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**SSC CHSL Pre**

# Solution

**SHP-9III54236-E**



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General Intelligence and Reasoning

1. **Solution: D**  
Given word: 'INCREDIBLE'.  
'DECIBEL' can be formed using the letters of the word 'INCREDIBLE'.  
'BLENDER' can be formed using the letters of the word 'INCREDIBLE'.  
'DECLINE' can be formed using the letters of the word 'INCREDIBLE'.  
'BRIDGE' cannot be formed using the letters of the given word, as there is no 'G' in 'INCREDIBLE'.  
Hence, option d.

2. **Solution: D**  
All of the above countries are the countries of Asia countries except for Greece, which is a country of Europe.  
Hence, option d.

3. **Solution: B**  
The logic followed here is as follows:  
The words are coded as sum of the positional value of all the consonants as per the English alphabetical series and the number of letters in the word.  
For 'CARB':

|   |   |    |   |
|---|---|----|---|
| C | A | R  | B |
| 3 |   | 18 | 2 |

Code =  $(3 + 18 + 2) + 4 = 27$

So, 'CARB' is coded as '27'.

For 'MODEL':

|    |   |   |   |    |
|----|---|---|---|----|
| M  | O | D | E | L  |
| 13 |   | 4 |   | 12 |

Code =  $(13 + 4 + 12) + 5 = 34$

So, 'MODEL' is coded as '34'.

Similarly, for 'DRIVE',

|   |    |   |    |   |
|---|----|---|----|---|
| D | R  | I | V  | E |
| 4 | 18 |   | 22 |   |

Code =  $(4 + 18 + 22) + 5 = 49$

So, 'DRIVE' is coded as '49'.

Hence, option b.

4. **Solution: D**  
The logic followed here is:  
The 1<sup>st</sup> letter and the 4<sup>th</sup> letter are written as the 4<sup>th</sup> preceding letter as per the English alphabetical order. The 2<sup>nd</sup> letter and the 3<sup>rd</sup> letter are written as the opposite letter as per the English alphabetical series.

In the 1<sup>st</sup> letter cluster and the 2<sup>nd</sup> letter cluster,

|   |   |   |    |
|---|---|---|----|
| D | A | R | K  |
| - |   |   |    |
| 4 |   |   | -4 |
| Z | Z | I | G  |

So, 'DARK' is written as 'ZZIG'.

Similarly, in the 3<sup>rd</sup> letter cluster and the 4<sup>th</sup> letter cluster,

|   |   |   |    |
|---|---|---|----|
| B | O | L | D  |
| - |   |   |    |
| 4 |   |   | -4 |

|   |   |   |   |
|---|---|---|---|
| X | L | O | Z |
|---|---|---|---|

So, 'BOLD' is written as 'XLOZ'.

Similarly, in the 5<sup>th</sup> letter cluster and the 6<sup>th</sup> letter cluster,

|   |   |   |    |
|---|---|---|----|
| F | O | U | R  |
| - |   |   |    |
| 4 |   |   | -4 |
| B | L | F | N  |

Therefore, 'FOUR' is written as 'BLFN'.

Hence, option d.

5. **Solution: B**

The pattern followed here is:

The 2<sup>nd</sup> letter is the 4<sup>th</sup> preceding letter of the 1<sup>st</sup> letter, as per the English alphabetical series. The 3<sup>rd</sup> letter is the 8<sup>th</sup> succeeding letter of the 2<sup>nd</sup> letter, as per the English alphabetical series.

In option 'A', 1<sup>st</sup> letter = F, 2<sup>nd</sup> letter = F - 4 = B, 3<sup>rd</sup> letter = B + 8 = J

In option 'B', 1<sup>st</sup> letter = Q, 2<sup>nd</sup> letter = Q - 4 = M, 3<sup>rd</sup> letter = M + 8 = U ≠ V

In option 'C', 1<sup>st</sup> letter = M, 2<sup>nd</sup> letter = M - 4 = I, 3<sup>rd</sup> letter = I + 8 = Q

In option 'D', 1<sup>st</sup> letter = X, 2<sup>nd</sup> letter = X - 4 = T, 3<sup>rd</sup> letter = T + 8 = B

Hence, option b.

6. **Solution: D**

The pattern followed here is as follows:

$46 - 7 = 39$

$39 + 14 = 53$

$53 - 21 = 32 \neq 74$

$32 + 28 = 60$

$60 - 35 = 25$

$25 + 42 = 67$

So, '32' will come in place of '74'.

Hence, option d.

7. **Solution: C**

The logic followed here is:

3<sup>rd</sup> number =  $(1^{\text{st}} \text{ number} \div 5) + 2^{\text{nd}} \text{ number}$

In (90, 18, 36)

3<sup>rd</sup> number =  $(90 \div 5) + 18$

3<sup>rd</sup> number =  $18 + 18$

3<sup>rd</sup> number = 36

In (65, 45, 58)

3<sup>rd</sup> number =  $(65 \div 5) + 45$

3<sup>rd</sup> number =  $13 + 45$

3<sup>rd</sup> number = 58

In option 'A' (45, 9, 27)

3<sup>rd</sup> number =  $(45 \div 5) + 9$

3<sup>rd</sup> number =  $9 + 9$

3<sup>rd</sup> number =  $18 \neq 27$

In option 'B' (85, 32, 64)

3<sup>rd</sup> number =  $(85 \div 5) + 32$

3<sup>rd</sup> number =  $17 + 32$

3<sup>rd</sup> number =  $49 \neq 64$

In option 'C' (120, 18, 42)

3<sup>rd</sup> number =  $(120 \div 5) + 18$

3<sup>rd</sup> number =  $24 + 18$

3<sup>rd</sup> number = 42

In option 'D' (55, 12, 32)

3<sup>rd</sup> number =  $(55 \div 5) + 12$

3<sup>rd</sup> number =  $11 + 12$

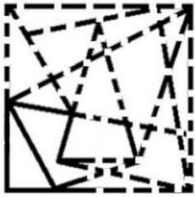
3<sup>rd</sup> number =  $23 \neq 32$

So, only the set of numbers given in option 'C' are related in the same way as are the numbers of the given set.

Hence, option c.

8. **Solution: C**

The embedded figure is shown below.



Hence, option c.

9. **Solution: C**

The logic followed here is as follows:

Twice of the sum of the place value of the 1<sup>st</sup> letter and last letter of the given word is the code of the word.

In 'QUEST',

|    |   |   |   |    |
|----|---|---|---|----|
| Q  | U | E | S | T  |
| 17 |   |   |   | 20 |

$$\text{Code} = (17 + 20) \times 2$$

$$\text{Code} = 37 \times 2$$

$$\text{Code} = 74$$

In 'SQUARE',

|    |   |   |   |   |   |
|----|---|---|---|---|---|
| S  | Q | U | A | R | E |
| 19 |   |   |   |   | 5 |

$$\text{Code} = (19 + 5) \times 2$$

$$\text{Code} = 24 \times 2$$

$$\text{Code} = 48$$

Similarly, in 'POLICY',

|    |   |   |   |   |    |
|----|---|---|---|---|----|
| P  | O | L | I | C | Y  |
| 16 |   |   |   |   | 25 |

$$\text{Code} = (16 + 25) \times 2$$

$$\text{Code} = 41 \times 2$$

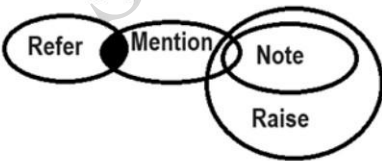
$$\text{Code} = 82$$

So, 'POLICY' is coded as '82'.

Hence, option c.

10. **Solution: C**

Following figures can be formed:



Conclusions:

I. No Refer are Raise. Doesn't follow. (As, there is no direct relation between Refer and Raise, so, no definite conclusions follow.)

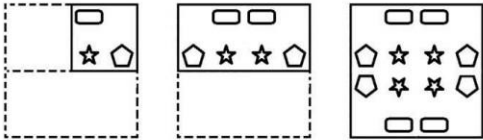
II. Some Mention are Raise. Follow. (As, some Mention are Note and all Note are Raise, so, some Mention, which are Note are also Raise.)

III. Some Note are Refer. Doesn't follow. (As, there is no direct relation between Note and Refer, so, no definite conclusions follow.)

So, only conclusion II follows.

Hence, option c.

11. **Solution: B**



Hence, option b.

12. **Solution: A**

The pattern followed here is:

The average of the 2<sup>nd</sup> and 3<sup>rd</sup> number is the 1<sup>st</sup> number.

In (58, 87, 29),

$$2^{\text{nd}} \text{ number} = 87, 3^{\text{rd}} \text{ number} = 29, 1^{\text{st}} \text{ number} = (87 + 29) / 2 = 58$$

In (41, 34, 48),

$$2^{\text{nd}} \text{ number} = 34, 3^{\text{rd}} \text{ number} = 48, 1^{\text{st}} \text{ number} = (34 + 48) / 2 = 41$$

In option 'A', (68, 45, 91):

$$2^{\text{nd}} \text{ number} = 45, 3^{\text{rd}} \text{ number} = 91, 1^{\text{st}} \text{ number} = (45 + 91) / 2 = 68$$

In option 'B', (32, 36, 24):

$$2^{\text{nd}} \text{ number} = 36, 3^{\text{rd}} \text{ number} = 24, 1^{\text{st}} \text{ number} = (36 + 24) / 2 = 30 \neq 32$$

In option 'C', (40, 73, 27):

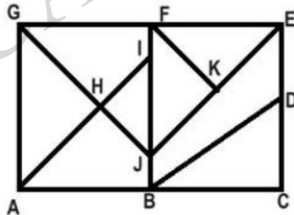
$$2^{\text{nd}} \text{ number} = 73, 3^{\text{rd}} \text{ number} = 27, 1^{\text{st}} \text{ number} = (73 + 27) / 2 = 50 \neq 40$$

In option 'D', (44, 28, 64):

$$2^{\text{nd}} \text{ number} = 28, 3^{\text{rd}} \text{ number} = 64, 1^{\text{st}} \text{ number} = (28 + 64) / 2 = 46 \neq 44$$

Hence, option a.

13. **Solution: B**



Triangles are: AHG, AIB, JHI, GFJ, FKJ, FJE, FKE, BDC and GJE.

Total numbers of triangles in the given figure are '9'.

Hence, option b.

14. **Solution: C**

The logic followed here is:

The number in second column is the sum of the product of the number of the 1<sup>st</sup> column and tens digit of the number of the 3<sup>rd</sup> column and the number of 3<sup>rd</sup> column.

$$2^{\text{nd}} \text{ number} = (1^{\text{st}} \text{ column number} \times \text{tens digit of the number of the } 3^{\text{rd}} \text{ column}) + 3^{\text{rd}} \text{ column number}$$

In row I: '23, 35, 12',

$$2^{\text{nd}} \text{ column number} = (23 \times 1) + 12$$

$$= 23 + 12$$

$$= 35$$

$$35 = 35$$

In row II: '45, 169, 34',

$$2^{\text{nd}} \text{ number} = (45 \times 3) + 34$$

$$= 135 + 34$$

$$= 169$$

$$169 = 169$$

Similarly, in row III: '38, ?, 58'

$$2^{\text{nd}} \text{ number} = (38 \times 5) + 58$$

$$= 190 + 58$$

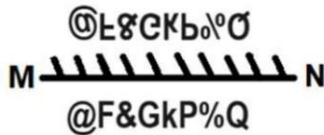
$$= 248$$

$$248 = 248$$

So, '248' will come in place of '?'.  
Hence, option c.

15. **Solution: A**  
The reverse dictionary order is:  
2 - Anthropology, 3 - Animation, 5 - Anchor, 1 - Ancestor, 4 - Analogy  
So, 'Ancestor' will come at the fourth position.  
Hence, option a.

16. **Solution: B**  
The mirror image is shown below:



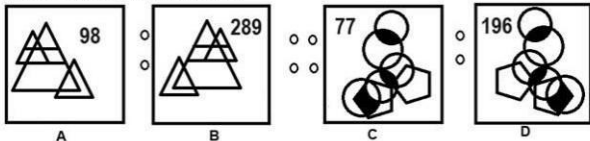
17. **Solution: B**  
The logic followed here is:  
From the left end the first and the last letter of the word is replaced by the 5<sup>th</sup> succeeding letter as per English alphabetical series in the next letter cluster and from the left end 2<sup>nd</sup> and 3<sup>rd</sup> letter is replaced by 3<sup>rd</sup> preceding letter as per English alphabetical series in the next letter cluster as shown below.

|    |    |    |    |
|----|----|----|----|
| S  | K  | U  | N  |
| +5 | -3 | -3 | +5 |
| X  | H  | R  | S  |
| +5 | -3 | -3 | +5 |
| C  | E  | O  | X  |
| +5 | -3 | -3 | +5 |
| H  | B  | L  | C  |
| +5 | -3 | -3 | +5 |
| M  | Y  | I  | H  |

- So, 'HBLC' will come in place of 'C'.  
The complete series is as follows:  
SKUN, XHRS, CEOX, **HBLC**, MYIH  
Hence, option b.
18. **Solution: C**  
The logic followed here is:  
Figure B is the mirror image of figure A except for numbers.  
Number in the figure B is the square of the sum of the digits of the number given in the figure A.  
Similarly, figure C and figure D follow the above pattern.  
So, the figure that will come in place of 'D' is:



The complete figure is:



- Hence, option c.
19. **Solution: B**  
The logic followed here is:

73 + 12 = 85  
85 + 11 = 96  
96 + 10 = 106  
106 + 9 = **115**  
115 + 8 = 123  
123 + 7 = 130  
So, '115' will complete the series:  
The complete series is:  
73, 85, 96, 106, **115**, 123, 130  
Hence, option b.

20. **Solution: C**  
The logic followed here is:  
In every figure, there is always a 3D figure inside a polygon.  
All the figures follow the above pattern except for figure given in option 'C'.  
Hence, option c.

21. **Solution: D**  
We draw the following family chart.
- (+) Brother of (-) Married to Person in the photo (+)
- Pihu(-)
- Pihu is the niece of the person in the photograph.  
Hence, option d.

22. **Solution: B**  
Given equation:  
 $88 + 22 - 130 \div 4 \times 20 + 98 = -190$   
Replacing the numbers given in option 'A' in the given equation, we get,  
 $88 + 22 - 130 \div 20 \times 4 + 98 = -190$   
LHS  
 $= 88 + 22 - 130 \div 20 \times 4 + 98$   
 $= 88 + 22 - 26 + 98$   
 $= 208 - 26$   
 $= 182$   
 $182 \neq -190$   
LHS  $\neq$  RHS  
Replacing the numbers given in option 'B' in the given equation, we get,  
 $130 + 22 - 88 \div 4 \times 20 + 98 = -190$   
LHS  
 $= 130 + 22 - 88 \div 4 \times 20 + 98$   
 $= 130 + 22 - 22 \times 20 + 98$   
 $= 130 + 22 - 440 + 98$   
 $= 250 - 440$   
 $= -190$   
 $-190 = -190$   
LHS = RHS  
Replacing the numbers given in option 'C' in the given equation, we get,  
 $88 + 22 - 98 \div 4 \times 20 + 130 = -190$   
LHS  
 $= 88 + 22 - 98 \div 4 \times 20 + 130$   
 $= 88 + 22 - 24.5 \times 20 + 130$   
 $= 88 + 22 - 490 + 130$   
 $= 240 - 490$   
 $= -250$   
 $-250 \neq -190$   
LHS  $\neq$  RHS  
Replacing the numbers given in option 'D' in the given equation, we get,  
 $88 + 20 - 130 \div 4 \times 22 + 98 = -190$   
LHS  
 $= 88 + 20 - 130 \div 4 \times 22 + 98$   
 $= 88 + 20 - 32.5 \times 22 + 98$

$$= 88 + 20 - 715 + 98$$

$$= 206 - 715$$

$$= -509$$

$$-509 \neq -190$$

$$\text{LHS} \neq \text{RHS}$$

So, replacing the numbers given in option 'B' will make the given equation correct.

Hence, option b.

23. **Solution: B**

Formula to find the angle between hour hand and minute hand is:

$$\text{Angle} = |(11 \times \text{minutes} - 60 \times \text{hours}) / 2|$$

$$\text{Here, minutes} = 40, \text{Hours} = 3$$

$$\text{Angle} = (11 \times 40 - 60 \times 3) / 2^\circ$$

$$\text{Angle} = (440 - 180) / 2^\circ$$

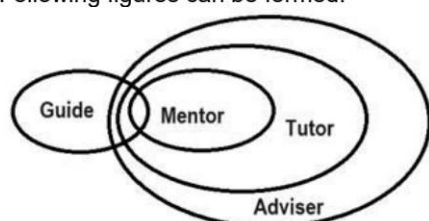
$$= 260 / 2^\circ = 130^\circ$$

So, for the angle between hour hand and minute hand, when seen in the clockwise direction of hour hand is  $130^\circ$ .

Hence, option b.

24. **Solution: C**

Following figures can be formed:



Conclusions:

I. Some Adviser are not Guide. Doesn't follow (As, there is no negative relation between Guide and Adviser. So, no definite negative conclusion follows.)

II. Some Guide are not Mentor. Doesn't follow (As, there is no negative relation between Guide and Adviser. So, no definite negative conclusion follows.)

III. All Mentor are Adviser. Follows (As, all Mentor are Tutor and all Tutor are Adviser. So, all Mentor, which are Tutor are also Adviser.)

Only conclusion III follows.

Hence, option c.

25. **Solution: D**

Given equation:

$$[(480 \div (12 + 5) + (45 \div 50))] - 133 \times 19 = ?$$

Equation after changing the sign,

$$[(480 - (12 \times 5) \times (45 - 50))] + 133 \div 19 = ?$$

On applying BODMAS rule, we get,

$$= [(480 - (60) \times (-5))] + 133 \div 19$$

$$= (480 + 300) + 7$$

$$= 780 + 7$$

$$= 787$$

So, '787' will come in place of '?'

Hence, option d.

### Quantitative Aptitude

26. **Solution: C**

Let the actual price of the bill be ₹'100c'.

Discount given to the customer = 27% of 100c

$$= ₹'27c'$$

$$\text{ATQ, } 27c = 530.55$$

$$\text{Or, 'c' } = (530.55/27) = 19.65$$

Therefore, actual price of the Sanjana's bill = ₹'100c'

$$= ₹(100 \times 19.65) = ₹1,965$$

Hence, option c.

27. **Solution: C**

Let the speed of passenger train = 'v' km/h

Speed of superfast train = (v + 20) km/h

$$\text{So, } \frac{150}{v} - \frac{150}{v+20} = 20$$

$$\text{Or, } 150(v + 20) - 150v = 2v(v + 20)$$

$$\text{Or, } 150v + 3,000 - 150v = 2v^2 + 40v$$

$$\text{Or, } 2v^2 + 40v - 3,000 = 0$$

$$\text{Or, } v^2 + 20v - 1,500 = 0$$

$$\text{Or, } v^2 + 50v - 30v - 1,500 = 0$$

$$\text{Or, } v(v + 50) - 30(v + 50) = 0$$

$$\text{Or, } (v + 50)(v - 30) = 0$$

On solving, we have 'v' = 30 or - 50

Speed cannot be negative. So, 'v' = 30

So, speed of the superfast train = 30 + 20 = 50 km/h

So, required time = (300/50) = 6 hours

Hence, option c.

28. **Solution: A**

$$\frac{2a+b}{3a-2b} = \frac{13}{2}$$

$$\text{So, } 2 \times (2a + b) = 13 \times (3a - 2b)$$

$$\text{Or, } 4a + 2b = 39a - 26b$$

$$\text{Or, } 35a = 28b$$

$$\text{Or, } (a/b) = (28/35) = (4/5)$$

Let 'a' = 4k and 'b' = 5k

$$\text{Required percent} = (5k/4k) \times 100 = 125\%$$

Hence, option a.

29. **Solution: C**

Statement I:

Each exterior angle in a polygon having 'n' sides =  $(360^\circ/n)$ .

So, required angle =  $(360/8) = 45^\circ$  (octagon has 8 sides)

Therefore, statement I is false.

Statement II:

Each interior angle in a polygon having 'n' sides =  $180^\circ \times \{(n - 2)/n\}$

So, required angle =  $180^\circ \times \{(8 - 2)/8\} = 135^\circ$

Therefore, statement II is true.

Hence, option c.

30. **Solution: D**

Simple interest = (principal  $\times$  rate  $\times$  time)  $\div$  100

ATQ;

$$1,200 = (10,000 \times 8 \times t) \div 100$$

$$\text{Or, 't' } = (1,200/800)$$

$$\text{Or, 't' } = 1.5$$

Let the required rate of interest be 'R%' p.a.

$$\text{So, } 2,400 = 16,000 \times 1.5 \times R \div 100$$

$$\text{Or, } 240R = 2,400$$

$$\text{Or, 'R' } = 10$$

Therefore, required rate of interest = 10% p.a.

Hence, option d.

31. **Solution: B**

$$125x^3 - 64y^3 = (Ax + By)(Dy^2 - Cx^2 + 20xy)$$

$$(5x)^3 - (4y)^3 = (Ax + By)(Dy^2 - Cx^2 + 20xy)$$

As we know,

$$x^3 - y^3 = (x - y)(x^2 + y^2 + xy)$$

$$\text{So, } (5x)^3 - (4y)^3 = (5x - 4y)(25x^2 + 16y^2 + 20xy)$$

$$= (Ax + By)(Dy^2 - Cx^2 + 12xy)$$

Comparing the coefficients of both sides, we get;

$$'A' = 5, 'B' = -4, 'C' = -25, 'D' = 16$$

$$\text{So, } A + C - 2B + 3D = 5 - 25 - \{2 \times (-4)\} + 3 \times 16$$

$$= -20 + 8 + 48$$

$$= 36$$

Hence, option b.

32. **Solution: D**

Let the quantity of water in the mixture be '8k' litres.

Quantity of milk =  $0.375 \times 8k = '3k'$  litres

$$\text{ATQ, } 8k + 3k = 143$$

So, 'k' =  $143/11 = 13$

Let 'p' litres of milk must be added to the mixture.

So,  $3k + p = (1/2) \times 8k$

Or,  $3k + p = 4k$

Or, 'k' = p

So, 'p' = 13

Therefore, 13 litres of milk must be added to the mixture.

Hence, option d.

33. **Solution: D**

$$(2x - 7y - 6z)^2 - (5y + 2x)^2 - (2y + 6z)^2$$

Using,

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

$$(a + b)^2 = a^2 + b^2 + 2ab$$

$$= [(2x)^2 + (-7y)^2 + (-6z)^2 + 2 \times (2x) \times (-7y) + 2 \times (-7y) \times (-6z) + 2 \times (2x) \times (-6z)] - [(5y)^2 + (2x)^2 + 2 \times (5y) \times (2x)] - [(2y)^2 + (6z)^2 + 2 \times (2y) \times (6z)]$$

$$= [4x^2 + 49y^2 + 36z^2 - 28xy + 84yz - 24xz] - [25y^2 + 4x^2 + 20xy] - [4y^2 + 36z^2 + 24yz]$$

$$= 4x^2 + 49y^2 + 36z^2 - 28xy + 84yz - 24xz - 25y^2 - 4x^2 - 20xy - 4y^2 - 36z^2 - 24yz$$

$$= 20y^2 - 48xy + 60yz - 24xz$$

$$= 20y^2 - 48xy + 60yz - 24xz$$

$$= 20y^2 - 48xy + 60yz - 24xz$$

$$= 20y^2 - 48xy + 60yz - 24xz$$

$$= 20y^2 - 48xy + 60yz - 24xz$$

Hence, option d.

34. **Solution: B**

Let, the two numbers be 'a' and 'b', such that,  $a > b$ .

ATQ,

$$a^2 + b^2 = 250$$

$$a - b = 4$$

$$(a - b)^2 = a^2 + b^2 + 2 \times a \times b$$

$$\text{Or, } 4^2 = 250 + 2 \times a \times b$$

$$\text{Or, } 2 \times a \times b = 250 - 16 = 234$$

$$\text{Or, } a \times b = 117$$

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

$$\text{Or, } a^3 - b^3 = 4 \times (250 + 117) = 4 \times 367 = 1,468$$

Hence, option b.

35. **Solution: C**

Effective time period =  $(12/12) \times 2 = 2$  terms

And effective rate of interest =  $25 \div 2 = 12.5\%$  per term

Amount in compound interest =  $\text{Sum} \{1 + (\text{rate of interest}/100)\}^{\text{time period}}$

$$= 32,000 \times \left(1 + \frac{25}{200}\right)^2$$

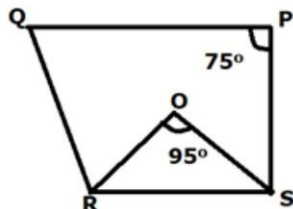
$$= 32,000 \times \left(1 + \frac{1}{8}\right)^2$$

$$= 32,000 \times \left(\frac{9}{8}\right)^2 = 40,500$$

$$\text{So, required interest} = (40,500 - 32,000) = ₹8,500$$

Hence, option c.

36. **Solution: C**



In  $\triangle ROS$ ;

We have,  $\angle ROS + \angle ORS + \angle OSR = 180^\circ$

$$\text{Or, } 75^\circ + \angle ORS + \angle OSR = 180^\circ$$

$$\text{Or, } \angle ORS + \angle OSR = 85^\circ$$

$$\text{Or, } (\angle R/2) + (\angle S/2) = 85^\circ \{ \angle ORS = (\angle R/2) \text{ and } \angle OSR = (\angle S/2) \}$$

$$\text{So, } \angle R + \angle S = 170^\circ$$

We know that sum of each angle of a quadrilateral is  $360^\circ$ .

$$\text{So, } \angle P + \angle Q + \angle R + \angle S = 360^\circ$$

$$\text{Or, } 75^\circ + \angle Q + 170^\circ = 360^\circ$$

$$\text{Or, } \angle Q = 360^\circ - 245^\circ$$

$$\text{So, } \angle Q = 115^\circ$$

Hence, option c.

37. **Solution: B**

Let the initial consumption be '10y' kg

Let the initial price of the sugar be ₹'6x' per kg

So, initial expense =  $10y \times 6x = ₹'60xy'$

And new consumption =  $10y \times 0.8 = '8y'$  kg

And new price of the sugar =  $6x \times (7/6) = ₹'7x'$  per kg

So, new expense =  $8y \times 7x = ₹'56xy'$

$$\text{So, required percentage change} = \left( \frac{60xy - 56xy}{60xy} \times 100 \right) \sim 6.67\%$$

Hence, option b.

38. **Solution: B**

Let the cost price of article be ₹'100a'

So, profit earned =  $100a \times 0.2 = ₹'20a'$

ATQ;

$$20a + 30 = 100a \times 0.25$$

$$\text{Or, } 20a + 30 = 25a$$

$$\text{Or, } 30 = 5a$$

$$\text{So, } a = 6$$

So, cost price of the article =  $100 \times 6 = ₹600$

So, initial selling price of the article =  $600 \times 1.2$

$$= ₹720$$

Hence, option b.

39. **Solution: A**

Sum of first 'n' odd numbers =  $n^2$

Sum of square of first 'n' natural numbers.

$$= \frac{\{n \times (n+1) \times (2n+1)\}}{6}$$

ATQ

$$\text{Sum of square of first 8 natural numbers} = \{8 \times (8 + 1) \times (8 \times 2 + 1)\} \div 6 = \{8 \times 9 \times 17\} \div 6 = 204$$

$$\text{Sum of first 12 odd natural numbers} = n^2 = 12^2 = 144$$

$$\text{Required ratio} = (204/144) = 17:12$$

Hence, option a.

40. **Solution: A**

$$\begin{aligned} & \frac{300}{11} \div \left[ \frac{7}{33} - \left\{ \frac{3}{11} \times \left( \frac{31}{6} - \frac{10}{3} \right) - \frac{29}{6} \right\} \right] \\ &= \frac{300}{11} \div \left[ \frac{7}{33} - \left\{ \frac{3}{11} \times \left( \frac{31-20}{6} \right) - \frac{29}{6} \right\} \right] \\ &= \frac{300}{11} \div \left[ \frac{7}{33} - \left\{ \frac{3}{11} \times \frac{11}{6} - \frac{29}{6} \right\} \right] \\ &= \frac{300}{11} \div \left[ \frac{7}{33} - \left\{ \frac{3-29}{6} \right\} \right] \\ &= \frac{300}{11} \div \left[ \frac{7}{33} + \frac{26}{6} \right] \\ &= \frac{300}{11} \div \left[ \frac{14+286}{66} \right] \\ &= \frac{300}{11} \times \frac{66}{300} \\ &= 6 \end{aligned}$$

Hence, option a.

41. **Solution: B**

Let, the total work be LCM  $[(544/10), 34] = 544$  units

So, the efficiency of 'A' =  $(544/54.4) = 10$  units/day

Efficiency of 'B' =  $(544/34) = 16$  units/day

So, the required time =  $[544/(10 + 16)] = (544/26) \sim 21$  days

Hence, option b.

42. **Solution: D**

Number of employees who are on leave in all the companies together on Monday =  $(12 + 15 + 18 + 20 + 10) = 75$

Number of employees who are on leave in all the companies together on Thursday =  $(24 + 15 + 20 + 10 + 15) = 84$

Therefore, required ratio = 75:84 = 25:28

Hence, option d.

43. **Solution: B**

$$1 + 3\sin^2 A + 4\cos A = 0$$

$$\text{Using, } \sin^2 A + \cos^2 A = 1$$

$$1 + 3 \times (1 - \cos^2 A) + 4\cos A = 0$$

$$1 + 3 - 3\cos^2 A + 4\cos A = 0$$

$$4 - 3\cos^2 A + 4\cos A = 0$$

$$\text{So, } 3\cos^2 A - 4\cos A - 4 = 0$$

$$\text{Or, } 3\cos^2 A - 6\cos A + 2\cos A - 4 = 0$$

$$\text{Or, } 3\cos A \times (\cos A - 2) + 2 \times (\cos A - 2) = 0$$

$$\text{Or, } (3\cos A + 2)(\cos A - 2) = 0$$

$$\text{Or, } \cos A = (-2/3) \text{ or, } \cos A = 2$$

$$\text{But } 90^\circ < A < 180^\circ, \text{ so, } \cos A = (-2/3)$$

$$\text{So, } 4(\tan^2 A + 1) = 4\sec^2 A \text{ (since, } \sec^2 A = \tan^2 A + 1)$$

$$= 4 \times (1/\cos^2 A) \text{ (since, } \sec A \text{ is reciprocal of } \cos A)$$

$$= 4 \times (-3/2)^2 = 4 \times (9/4) = 9$$

Hence, option b.

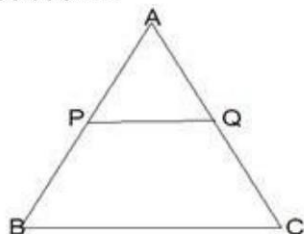
44. **Solution: C**

$$\text{Required percentage} = \left( \frac{200-150}{120-100} \right) \times 100$$

$$= \left( \frac{50}{20} \right) \times 100 = 250\%$$

Hence, option c.

45. **Solution: D**



We know that if a line joining the two sides of a triangle is parallel to the third side of the triangle then it divides the two sides in same ratio.

$$\text{So, } \frac{AQ}{CQ} = \frac{AP}{BP}$$

$$\text{Or, } \frac{AQ}{CQ} = \frac{2}{3}$$

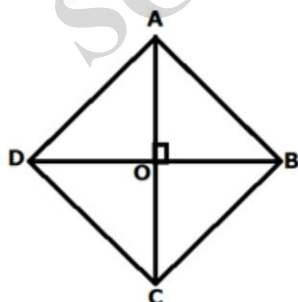
$$\text{So, length of } AQ = \left( \frac{2}{3+2} \right) \times 25 = 10 \text{ cm}$$

Hence, option d.

46. **Solution: A**

$$\text{Perimeter of rhombus} = 4 \times \text{side of rhombus}$$

$$\text{So, length of each side of rhombus} = (116/4) = 29 \text{ cm}$$



$$\text{Let } AC = 42 \text{ cm}$$

We know that diagonals of rhombus bisect each other at  $90^\circ$

$$\text{So, } OA = (42/2) = 21 \text{ cm}$$

In  $\triangle AOB$ , using Pythagoras theorem

$$AB^2 = OA^2 + OB^2$$

$$\text{Or, } 29^2 = 21^2 + OB^2$$

$$\text{Or, } OB^2 = 841 - 441$$

$$\text{Or, } OB^2 = 400$$

$$\text{Or, } OB = 20 \text{ or } OB = -20$$

But length cannot be negative. So,  $OB = 20 \text{ cm}$

$$\text{So, } BD = 2 \times 20 = 40 \text{ cm}$$

Area of rhombus =  $(1/2) \times (\text{product of length diagonals})$

$$= (1/2) \times 42 \times 40$$

$$= 840 \text{ cm}^2$$

Hence, option a.

47. **Solution: A**

$$\text{We have, } \cos q + \sec q = (3/\sqrt{2})$$

$$\text{Or, } \cos q + (1/\cos q) = (3/\sqrt{2})$$

$$\text{Or, } \sqrt{2}\cos^2 q + \sqrt{2} = 3\cos q$$

$$\text{Or, } \sqrt{2}\cos^2 q - 3\cos q + \sqrt{2} = 0$$

$$\text{Or, } \sqrt{2}\cos^2 q - 2\cos q - \cos q + \sqrt{2} = 0$$

$$\text{Or, } \sqrt{2}\cos q(\cos q - \sqrt{2}) - 1(\cos q - \sqrt{2}) = 0$$

$$\text{Or, } (\cos q - \sqrt{2})(\sqrt{2}\cos q - 1) = 0$$

$$\text{So, } \cos q = \sqrt{2} \text{ or } (1/\sqrt{2})$$

But  $\cos q$  is not greater than 1. So,  $\cos q = (1/\sqrt{2})$

$$\text{Or, } \cos q = \cos 45^\circ$$

$$\text{So, } q = 45^\circ$$

$$\text{Therefore, } 16 \sin^4 q = 16 \times \sin^4 45^\circ = 16 \times (1/\sqrt{2})^4 = 4$$

Hence, option a.

48. **Solution: C**

$$\left( a + \frac{1}{a} \right) = 3\sqrt{2}$$

On cubing both sides, we have;

$$\left( a + \frac{1}{a} \right)^3 = a^3 + \frac{1}{a^3} + \left( 3 \times a \times \frac{1}{a} \right) \times \left( a + \frac{1}{a} \right)$$

$$(3\sqrt{2})^3 = a^3 + \frac{1}{a^3} + 3 \times (3\sqrt{2})$$

$$a^3 + \frac{1}{a^3} = 54\sqrt{2} - 9\sqrt{2}$$

$$a^3 + \frac{1}{a^3} = 45\sqrt{2}$$

Hence, option c.

49. **Solution: A**

$$\text{Initially, mean of 60 numbers} = 40$$

$$\text{So, sum of 60 numbers} = 60 \times 40 = 2,400$$

ATQ,

$$\text{Correct sum} = 2,400 - (68 + 32) + (86 + 23) = 2,409$$

$$\text{Correct mean} = (2,409/60) = 40.15$$

Hence, option a.

50. **Solution: C**

For a triangle having sides equal to 'a' cm, 'b' cm and 'c' cm,

Area of a triangle

$$= \sqrt{s \times (s-a) \times (s-b) \times (s-c)}, \text{ where } s' = \frac{a+b+c}{2}$$

$$\text{So, } 's' = \frac{12+15+13}{2} = 20 \text{ cm}$$

Required Area

$$= \sqrt{20 \times (20-12) \times (20-15) \times (20-13)}$$

$$= \sqrt{20 \times 8 \times 5 \times 7} = 20\sqrt{14} \text{ cm}^2$$

Hence, option c.

## General Awareness

51. **Solution: C**

The **Birbhum** is a large coal field located in the east of India in **West Bengal**.

Birbhum has estimated reserves of 5 billion tonnes of coal.

Hence, option C is the correct answer.

52. **Solution: C**

The **Government of India Act (1935)** provided for the establishment of an all-India Federation.

It divided the powers into three lists:

- Federal List,
- Provincial List
- Concurrent List

Hence, option C is the correct answer.

53. **Solution: B**

On **21<sup>st</sup> January** 1972, all the three states, **Manipur, Meghalaya, and Tripura** became full-fledged states under the North Eastern Region (Reorganisation) Act, 1971.

The North-Eastern Areas (Reorganisation) Act, 1971 was a major reform of the boundaries of India's North-East region into States and union territories.

Hence, Option B is the correct answer.

54. **Solution: C**

**Arunachal Pradesh** has achieved **100 percent** saturation in 'Har Ghar Jal' scheme under the Jal Jeevan Mission (JJM). With this, the state has become the **first in the northeast and tenth state in India** to achieve a 100% saturation under JJM.

The Centre's share for the scheme in the state was ₹3,965.41 crore, while the state contributed ₹455.51 crore to complete the project, ensuring every household gets clean and safe piped water.

Hence, Option C is the correct answer.

55. **Solution: B**

Atal Bihari Vajpayee was an Indian politician and poet who served three terms as the 10<sup>th</sup> Prime Minister of India, first for a term of 13 days in 1996, then for a period of 13 months from 1998 to 1999, followed by a full term from 1999 to 2004.

In 2015, he was conferred India's highest civilian honour **Bharat Ratna**, by the then-President of India, Pranab Mukherjee.

Hence, Option B is the correct answer.

56. **Solution: B**

**Kalibangān** is a town located on the left or southern banks of the **Ghaggar** (Ghaggar-Hakra River) in Tehsil Pilibangān, between Suratgarh and Hanumangarh in Hanumangarh District, **Rajasthan**, India.

- The prehistoric and pre-Mauryan character of Indus Valley civilization was first identified by Luigi Tessitori at **Kalibangān**.

- Kalibangan's excavation report was published in its entirety in 2003 by the Archaeological Survey of India, 34 years after the completion of excavations.

- The report concluded that Kalibangan was a major provincial capital of the Indus Valley Civilization.

- Kalibangan is distinguished by its **unique fire altars** and "**world's earliest attested ploughed field**".

Hence, Option B is the correct answer.

57. **Solution: C**

**Sumo** is a form of competitive full-contact wrestling where a rikishi (wrestler) attempts to force his opponent out of a circular ring (dohyō) or into touching the ground with any body part other than the soles of his feet (usually by throwing, shoving, or pushing him down).

Sumo originated in **Japan**, the only country where it is practiced professionally and where it is considered the national sport.

Hence, Option C is the correct answer.

58. **Solution: C**

Indonesia's Defence Minister **Prabowo Subianto** has been elected as the next **President of Indonesia**. He has secured approximately 58 percent of the votes in the recent elections.

He will succeed Joko Widodo as the next President of the Southeast Asian nation.

Hence, Option C is the correct answer.

59. **Solution: B**

**Kunchikal Falls** is a waterfall in India located in the Nidagodu village near Masthikatte in the Shimoga district of state **Karnataka**. Kunchikal falls is formed by the **Varahi River**.

Hence, option B is the correct answer.

60. **Solution: C**

On **November 9, 2000**, the state of **Uttaranchal**, the 27<sup>th</sup> state of India was carved out of Uttar Pradesh.

In January 2007 the new state changed its name to **Uttarakhand**, meaning "northern region," which was the traditional name for the area.

Hence, option C is the correct answer.

61. **Solution: B**

**Chilkur Balaji Temple**, popularly known as "Visa Balaji Temple", is an ancient Hindu temple of Lord Balaji on the banks of Osman Sagar in Rangareddy District in **Telangana**.

This temple has no Donation box and neither accepts any money from devotees.

This is one of the special Temples in India with no green channel or privileges for VIP's.

Hence, Option B is the correct answer.

62. **Solution: A**

When an object moves along a straight line with uniform acceleration, it is possible to relate its velocity, acceleration during motion and the distance covered by it in a certain time interval by a set of equations known as the equations of motion.

There are **three** such equations.

These are:

$v = u + at$  - describes the **velocity-time** relation

$s = ut + \frac{1}{2}at^2$  - represents the position-time relation

$2as = v^2 - u^2$  - represents the relation between the position and the velocity

where,  $u$  is the initial velocity of the object which moves with uniform acceleration  $a$  for time  $t$ ,  $v$  is the final velocity, and  $s$  is the distance travelled by the object in time  $t$ .

Hence, Option A is the correct answer.

63. **Solution: A**

**Engineers India Limited (EIL)** is an Indian public sector industrial technology, engineering consultancy and technology licensing company. It was set up in 1965 with the mandate of providing indigenous technology solutions across hydrocarbon projects.

EIL is headquartered in **New Delhi**.

Navratna status was accorded by Government of India to EIL in 2014.

Hence, Option A is the correct answer.

64. **Solution: C**

The **National Judicial Appointments Commission (NJAC)** was a proposed body which would have been responsible for the recruitment, appointment and transfer of judicial officers, legal officers, and legal employees under the government of India and in all state governments of India.

The commission was established by amending the Constitution of India through the **99<sup>th</sup> Constitutional Amendment Act 2014**.

On 16<sup>th</sup> October 2015, Supreme Court struck down the NJAC as unconstitutional.

Hence, Option C is the correct answer.

65. **Solution: C**

Rugby, football game played with an oval ball by two teams of **15 players** (in rugby union play) or 13 players (in rugby league play).

Both rugby union and rugby league have their origins in the style of football played at Rugby School in **England**.

Hence, Option C is the correct answer.

66. **Solution: B**

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is an international organisation of seven South Asian and Southeast Asian nations.

The BIMSTEC member states - Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand - are among the countries dependent on the Bay of Bengal. Hence, Option B is the correct answer.

67. **Solution: C**

**Kuchipudi** is one of the eight major Indian classical dances. It originates from a village named Kuchipudi in the Indian state of **Andhra Pradesh**. Kuchipudi is a dance-drama performance, with its roots in the ancient Hindu Sanskrit text of *Natya Shastra*.

Hence, option C is the correct answer.

68. **Solution: D**

**NISAR** is a joint Earth-observing mission between NASA and the Indian Space Research Organization (ISRO).

**Recent news:**

The **Kerala University of Fisheries and Ocean Studies (KUFOS)** has collaborated with Indian Space Research Organisation (ISRO) for **NISAR Phase II research programme**.

· **NASA and ISRO** are collaboratively developing a space-borne **synthetic aperture radar (NISAR)**, scheduled for launch in 2024.

· **NISAR** will be the first radar of its kind in space to systematically map Earth, using two different radar frequencies (**L-band and S-band**) to measure changes of our planet's surface, including movements as small as centimeter.

Hence, option D is the correct answer.

69. **Solution: C**

**Marina Beach** is a natural urban beach in Chennai, Tamil Nadu, India, along the Bay of Bengal.

The beach runs from near Fort St. George in the north to Foreshore Estate in the south, a distance of 6.0 km (3.7 mi), making it the second longest urban beach in the world, after Cox's Bazar Beach.

Marina Beach is India's longest beach.

Hence, option C is the correct answer.

70. **Solution: B**

**"Straight from the Heart"** is the autobiography of **Kapil Dev**.

Kapil Dev is an Indian former cricketer. He is one of the greatest all-rounders in the history of cricket.

Kapil Dev captained the Indian cricket team that won the 1983 Cricket World Cup, becoming the first Indian captain to win the Cricket World Cup.

Hence, Option B is the correct answer.

71. **Solution: B**

**Minimum Alternate Tax (MAT)** is a provision in Direct tax laws to limit tax exemptions availed by companies, so that they pay at least a minimum amount of corporate tax to the government. The key reason for introduction of MAT is to ensure minimum levels of taxation for all domestic and foreign companies in India.

MAT is calculated at **15%** of the book profit as per Section 115JB of Income Tax Act, 1961.

Hence, Option B is the correct answer.

72.

**Solution: D**

**Eighth Five Year Plan (1992-1997) :**

**Aim-** To provide a new dynamism to the economy and improve the quality of life of the common man.

· It is also called **Rao Manmohan Singh Model** of economic development.

· It has achieved the higher economic growth rate of 6.68%, as against the targeted 5.6%.

Hence, Option D is the correct answer.

73.

**Solution: B**

The **National Football Championship for Santosh Trophy**, due to ties with FIFA (from 2024 - 25), also known as the **FIFA Santosh Trophy**, or simply **Santosh Trophy**, is an inter-state national football competition contested by the state associations and government institutions under the All-India Football Federation (AIFF), the sport's governing body in India.

In the post-independence era, the National Football Championship for Santosh Trophy, started in **1941** and named after Sir **Manmatha Nath Roy Chowdhary**, the then-president of the Indian Football Association.

Hence, Option B is the correct answer.

74.

**Solution: C**

**OSCAR Awards 2024:**

|                              |                                                        |
|------------------------------|--------------------------------------------------------|
| Actor in a Leading Role      | CILLIAN MURPHY (Oppenheimer)                           |
| Actor in a Supporting Role   | ROBERT DOWNEY JR. Oppenheimer                          |
| Actress in a Leading Role    | EMMA STONE Poor Things                                 |
| Actress in a Supporting Role | DA'VINE JOY RANDOLPH The Holdovers                     |
| Animated Feature Film        | THE BOY AND THE HERON Hayao Miyazaki and Toshio Suzuki |

Hence, Option C is the correct answer.

75.

**Solution: B**

**Hepatitis** is a general term used to describe inflammation of the **liver**.

Liver inflammation can be caused by several viruses (viral hepatitis), chemicals, drugs, alcohol, certain genetic disorders or by an overactive immune system that mistakenly attacks the liver, called autoimmune hepatitis.

Hence, Option B is the correct answer.

### English Language

76.

**Solution: A**

We need a noun to be modified by definite article **THE** and to follow the possessive noun case **POLITICIAN'S**. Replace the base form verb **DENY** with the noun **DENIAL** (a statement that something is not true) to make the sentence correct. Thus, A is the right answer.

B is incorrect, replace the indefinite article **A** with the definite article **THE**, as the sentence talks of specific allegations.

C and D are incorrect as they use verbs **DENIED** and **DENIES** instead of the noun.

77. **Solution: B**  
B is the right answer. Follow the rules below to change a sentence from direct to indirect speech:  
I. Remove the comma, quotation marks, and period.  
II. SAID TO will be replaced by TOLD.  
III. The first person subject pronoun I will change to the third person subject pronoun SHE, and the second person object pronoun YOU changes to first person object pronoun ME.  
IV. THAT will be added after the reporting verb [In this case, after (told me) ].  
V. Simple past tense changes into past perfect tense in indirect speech. Therefore, DID NOT HURT will change to HAD NOT HURT.
78. **Solution: D**  
The correct phrase is "hand in the report to," indicating the action of submitting the report to Mr. Smith. The highlighted phrase is correct and needs no substitution. Thus, D is the right answer.  
A is incorrect as HAND OUT means to distribute. B is incorrect as the modal verb COULD should take the base form main verb HAND and not HANDED. C is incorrect grammatically and does not make meaning in the sentence.
79. **Solution: A**  
The word DELETERIOUS means causing harm or damage. DETRIMENTAL (tending to cause harm) will be the synonym of the given word. Thus, A is the right answer.  
The other options have different meanings:  
Affable - friendly, good-natured, or easy to talk to.  
Ignite - to catch fire or cause to catch fire.  
Delight - to please someone greatly.
80. **Solution: D**  
The correct option to complete the analogy is "colony," as ants live in colonies just as bees live in hives. Therefore, D is the right answer.  
Birds live in a nest. A lion lives in a den. A rabbit lives in a burrow.
81. **Solution: A**  
SAVED should be replaced with SAVE, as we need a base form of the verb to fit in the TO + VERB infinitive construction. The sentence would then read, "The cool roofs initiative is a simple solution with the potential to save lives and protect those most vulnerable to the harmful effects of climate change". Thus, A is the right answer.
82. **Solution: D**  
Replace the noun EFFECT with the verb AFFECT as the former would indicate the result of a change and the latter means to impact or change. Also, we use EACH OTHER for two people or things, and we use ONE ANOTHER for more than two people or things. The sentence tells us that the two planets influence each other, which is called resonance. Thus, D is the right answer.
83. **Solution: D**  
The idiom BITE OFF MORE THAN ONE CAN CHEW means to take on a task that is way too big or to undertake more responsibilities than one can handle. Thus, D is the right answer.
84. **Solution: A**  
We need a base form verb to fit in the TO + VERB infinitive construction. SUSTAIN (to support or maintain) is the correct choice, as the sentence here intends to convey that the given professions are important to support life. Thus, A is the right answer.
- Dignify- to make something seem worthy. Assert- to state confidently. Aggravate- to make a situation worse.
85. **Solution: D**  
We need an adjective to modify the noun EXTENSIONS. Out of the given options, only DISCRETIONARY (left to individual choice or judgement) will fit to convey that the teacher uses his judgement to give extra time to students to finish their work, in unusual events. Thus, D is the right answer. The other options are either grammatically or contextually incorrect:  
Ineffable - too extreme to be expressed in words.  
Perspicacious - having a ready insight into things.  
Discourage (verb) - to cause someone to lose confidence.
86. **Solution: B**  
We need an adjective to describe the blending of old traditions with new technology. ANCIENT (old) will fit here contextually. Thus, B is the right answer.  
Modern - new. Poor - having no money. Futuristic - related to the future.
87. **Solution: C**  
We need an adjective to describe the temples, tea ceremonies, and ikebana. VIBRANT (bright and colourful) will fit here contextually. Thus, C is the right answer.  
Simple - easy. Lacking - deficient. Strange - odd.
88. **Solution: B**  
We need an adjective to describe the advanced infrastructure and disaster preparedness. FORMIDABLE (impressive and powerful) will fit here contextually. Thus, B is the right answer.  
Passive - inactive. Savage - fierce. Helpless - unable to do anything.
89. **Solution: C**  
We need an adjective to describe the flavours and presentation of Japanese cuisine. EXQUISITE (extremely beautiful and delicate) will fit here contextually. Thus, C is the right answer.  
Illicit - illegal. Costly - expensive. Ordinary - typical; normal.
90. **Solution: A**  
We need an adjective to describe the literacy rate. HIGH will fit here contextually. Thus, A is the right answer.  
Bold - forward. Steady - consistent. Famous - renowned.
91. **Solution: B**  
Equally skilful with each hand is called AMBIDEXTROUS. Thus, B is the right answer.  
Ambiguous- having more than one possible meaning.  
Benefactor- a person who helps a person or organisation by giving them money. Biennial- Taking place once in two years.
92. **Solution: A**  
In A, replace the second form verb WENT with the base form GO, as the modal verb DIDN'T will take a base form verb after it. Thus, A is the right answer.
93. **Solution: D**  
The given sentence is in the active voice.  
Follow the rules below to change this sentence to the passive voice:  
I. The object A SONG will become the subject of the sentence.  
II. The modal verb construction WOULD SING will change to WOULD BE SUNG.

III. The preposition BY will be added and SHE will change to HER and become its object.

The passive voice sentence will be: A song would be sung by her.

Thus, D is the right answer.

94. **Solution: C**

The correct order of the given parts of the sentence is CEBAD. C begins the sentence by establishing the subject - Google. E comes next, it explains, what has been introduced by Google - a new program. B follows E, by specifying the target audience of the program - young entrepreneurs. AD is a mandatory pair and follows B. A further provides the purpose of the program - to help them in developing ideas related to startups (continued by D) . Thus, C is the right answer.

95. **Solution: C**

SHALLOW means lacking depth. Deep (extending far down from the top) will be its antonym. Thus, C is the right answer.

Brisk- quick, energetic, and active. Wide- having a great extent from side to side. Salient- of notable significance.

96. **Solution: C**

The idiom BITE THE DUST means to be defeated. Thus, C is the right answer.

The other options are incorrect.

97. **Solution: B**

The word ASTONISHING means causing a feeling of great surprise or wonder. The sentence tells us that Elon Musk said something about Tesla cars that surprised the listeners. SURPRISING will be the synonym of the given word. Thus, B is the right answer.

The other words have different meanings:

Elevating - raising to a more important or impressive level.

Sinking - going down below the surface.

Inspiring - encouraging; giving someone positive or creative feelings.

98. **Solution: D**

(d) is the correct answer. The sentence is in the passive voice. The rules to change the passive voice to active voice are as follows:

I. The subject clause will become the object clause. Here, the subject THE NEWS will become the object, and the object THE SPOKESPERSON will become the subject and begin the sentence.

II. Replace WAS ANNOUNCED with ANNOUNCED to agree with the past tense of the original sentence.

III. Remove the conjunction BY before THE SPOKESPERSON.

99. **Solution: C**

The word RETICENT means not revealing one's thoughts or feelings readily. The sentence seeks to convey that the quiet artist liked to be known for his work and avoided promoting himself through words. VOLUBLE ( talking fluently, readily, or incessantly) will be the antonym of the given word. Thus, C is the right answer.

The other options have different meanings:

Nebulous - not clear and having no form.

Mellifluous - having a pleasant and flowing sound.

Ambivalent - having mixed feelings.

100. **Solution: A**

The word CHANNEL represents a means or **outlet** for communication. Thus, A is the right answer.

Land- a specific area of ground. Destination- the place to which someone or something is going or being sent. Tool- an instrument or piece of equipment.

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