the exchange of expertise and resources for improved medical standards.

The Indian Pharmacopoeia (IP), compiled by the Indian Pharmacopoeia Commission (IPC) under the Ministry of Health & Family Welfare in India, serves as the official compendium of standards for drugs.

Hence, Option D is the correct answer.

66. **Solution: B**

The **Coast Guards of the Maldives, India, and Sri Lanka**, along with observers from **Bangladesh**, have participated in the **Exercise 'Dosti 16'** in Maldives to enhance collaboration between the forces. It is the 16th edition of the exercise.

Participation:

· **Indian side:** ICGS Samarth (with integral helo), ICGS Abhinav, and ICG Dornier

· **Sri Lankan side:** SLNS Samudra

Exercise Dosti:

It is a trilateral coast guard exercise between India, Sri Lanka, and the Maldives. It is a biennial exercise. It was first conducted in **1991** between the **Indian and Maldives Coast Guards**. Sri Lanka joined the exercise for the first time in 2012. Dosti was last conducted in 2021.

Hence, Option B is the correct answer.

67. **Solution: C**

Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL) was established by Reserve Bank of India (RBI) as its wholly owned subsidiary on 3rd February 1995 with a view to augmenting the production of bank notes in India to enable the RBI to bridge the gap between the supply and demand for bank notes in the country.

The BRBNMPL has been registered as a Private Limited Company under the Companies Act 1956 with its Registered and Corporate Office situated at Bengaluru.

The company manages **two Presses** one at **Mysore** in Karnataka and the other at **Salboni** in West Bengal.

Hence, Option C is the correct answer.

68. **Solution: D**

Bharuch is a port city situated on the banks of the **Narmada River**, Gujrat. Bharuch was known as "*Bharutkutcha*" in ancient times. Bharuch was a prominent port in the Indian subcontinent region during ancient India.

Bharuch was known to the Greeks, the various Parthian Empire, in the Roman Empire, and in other Western and Eastern centres of civilization through the end of the European Middle Ages and the other Middle Ages of the World.

Hence, Option D is the correct answer.

69. **Solution: A**

The **Second Battle of Tarain** was fought in **1192** between the Ghurid forces of Muhammad Gori and the Rajput Confederacy of Prithviraj Chauhan.

· It took place near Tarain (modern Taraori), which is 110 kilometres, north of Delhi.

· The battle ended in a decisive victory for the invading Ghurids and their successful penetration in north Indian plain.

· The battle is regarded as a watershed event in Medieval India history as it led to the destruction of Rajput powers for a while and laid the foundation of Muslim rule in North India, which led to the establishment of Delhi Sultanate.

Hence, Option A is the correct answer.

70. **Solution: D**

Indian Digambar Jain Monk **Acharya Shri 108 Vidyasagarji Maharaj**, known as '*Chote Baba*,' in Jain community, has passed away on 18 February 2024 at the age of 77 at **Chandragiri Teerth in Dongargarh, Chhattisgarh** after undertaking '*sallekhna*'.

· He was born on 10 October 1946 in Sadalga in Belgaum district of Karnataka.

· His childhood name was **Vidyadhar**.

· He was a scholar of Sanskrit and Prakrit and knew several languages including Hindi, Kannada, Marathi and English.

· His works include *Niranjana Shataka*, *Bhavana Shataka*, *Parishah Jaya Shataka*, *Suniti Shataka* and *Shramana Shataka*.

· He wrote the Hindi epic poem "*Mukamati*." This has been included in the syllabus of Hindi MA programmes at various institutions.

· This has been translated into English by Lal Chandra Jain and was presented to Pratibha Patil, the President of India.

· He had composed nearly 700 haiku (a type of short form poetry that originated in Japan) poems.

Note: '*Sallekhna*' is the practice of meditation and fasting which continues until the point of death.

Hence, Option D is the correct answer.

71. **Solution: B**

Key points about Chalcolithic culture in India:

· In India, the Chalcolithic period spanned around 2000 BC to 700 BC.

· The culture was mainly seen in the pre-Harappan phase but extended to the post-Harappan phase in many places.

· The people were mostly rural and lived near hills and rivers.

· Copper was the first metal to be used.

· Chalcolithic culture refers to the **stone-copper phase**.

· People also used hand-axes and other objects made up of copperware.

· Chalcolithic people were primarily rural communities.

· They domesticated animals and practised agriculture.

· They venerated the mother Goddess and worshipped the bull.

· The people of Chalcolithic culture were the first to use painted pottery. Black and red pottery painted with white line design was most popular.

· The ceramics obtained from Malwa is considered the richest among the Chalcolithic ceramics.

Hence, Option B is the correct answer.

72. **Solution: A**

The **Zeliangrong** community of **Manipur** has observed the **Gaan-Ngai festival** to bring peace,

prosperity, and unity to the people of Manipur. The festival also marks the beginning of the New Year and bids farewell to the old year.

In 2024, the festival is observed on 23rd January.

This festival is one of the biggest cultural and religious post-harvest festivals of the Zeliangrong community that marks the end of the year when the farmers store their harvest in their granaries.

Hence, option A is the correct answer.

73. **Solution: D**

Raziyyat-Ud-Dunya Wa Ud-Din popularly known as **Razia Sultana**, was a ruler of the **Delhi Sultanate** in the northern part of the Indian subcontinent. She was the first female Muslim ruler of the subcontinent, and the only female Muslim ruler of Delhi.

Hence, option D is the correct answer.

74. **Solution: B**

Key points of First Five Year Plan (1951-56) :

- This was based on Harrod Domar model.
- Highest priority accorded to agriculture in view of large import of foodgrains and inflation.
- Target growth 2.1% and achieved 3.6%.
- Many irrigations project were initiated including the Bhakra, Hirakud and Damodar Valley dams.

Hence, option B is the correct answer.

75. **Solution: C**

Bangladesh is the eighth-most populated country in the world with almost 2.2% of the world's population. Bangladesh (previously East Pakistan between 1947 and 1971 and East Bengal before 1947) is largely ethnically homogeneous, and its name derives from the Bengali ethno-linguistic group which comprises 99% of the population.

Ethnic group associated with Bangladesh:

- The vast majority (about 99%) of Bangladeshis are of the **Bengali ethno-linguistic group**.
- This group also spans the neighbouring Indian province of West Bengal.
- Minority ethnic groups include Meitei, Tripuri, Marma, Tanchangya, **Barua**, Khasi, Santhals, **Chakma**, Rakhine people, **Garo**, Biharis, Oraons, Mundas.

Note: The Hausa are a native ethnic group in West Africa.

Hence, option C is the correct answer.

English Language

76. **Solution: A**

The word **CONSCRIPTION** means compulsory enrollment of persons, especially for military service. Thus, A is the right answer.

The other options have different meaning:

- Impropriety - failure to observe proper standards.
- Interlude - an intervening period, space, or event.
- Disrespect - lack of respect or courtesy.

77. **Solution: C**

The correct idiom is **BURN A HOLE IN SOMEONE'S POCKET**, which means to spend money very quickly. Thus, C is the right answer.

The other options are incorrect.

78. **Solution: B**

Option B is the right answer.

The sentence is in direct speech and in the indicative mood. To convert this sentence to the indirect speech, follow these rules:

I. Remove the comma and the inverted commas.

II. Begin the indirect speech sentence with the reporting speech clause **THE SCIENTIST SAID**.

III. Put **THAT** between the reporting and reported speeches.

IV. Change the present perfect tense **HAVE MADE** to the past perfect tense **HAD MADE**.

V. The first person pronoun **WE** will change to the third person **THEY**.

79. **Solution: D**

FALL BACK ON (rely on as a last resort) will fit here as the sentence talks about how they decided to rely on their savings during the financial crisis. Thus, D is the right answer.

Fall in - collapse inward. Fall out - have a disagreement. Fall through - fail to happen.

In the question given below, rearrange the fragments in the correct order, and choose the correct option.

80. **Solution: B**

SRQP is the final order. S begins the passage by telling us about the woman in the vegan diner who mentioned her thumbs. R then describes her thumbs, which are similar to the thumbs of the speaker. Then, Q tells us how this resemblance made the speaker feel a connection with that woman. Finally, P tells us that they share the connection of being sisters. Thus, B is the right answer.

81. **Solution: B**

EVINCE means to reveal something. Reveal will be its synonym. Thus, B is the right answer.

Project- to throw or cast forward. Convince- to persuade someone to do something. Defeat- to beat in a contest or competition.

82. **Solution: A**

The error is in part A. We use a base form of **VERB** with subject **I** and not the third person singular verb. Therefore, **LIKE** should be used instead of **LIKES**.

Thus, A is the right answer.

83. **Solution: A**

The correct one-word substitute for a person highly skilled or knowledgeable in a particular field is "Expert." Therefore, A is the right answer.

Novice - a person who is new to something. Specialist - a person who specialised in a field. Amateur - a person who engages in a pursuit, especially a sport, on an unpaid rather than a professional basis.

84. **Solution: B**

The idiom **BURY THE HATCHET** means to end a fight or argument and make peace. B is the correct meaning of the idiom. Thus, B is the right answer.

85. **Solution: C**

The phrase "riding high" means to be very successful or proud. Therefore, C is the most appropriate to describe Tom's situation after receiving the promotion. Thus, C is the right answer.

Treading water - to be active but without making progress or falling further behind. A fish out of water - to be out of place or uncomfortable. Barking up the wrong tree - expecting a solution from the wrong person or place.

86. **Solution: D**

The correct spelling of the word is "unnecessarily." Therefore, option D is the misspelt word. Thus, D is the right answer.

Authoritarian - too strict or rigid. Endeavours - attempts; efforts. Commendable - deserving praise.

87. **Solution: D**

ABANDON means to leave or desert. DESERT (abandon) will be its synonym. Thus, D is the right answer.

Support - hold up; sustain. Retain - keep possession of. Cling - hold on tightly.

88. **Solution: B**

DOWNFALL means defeat or loss. VICTORY (triumph) is its antonym. Thus, B is the right answer.

Goal - point. Frenzy - excitement; madness.

Celebration - the act of commemorating an occasion.

89. **Solution: D**

The word TRAMPLE means to step heavily on something or someone, causing damage or injury. The sentence tells us that the people in the crowd started to step on each other as they hurried towards the exits. CRUSH (to press someone so hard that he or she gets injured) will be the synonym of the given word. Thus, D is the right answer.

The other options have different meanings:

Innovate - to introduce changes and new ideas in the way something is done or made.

Separate - to set or keep apart.

Assign - to give someone a job or responsibility.

90. **Solution: D**

The correct meaning of the idiom LET THE CAT OUT OF THE BAG is to reveal a secret by mistake. Thus, D is the right answer.

The other options do not provide the correct meaning of the idiom.

91. **Solution: C**

EXPLICIT means clearly stated and leaving no room for confusion. IMPLIED (implicit though not plainly expressed) will be its antonym. Thus, C is the right answer.

Ambiguous - open to more than one interpretation.

Small - tiny. Brave - courageous.

92. **Solution: C**

RSQP is the final order. RS begins the paragraph as a pair: R tells us what the colours used on Holi used to be made of. S tells us how they are synthetic in nature today. Q follows by telling us how the festival is celebrated using these colours. P ends by commenting on the experience of the festival. Thus, C is the right answer.

93. **Solution: B**

The given sentence is in active voice.

Follow the rules below to change this sentence to the passive voice:

I. The object THE SURGERY will become the subject and begin the sentence, and the subject THE DOCTOR will become the object.

II. The simple present tense construction CAREFULLY PERFORMS will change to IS CAREFULLY PERFORMED in the passive voice.

III. The preposition BY will be added and THE DOCTOR will become its object.

The passive voice sentence will be: The surgery on the patient is carefully performed by the doctor.

Thus, B is the right answer.

94. **Solution: A**

In B, replace WAS with WERE as the singular proper noun GEORGE HUDSON will take a singular verb. The sentence would then read, "In the early 1880s, an adolescent George Hudson was already enamoured by insects". Thus, A is the right answer.

95. **Solution: B**

Someone who loves collecting books is called BIBLIOPHILE. Thus, B is the right answer.

The other words have different meanings:

Philanthropy - love for mankind.

Gourmet - One who has a keen interest in food and drinks.

Sycophant - One who praises powerful or rich person too much and in a non-sincere

96. **Solution: D**

We need a preposition to follow the verb TAKEN. TAKEN FOR GRANTED means assumed, and will fit here as the sentence tells us how the incident reminds us that safety cannot be assumed to be guaranteed. Thus, D is the right answer.

The other prepositions cannot fit in this phrase.

97. **Solution: A**

We need an adverb to modify the adjective HARD. VERY (extremely) will fit here as the sentence tells us how engineers work quite hard to ensure the safety of bridges. Thus, A is the right answer.

Every - used to refer to all of the individuals. Any - used to refer to one or some of a thing. Many - several.

98. **Solution: A**

We need a noun to be modified by the adjective SHOCKING. EVENT (incident) will fit here as the sentence tells us how the incident was a shocking one for the public as well as for bridge engineers. Thus, A is the right answer.

Resident - citizen; dweller. Foray - incursion; an attack into enemy territory. Command - order.

99. **Solution: C**

We need a noun to be modified by the definite article THE. ABSENCE (lack) will fit here as the sentence tells us how logistical problems are expected to arise due to the lack of the transport link that was being provided by the bridge. Thus, C is the right answer.

Allure - charm. Reform - change. Fusion - the act of joining together.

100. **Solution: D**

We need a verb to agree with the subject THE BRIDGE. COLLAPSED (lost structural integrity and fell) will fit here as the sentence tells us how the bridge fell due to the ship collision. Thus, D is the right answer.

Prevented - stopped; hindered. Founded - established; based. Approved - accepted as satisfactory.