SSC GD Constable (Held On: 21 Feb, 2024 Shift 1)



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Solution

- Duleep Trophy is a domestic first-class cricket competition in India.
- The tournament is named after Kumar Shri Duleepsinhji of Nawanagar, who was a famous Indian cricketer.
- The Duleep Trophy was started by the Board of Control for Cricket in India (BCCI) in 1961-62.
- It features teams representing geographical zones of India, such as North Zone, South Zone, East Zone, West Zone, and Central Zone.
- The competition aims to provide a platform for players to showcase

their talent and make a case for selection to the national team.

2. Which of the following article of Indian Constitution is related to the Finance Commission of India?



Solution

- Article 280 of the Indian Constitution is related to the Finance Commission of India.
- The Finance Commission is constituted by the President of India every five years.
- Its purpose is to define the financial relations between the central government and the individual state governments.
- The Finance Commission makes recommendations on the

distribution of tax revenues between the Union and the States and

among the States themselves.

• It also addresses issues related to grants-in-aid to the states from the

Consolidated Fund of India.

3. Which of the following groups of letters when sequentially placed from left to right will complete the given series?

 $defgh_defghidefg_idefghidef_hidefghide_ghi$

| A | ihhf |
|---|------|
| B | ehgf |
| С | ihgf |
| D | defg |

Solution

• Let's check each option,

| 1) | d | e | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | e | f | g | h | i | d | е | f | h | h | i | d | е | f | g | h | i | d | e | f | g | h | İ |
|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2) | d | e | f | g | h | e | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i |
| 3) | d | e | f | g | h | i | d | e | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i | d | е | f | g | h | i |
| 4) | d | е | f | g | h | d | d | е | f | g | h | i | d | е | f | g | e | i | d | е | f | g | h | i | d | е | f | f | h | i | d | е | f | g | h | i | d | е | g | g | h | i |

• Here, we can see that "Option C" follows a repeating pattern of



4. In a certain code language, if TEA is coded as RFY, COFFEE is coded as APDGCF, then what will SUGAR be coded as?



Solution

• TEA : RFY

T(20) E(5) A(1)

$$I -2$$
 $I +1$ $I -2$
R(18) F(6) Y(25)

• COFFEE : APDGCF



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• Similarly, SUGAR : ?



• Hence, the correct answer is "QVEBP".

5. In the following question, select the related letter pair from the given alternatives.





D FVKG : HXMI

Solution

• DGKX : FIMZ

D(4) G(7) K(11) X(24)

$$\downarrow +2$$
 $\downarrow +2$ $\downarrow +2$ $\downarrow +2$ $\downarrow +2$

F(6) I(9) M(13) Z(26)

- Let's check each option.
- By checking Option **D**) **FVKG : HXMI**

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6. In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:

- I. Some U are C.
- II. No L is U.
- **Conclusion:**
- I. Some L are U.
- II. Some C are not L.

Both conclusions I and II follows



A

Only conclusion I follows



С



Solution

• The least possible venn diagram is shown below,



Conclusion:

- I. Some L are U → False (No L is U implies that some L cannot be U).
- II. Some C are not L → True (Some U are C and no L is U implies that some part of C which are U cannot be L).
- Hence, the correct answer is "Only conclusion II follows".

7. In a certain code language, if RAINBOW is coded as 'S190C15X' and SUNSHINE is coded as 'T21OTI9O5', then what will MOONLIGHT be coded as?



Solution

• RAINBOW : S190C15X



• SUNSHINE : T210TI905

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• Similarly, MOONLIGHT : ?



• Hence, the correct answer is "N1515OM9HIU".

8. P, Q, R, S, T, U and V are sitting in a row facing North. U is to the immediate right of T. T is fourth to the right of V. R is the neighbour of Q and S. Person who is third to the left of S is at one of ends. Who is sitting on the immediate right of R?



Solution

• Person who is third to the left of S is at one of ends.



- R is the neighbour of Q and S.
- T is fourth to the right of V.



• U is to the immediate right of T.

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• Here, we can see that S is sitting on the immediate right of R.

9. In the following question, select the related letters from the given alternatives.

AEI : ACI :: NRV : ?



Solution

• AEI : ACI





• NRV : ?



• Hence, the correct answer is "NPV".

74, 61, 82, 53, 90, ?

10. In the following question, select the missing number from the given series.

A 44 B 45 C 43 D 40

Solution

• The logic followed here is,

• Hence, the correct answer is "45".

11. Two positions of a dice are given below. What will come on the face opposite to the face containing '3' on it?









Solution

Logic:

• If two dice have the same face value in the given image then their

clockwise or anticlockwise wise number are known as opposite

numbers in dice.

- In the first dice and second dice. The number 1 is common.
- The left numbers will be opposite each other writing them clockwise starting from 1.

| Number | Opposite |
|--------|----------|
| 3 | 5 |
| 4 | 6 |

• Here, we can see that face opposite to the face containing '3' on it is

5.

12. A paper is folded and cut as shown below. How will it appear when unfolded?











Solution

• When the folded paper is unfolded, we get:



• Hence, the correct answer is "Option A".

13. In the following question, select the figure which can be placed at the sign of question mark (?) from the given alternatives.











Solution

Logic:

• The letters are rotating in clockwise direction among the blocks.



• Hence, the correct answer is "Option C".

14. Seven girls P, Q, R, S, T, U and V are sitting in a row facing towards the south (not necessarily in the same order). Q and R are immediate neighbour of each other. Q is at one of the extreme ends. P is fourth to the left of Q. U is not the immediate neighbour of either P or R. S is second to the right of V. Who is sitting on the immediate right of R?



Solution

- Q is at one of the extreme ends.
- P is fourth to the left of Q.
- Q and R are immediate neighbour of each other.



• U is not the immediate neighbour of either P or R.





• Here, we can see that Q is sitting on the immediate right of R.

15. Which of the following numbers will replace the question mark (?) in the given series?



Solution

• The logic followed here is,



• Hence, the correct answer is "-7".

16. After arranging the given words according to dictionary order, which word will come at 'Fourth' position?

1. Private

2. Prison

3. Privacy

4. Privy

5. Privilege

A Prison

B Privilege

| С | Privacy |
|---|---------|
| | |
| D | Privy |
| | |

Solution

• The arrangement of words in dictionary order is shown below:

\rightarrow 2) Prison

\rightarrow 3) Privacy

\rightarrow 1) Private

- \rightarrow 5) Privilege
- \rightarrow 4) Privy
- Here, we can see that the word at fourth position is 'Privilege'.

17. In the following question, select the figure which can be placed at the sign of question mark (?) from the given alternatives.









Solution

Logic:

• The inner shape becomes the outer shape in the next term of the .

series.



• Hence, the correct answer is "Option A".

18. Which two signs should be interchanged to make the given equation correct?



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Solution

- Now, let's check each option.
- By cheching Option D) + and -

 $\rightarrow 28$ - $12 + 6 \times 40 \div 8 = 46$

- $\rightarrow 28 12 + 6 \times 5 = 46$
- $\rightarrow 28 12 + 30 = 46$

 \rightarrow 58 - 12 = 46

 \rightarrow LHS = RHS \Rightarrow Satisfies the equation.

• Hence, the correct answer is "+ and -".

19. P + Q means P is the brother of Q, P × Q means P is the mother of Q, P ÷ Q means P is the father of Q and P - Q means P is the sister of Q. If A × B ÷ C - D + E - F, then how is A related to F?



Solution

• The family tree can be drawn as shown below,



• Here, we can see that A is the father's mother of F.

20. If 6 @ 10 # 5 * 7 = 63 and 4 @ 3 # 2 * 5 = 15, then 4 @ 5 # 6 * 7 = ?



Solution

Logic:

• Final output = (Second number × Third number) + (First number + Fourth number)

6 @ 10 # 5 * 7 = 63

 $\rightarrow (10 \times 5) + (6 + 7)$

$$\rightarrow 50 + 13 = 63$$

$$\rightarrow (3 \times 2) + (4 + 5)$$

$$\rightarrow 6 + 9 = 15$$

$$\rightarrow (5 \times 6) + (4 + 7)$$

 $\rightarrow 30 + 11 = 41$

• Hence, the correct answer is "41".

21. Three different positions of the same dice are given below. Find the number opposite of 7.







D 3

Solution

Logic:

- If two dice have the same face value in the given image then their clockwise or anticlockwise wise number are known as opposite numbers in dice.
- In the first dice and second dice. The number 3 is common.
• The left letters will be opposite each other writing them clockwise starting from 3.

| Number | Opposite |
|--------|----------|
| 12 | 15 |
| 8 | 20 |

• Here, we can see that the number opposite to 7 is 3.

22. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

LMRC, PQVG, TUZK, XYDO, ?

| A | BTSQ |
|---|------|
| | |
| B | RBMN |
| | |
| С | BMRN |
| | |
| D | BCHS |

Solution

• The logic followed here is,

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• Hence, the correct answer is "BCHS".

23. Which state's Chief Minister launched 'Kalaignar Magalir Urimai Thogai Thittam' initiative with the goal of empowering the women of the state?



Solution

- 'Kalaignar Magalir Urimai Thogai Thittam' is an initiative launched by the Chief Minister of Tamil Nadu.
- The scheme aims at empowering the women of the state by providing them with financial assistance.
- Under this scheme, eligible women will receive a monthly financial

aid to help improve their living standards and achieve greater economic independence.

• This initiative is part of the state government's ongoing efforts to

promote gender equality and women's empowerment.

• The scheme is named after the late Tamil Nadu Chief Minister

Kalaignar M. Karunanidhi, honoring his legacy and contributions to the state.

24. Into how many distinctive types of territories was the Harshvardhan's Dynasty divided?

| A Four | |
|----------------|--------|
| B Five | |
| C Two | ך ן |
| | J |
| D Three | |

Solution

- The Harshvardhan's Dynasty was divided into two distinctive types of territories.
- The two types of territories were the directly administered territories and the feudatory states.
- Directly administered territories were under the direct control of the king and his administration.
- Feudatory states were semi-autonomous and ruled by local

chieftains who owed allegiance to Harshvardhan.

• This division helped in the efficient administration and control of the vast empire.

25. Read the following about the impact of Green Revolution to the farmers in India.

A. The introduction of the Green Revolution helped the farmers in raising their level of income.

B. Farmers ploughed back their surplus income for improving agricultural productivity.

Identify the INCORRECT statement/statements.



Solution

The Green Revolution was a period when agriculture in India was •

converted to an industrial system due to the adoption of modern

methods and technology such as high-yielding variety (HYV) seeds,

tractors, irrigation facilities, pesticides, and fertilizers.

• Statement A: The introduction of the Green Revolution helped the

farmers in raising their level of income. This statement is correct.

The Green Revolution led to an increase in agricultural production, which in turn increased the income levels of many farmers.

- Statement B: Farmers ploughed back their surplus income for improving agricultural productivity. This statement is also correct.
- Many farmers reinvested their increased income into their farms to further enhance productivity by purchasing better seeds, fertilizers, and farming equipment.

26. Under the Pradhan Mantri Jan Dhan Yojana (PMJDY), \ (\textit{_____}\) of households provided with a Jan Dhan Account in Madhya Pradesh as on August 09, 2023.



Solution

- 100 percent of households in Madhya Pradesh have been provided with a Jan Dhan Account under the Pradhan Mantri Jan Dhan Yojana (PMJDY) as of August 09, 2023.
- The PMJDY is a flagship financial inclusion program launched by the Government of India aimed at providing universal banking

access.

- Under this scheme, every household is encouraged to have at least one bank account to ensure financial inclusion and access to
 - financial services like savings, credit, insurance, and pensions.
- This achievement reflects the significant progress made in financial

inclusion and the government's commitment to ensuring that every

household has access to basic banking facilities.

• The Pradhan Mantri Jan Dhan Yojana (PMJDY) was launched on

August 28, 2014.

27. Ustad Bismillah Khan is a famous exponent of \(\textit{____}}\).



Solution

- Ustad Bismillah Khan is a legendary figure known for his exceptional skill in playing the Shehnai.
- The Shehnai is a traditional Indian musical instrument, often used in weddings and religious ceremonies.
- Ustad Bismillah Khan has been credited with bringing the Shehnai into the mainstream of Indian classical music.
- His performances have earned him numerous awards, including the

Bharat Ratna, India's highest civilian award.

28. Green revolution can also be termed as:



Solution

- Agricultural revolution is another term for the Green Revolution.
- The Green Revolution refers to a set of research, development, and technology transfer initiatives that occurred between the 1940s and the late 1960s, which increased agricultural production worldwide, particularly in developing countries.
- Key elements of the Green Revolution include the development of high-yielding varieties of cereal grains, expansion of irrigation

infrastructure, modernization of management techniques,

distribution of hybridized seeds, synthetic fertilizers, and pesticides to farmers.

• The Green Revolution led to significant increases in food production

and helped many countries to achieve food self-sufficiency.

29. Which of the following articles of the Indian Constitution mentions that no person accused of any offence shall be compelled to be a witness against himself?



Solution

- Article 20 of the Indian Constitution provides protection against arbitrary and excessive punishment to an individual.
- It states that no person accused of any offence shall be compelled to be a witness against himself.
- This article ensures the protection of the rights of individuals in

criminal cases and prevents self-incrimination.

• Article 20 is a fundamental right guaranteed under Part III of the

Constitution of India.

30. In which sport the Participants are called Pugilist?



Solution

- A pugilist is a term used for a boxer.
- The term comes from the Latin word "pugil," which means a boxer or a fighter.
- Boxing is a combat sport in which two people, usually wearing protective gloves and other protective equipment such as hand wraps and mouthguards, throw punches at each other for a predetermined amount of time in a boxing ring.
- The sport requires a combination of physical strength, speed,

reflexes, and endurance.

31. With the Theory of Relativity, \(\textit{____}\) transformed the landscape of physics, this theory majorly contributed to designing the theory of Quantum Mechanics.



Solution

- Albert Einstein is renowned for developing the Theory of Relativity, which significantly transformed the landscape of physics.
- This theory introduced groundbreaking concepts such as space-time and mass-energy equivalence \((E=mc^2)\).
- The Theory of Relativity played a crucial role in the development of

Quantum Mechanics, influencing the way scientists understand the

fundamental nature of the universe.

- Einstein's work laid the foundation for modern physics and has had
 - a lasting impact on scientific research and technological

advancements.

• Albert Einstein was awarded the Nobel Prize in Physics in 1921 for his explanation of the photoelectric effect, which was pivotal in the

establishment of quantum theory.

32. To which of the following states does the dance form Lavani belong?



Solution

- Lavani is a traditional dance form that belongs to the state of Maharashtra.
- It is a combination of traditional song and dance, which is noted for its powerful rhythm and erotic sentiment.
- The word 'Lavani' is derived from the word 'Lavanya' which means beauty.
- Lavani is performed to the beats of Dholki, a drum-like instrument.
- It is primarily performed by women wearing nine-yard long sarees

and is known for its vibrant tempo and engaging footwork.

33. Which of the following is the highest award for dance in India?



Solution

- The Sangeet Natak Akademi Award is the highest award for dance in India.
- It is given by the Sangeet Natak Akademi, India's National Academy for Music, Dance, and Drama.
- Established in 1952, the award recognizes individuals for their outstanding contribution to the performing arts, including dance.
- The award includes a citation, a plaque, and a cash prize.
- Recipients of this award are considered to have made significant

contributions to the cultural heritage of India.

34. Which of the neighbouring countries used to be parts of India?



Solution

- Pakistan and Bangladesh were parts of India before the partition in 1947.
- India was divided into two independent dominions, India and Pakistan, through the Indian Independence Act 1947.
- Pakistan was later further divided to create Bangladesh in 1971 after the Bangladesh Liberation War.
- The partition was based on religious lines, with Pakistan intended as

a homeland for Muslims and India for Hindus.

• This historic event led to significant demographic changes and large-

scale migrations.

35. Which of the following states have the lowest female literacy rates as per 2011 census?

| A | Jharkhand |
|---|---------------|
| B | Kerala |
| С | Rajasthan |
| D | Uttar Pradesh |

Solution

- Rajasthan has the lowest female literacy rate as per the 2011 census.
- As per the 2011 Census, the female literacy rate in Rajasthan is approximately 52.66%.
- Other states with low female literacy rates include Uttar Pradesh and Jharkhand, but Rajasthan ranks the lowest among them.
- The low literacy rate is attributed to various socio-economic factors

including traditional gender roles, lack of access to education, and

early marriages.

36. Who was awarded the "Udyog Ratna' award (2023) established by the Maharashtra government?



Solution

- Ratan Tata was awarded the "Udyog Ratna" award in 2023 by the Maharashtra government.
- The "Udyog Ratna" award is a prestigious honor established to recognize significant contributions to the industry and economy of Maharashtra.
- Ratan Tata, a prominent industrialist and philanthropist, has made

substantial contributions to the growth and development of various sectors in India.

- His leadership in Tata Group has led to numerous advancements in technology, industry, and social welfare.
- The award highlights his exceptional achievements and dedication to

the industrial sector in Maharashtra.

37. Which sport is played by the Indian sportsperson Anaka Alankamony?



Solution

- Anaka Alankamony is a professional squash player from India.
- She has represented India in various international squash championships.
- Anaka has achieved significant success in her career, including winning medals in events like the Asian Junior Squash Championships.
- She is known for her agility, strategic gameplay, and contributions to popularizing squash in India.

38. The Service Tax, a tax on services like telephone services, stock brokers, health clubs, beauty parlors, dry cleaning services, etc., was introduced in \(\textit{____}\).



Solution

- The Service Tax was introduced in India in the year 1994-95.
- It is a tax levied on services provided, including telephone services, stock brokers, health clubs, beauty parlors, and dry cleaning services.
- The introduction of Service Tax marked a significant shift in the tax

structure, aiming to widen the tax base and increase revenue.

- The responsibility of collecting the Service Tax lies with the Central Board of Indirect Taxes and Customs (CBIC).
- The Service Tax regime has undergone several changes and reforms

since its inception to streamline and simplify the tax process.



Solution

- Sarojini Naidu served as President of the Indian National Congress in 1925.
- She was the first Indian woman to hold the position of President of the Indian National Congress.
- Her presidency marked a significant milestone in the Indian independence movement.
- She was known as the "Nightingale of India" for her contributions to

poetry and Indian literature.

40. The "Losar" festival, celebrated in Ladakh and Tibetan communities, marks the \(\textit{____}\).



Solution

- Losar is celebrated as the New Year Festival in Ladakh and Tibetan communities.
- This festival marks the beginning of the Tibetan lunar calendar.
- Losar is one of the most significant festivals in the region, characterized by various cultural events, rituals, and traditional performances.
- It typically involves offerings, prayers, and festivities that last for several days, symbolizing the welcoming of a new year with hope and joy.
- The celebration includes traditional foods, dances, songs, and the

creation of intricate sand mandalas.

41. Evaluate:



A 12



D 14

Solution

• According to BODMAS Rule:

$$6 + 2 \times (9 - 4) \div 2$$

 \Rightarrow 6 + 2 × 5 ÷ 2 (Evaluate the expression inside the brackets first)

 $\Rightarrow 6 + 2 \times 5 \div 2$ (Next, perform the multiplication and division from

left to right)

$\Rightarrow 6 + 2 \times 5 \div 2$

$\Rightarrow 6+5$

\Rightarrow 11 (Finally, perform the addition)

42. Ramesh's salary is 20 percent more than Raman's salary. If Ramesh saves Rs. 33750 which is 75 percent of his salary, then what is Raman's salary?



Solution

Formula used:

- Ramesh's Salary = Savings ÷ Percentage of Salary Saved
- Ramesh's Salary = Raman's Salary \times (1 + 20 \div 100)
- Raman's Salary = Ramesh's Salary ÷ 1.20

Calculation:

• Calculate Ramesh's salary:

 \Rightarrow Ramesh's Salary = 33,750 \div 75%

 \Rightarrow Ramesh's Salary = 33,750 \div 0.75

 \Rightarrow Ramesh's Salary = 45,000

• Calculate Raman's salary from Ramesh's salary:

 \Rightarrow Raman's Salary = Ramesh's Salary \div 1.20

 \Rightarrow Raman's Salary = 45,000 \div 1.20

 \Rightarrow Raman's Salary = 37,500

43. The selling price of an article is Rs. 1690. If discount of 35 percent is given, then what will be the marked price of the article?



Solution

Formula Used:

• $SP = MP \times (1 - Discount \div 100)$

Calculation:

• $SP = MP \times (1 - 35 \div 100)$

$$\Rightarrow 1690 = MP \times (1 - 0.35)$$

 $\Rightarrow 1690 = MP \times 0.65$

$$\Rightarrow$$
 MP = 1690 \div 0.65

$$\Rightarrow$$
 MP = 2600

44. If 70 percent of total articles are sold at a profit of 20 percent and remaining articles are sold at a loss of 10 percent, then what will be the overall profit percentage?



Solution

Formula Used:

Overall Profit % = (Profit from 70% articles + Loss from 30% articles) ÷ Total articles

Calculation:

- Let the total number of articles be 100 (for simplicity).
- Profit from 70 articles:

$$\Rightarrow$$
 Profit% = 20%

$$\Rightarrow$$
 Profit = 70 × 20% = 70 × 0.20 = 14

• Loss from 30 articles:

• Overall Profit:

 \Rightarrow Overall Profit = Profit from 70 articles + Loss from 30 articles

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 \Rightarrow Overall Profit = 14 - 3 = 11

• Overall Profit Percentage:

 \Rightarrow Overall Profit % = (Overall Profit ÷ Total articles) × 100

 \Rightarrow Overall Profit % = (11 ÷ 100) × 100 = 11%

45. The value of (12.3 + 4. 3) is:



D
$$(\langle frac \{18\} \{7\} \rangle)$$

Solution

• Formula Used:

 $(a. bar b) = (ab - a) \div 9$

• According to the formula

 $\Rightarrow (23 - 2) \div 9 + (43 - 4) \div 9$

 $\Rightarrow (\langle frac \{21\} \{9\} \rangle) + \langle (frac \{39\} \{9\} \rangle)$



$\Rightarrow \setminus (\langle frac \{20\} \{3\} \rangle)$



Solution

• According to BODMAS Rule:

$$\Rightarrow (27 \times 50) \div 25 \times 5 (15 - 14) + 800 \div 25$$

$$\Rightarrow 1350 \div 25 \times 5 \ (1) + 800 \div 25$$

 $\Rightarrow 54 \times 5 + 32$



$\Rightarrow 302$

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47. P and Q together can complete a work in 30 days. Q and R together can complete the same work in 37.5 days. R and P together can complete the same work in 150 days. In how many days can all the three complete the same work while working together?

| A | 20 days |
|---|---------|
| | |
| B | 30 days |
| | |
| С | 35 days |
| | |
| D | 25 days |

Solution

• Calculation:

| | Time taken | Total work | Efficiency |
|-------|------------|------------|------------|
| P + Q | 30 | | 5 |
| Q + R | 37.5 | 150 | 4 |

| R + P | 150 | | 1 | |
|-------|-----|--|---|--|
|-------|-----|--|---|--|

- Total work = LCM of {30, 37.5, and 150} = 150
- Efficiency of $P + Q + R \rightarrow (P + Q + Q + R + R + P) = 5 + 4 + 1 = 10$

$$\Rightarrow 2(P+Q+R) = 10$$

 \Rightarrow P + Q + R = 10 \div 2 = 5

• Now, Time taken to complete the work while working all together

 $\Rightarrow 150 \div 5 = 30$

^{48.} The average income of 35 employees is Rs. K. If the income of manager is also included, then the average income becomes Rs.
19000. If the income of the manager is Rs. 54000, then what is the value of K?



Solution

- Total income of 36 employees = $36 \times 19,000 = 684,000$
- Total income of 35 employees + Manager's income = 684,000

 \Rightarrow Total income of 35 employees + 54,000 = 684,000

 \Rightarrow Total income of 35 employees = 684,000 - 54,000

 \Rightarrow Total income of 35 employees = 630,000

• Average income of 35 employees = Total income of 35 employees \div

35

$$\Rightarrow$$
 K = 630,000 \div 35
$$\Rightarrow$$
 K = 18,000

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49. Average age of 22 teachers is 64 years. After involving a new teacher in that group the average increases by 1 year. What is the age of the new teacher?



Solution

- Sum of ages of 22 teachers = $64 \times 22 = 1408$
- New average age = 64 + 1 = 65 years
- Number of teachers after adding the new teacher = 22 + 1 = 23
- Sum of ages of 23 teachers = $65 \times 23 = 1495$
- Age of the new teacher = Sum of ages of 23 teachers Sum of ages of 22 teachers

$$\Rightarrow$$
 Age of the new teacher = 1495 - 1408 = 87 years

50. The simple interest received on a sum for 20 years is 2/5 of the sum.What is the annual rate of interest?



Solution

- Given $SI = \langle (frac \{2\} \{5\} \rangle \times Sum$
- Using the formula: $SI = (P \times R \times T) \div 100$

 $\Rightarrow ((frac \{2\} \{5\})) \times P = (P \times R \times 20) \div 100$

$$\Rightarrow ((frac {2} {5})) \times 100 = R \times 20$$

$$\Rightarrow 40 = R \times 20$$

$$\Rightarrow$$
 R = 40 ÷ 20

$$\Rightarrow$$
 R = 2

51. What is the value of 64 percent of 512 + 46 percent of 215?



Solution

• Calculation:

64% of $512 = (64 \div 100) \times 512$ $\Rightarrow 0.64 \times 512 = 327.68$ 46% of $215 = (46 \div 100) \times 215$ $\Rightarrow 0.46 \times 215 = 98.90$

• Add the two results:

$$\Rightarrow 327.68 + 98.90 = 426.58$$

52. In a mixture, milk and water are in ratio of 2 : 3. Some milk is added to the mixture because of which ratio of milk and water becomes 10 :3. How much milk was added as a percentage of initial mixture?



Solution

- Let the initial quantities of milk and water be 2x and 3x respectively.
- In the final mixture, let the quantity of milk be 2x + M and the quantity of water be 3x.
- Given final ratio: $(2x + M) \div 3x = \langle \langle frac \{10\} \{3\} \rangle$

$$\Rightarrow 3(2x + M) = 10 \times 3x$$

$$\Rightarrow 6x + 3M = 30x$$

$$\Rightarrow$$
 3M = 24x

$$\Rightarrow$$
 M = 8x

• Initial mixture
$$= 2x + 3x = 5x$$

• Milk added as a percentage of initial mixture:

 \Rightarrow (M \div (5x)) \times 100%

 $\Rightarrow (8x \div (5x)) \times 100\%$

 $\Rightarrow ((frac \{8\} \{5\}) \times 100\%)$

 $\Rightarrow 1.6 \times 100\%$

 $\Rightarrow 160\%$

53. Arvind can do a work in 20 days and Bakshi in 22 days. If they work on it together for 5 days, then the fraction of the work that is left is:



Solution

- Work done by Arvind in one day = $\langle \operatorname{rac} \{1\} \{20\} \rangle$
- Work done by Bakshi in one day = $\langle | \{22\} \rangle$

 $\Rightarrow \text{ Work done by both in one day} = \langle (\frac{1}{20} \rangle + \langle \frac{1}{22} \rangle \rangle$

 $\Rightarrow \text{ Work done by both in one day} = \langle (\frac{11}{210} \rangle + (\frac{10}{220} \rangle) \rangle$

- \Rightarrow Work done by both in one day = \(\frac {21} {220} \)
 - Total work done in 5 days = $5 \times (\langle frac \{21\} \{220\} \rangle)$

 \Rightarrow Total work done in 5 days = \(\frac {105} {220} \)

 \Rightarrow Total work done in 5 days = \(\frac {21} {44}\)

• Fraction of work left = $1 - (\langle frac \{21\} \{44\} \rangle)$

 $\Rightarrow Fraction of work left = ((frac {44} {44})) - ((frac {21} {44})))$

 \Rightarrow Fraction of work left = \(\frac {23} {44}\)

54. A man buys 35 pens for a rupee. How many pens should he sell for a rupee to earn a profit of 40 percent?



Solution

Formula Used:

- Cost Price (CP) per pen = Total Cost ÷ Number of pens
- Selling Price (SP) per pen = CP + Profit
- Profit = (Profit Percentage \div 100) × CP

Number of pens to sell for 1 rupee = $1 \div SP$ per pen •

Calculation:

• CP per pen = 1 rupee
$$\div$$
 35 pens

$$\Rightarrow$$
 CP per pen = 1 \div 35 rupees

• Profit per pen =
$$(\langle frac \{40\} \{100\} \rangle) \times \langle frac \{1\} \{35\} \rangle)$$

- \Rightarrow Profit per pen = \(\frac {0.4} {35}\) rupees
- SP per pen = CP per pen + Profit per pen

```
\Rightarrow SP per pen = \langle ( frac \{1\} \{35\} \rangle ) + \langle ( frac \{0.4\} \{35\} \rangle )
```

```
\Rightarrow SP per pen = (1 + 0.4) \div 35
```

 \Rightarrow SP per pen = \(\frac {1.4} {35}\) rupees

• Number of pens to sell for 1 rupee = $1 \div (\langle frac \{1.4\} \{35\} \rangle)$

 \Rightarrow Number of pens = \(\frac {135} {1.4}\)

 \Rightarrow Number of pens = 25

55. The ratio of the income to the expenditure of a family is 19:13. If the family's expenses are Rs. 29,510, then find the savings of the family.



Solution

Formula Used:

- Income = (Income ratio ÷ Expenditure ratio) × Expenditure
- Savings = Income Expenditure

Calculation:

- Income ratio = 19•
 - Expenditure ratio = 13

$$\Rightarrow$$
 Income = $(19 \div 13) \times 29,510$

 \Rightarrow Income \approx 43,130

• Savings = Income - Expenditure

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$$\Rightarrow$$
 Savings = 43,130 - 29,510

 \Rightarrow Savings = 13,620

56. A 600 metres long train crosses a man walking in opposite direction in 20 seconds. If the speed of train is 5 times to the speed of man, then what is the speed of train?



Solution

- Let Speed of man = x m/s
 - \Rightarrow Speed of train = 5x m/s
- Relative Speed = Speed of train + Speed of man = 5x + x = 6x m/s
- According to formula : Speed = Distance ÷ Time

$$\Rightarrow 6x = 600 \text{ meters} \div 20 \text{ seconds}$$

$$\Rightarrow$$
 6x = 30 m/s

$$\Rightarrow x = 30 \div 6$$

$$\Rightarrow$$
 x = 5 m/s

 \Rightarrow Speed of train = 5x = 5 × 5 = 25 m/s

• Convert m/s to km/hr: 1 m/s = 18/5 km/hr

 \Rightarrow Speed of train = 25 × \(\frac {18} {5}\)km/hr

 \Rightarrow Speed of train = 25 × 3.6 km/hr

 \Rightarrow Speed of train = 90 km/hr

57. Find the height of the triangle whose base is \(\frac{5}{7}\) th of its height and whose area is 18.207 \(cm^2\).



Solution

- Let the height of the triangle be h.
- Then, base = $(\frac{5}{7}) h$
- Area = $(\{1\} \{2\}) \times base \times height$

 $\Rightarrow 18.207 = (\langle frac \{1\} \{2\} \rangle) \times \langle (\langle frac \{5\} \{7\} \rangle)h \times h$

$$\Rightarrow 18.207 = \langle (\operatorname{frac}\{1\}\{2\}) \times \langle (\operatorname{frac}\{5\}\{7\}) \rangle (h^2) \rangle$$

$$\Rightarrow 18.207 = \langle (frac \{5\} \{14\} \rangle) \rangle (h^2)$$

$$\Rightarrow (h^2) = 18.207 \times ((frac \{14\} \{5\}))$$

$$\Rightarrow (h^2) = 18.207 \times 2.8$$

 $\Rightarrow (h^2) = 50.9796$

 \Rightarrow h \approx 7.14 cm

58. What is the value of $((0.5)^2 + (0.05)^2)?$



Solution

• Calculation:

$$\Rightarrow \setminus ((0.5)^2 = 0.5 \times 0.5 = 0.25 \setminus)$$

 $\Rightarrow \setminus ((0.05)^2 = 0.05 \times 0.05 = 0.0025 \setminus)$

• Now, add the two results:

 $\Rightarrow 0.25 + 0.0025 = 0.2525$

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59. On Selling a book at \(\frac{16}{25}\) of the marked price there is a loss. What will be the ratio of marked price and selling price of the book?



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Solution

Concept and Formula used:

- The ratio of the marked price (MP) to the selling price (SP) is simply the reciprocal of the fraction used to represent the selling price in terms of the marked price.
- If SP = $(\{16\} \{25\})$ of MP, then the ratio of MP to SP is:

MP : SP = 25 : 16

Calculation:

- MP = 25 parts
- SP = 16 parts

60. Simple interest and compound interest (compounding annually) on a principal at a certain rate of interest for 2 years is Rs. 12000 and Rs. 14400 respectively. What is the principal?



Solution

- SI for 1 year = $12000 \div 2 = 6000$
- Difference between SI and CI = 14,400 12000 = 2400
- Rate of interest(R) = $(2400 \div 6000) \times 100 = 40\%$
- According to the question:

$$SI = P \times R \times T \div 100$$

$\Rightarrow 12000 = P \times 40 \times 2 \div 100$

$\Rightarrow 15000$

61. Select the most appropriate option for the given blank.

\(\textit{_____}\) each other's hands; otherwise, you will fall.

| A | Carry |
|---|-------|
| B | Кеер |
| С | Hold |
| D | Clap |

Solution

- The word "Hold" means to grasp, carry, or support with one's hands or arms.
- Example: Please hold my hand while crossing the street.
- In this context, "Hold" refers to maintaining a grasp on something to prevent it from slipping or falling.

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62. Select the most appropriate option for the given blank.

It's \(\textit{_____}\) to see how the movie star acted in real life.



Solution

- The word "Disappointing" means causing someone to feel sad or unhappy because something was not as good as expected; disheartening.
- Example: The ending of the movie was disappointing because it left many questions unanswered.
- The context tells us that seeing how the movie star behaved in real

life is disheartening.

• Hence, we can infer that the correct word to describe how the movie

star acted in real life is 'Disappointing'.

63. Choose the most appropriate synonym of the underlined word.

That young woman has a \(\underline{tendency}\) to date men who are similar to her father.

| A | Apathy |
|---|--------------|
| B | Inactivity |
| С | Indifference |
| D | Propensity |

Solution

- The word "tendency" means an inclination towards a particular characteristic or type of behavior.
- Example: He has a tendency to overthink every decision.

"Propensity" refers to a natural inclination or tendency to behave in a

certain way.

- Example: She has a propensity to be very organized and meticulous.
- Hence, we can infer that the synonym of 'tendency' is 'propensity'.
- Apathy: Lack of interest, enthusiasm, or concern. Example: His

apathy towards the project was evident in his lack of participation.

• Inactivity: The state of being inactive or not engaging in any

physical activity. Example: A period of prolonged inactivity can lead

to health issues.

• Indifference: Lack of interest, concern, or sympathy. Example: Her indifference towards the plight of others was shocking.

64. Improve the underlined part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.

The truck driver \(\underline{pull \space over}\) to the side of the road.



Solution

- The word "pull" means to exert force on someone or something so as to cause movement towards oneself.
- Example: She had to pull the door to open it.
- "Pulled over" refers to the action of moving a vehicle to the side of

the road and stopping.

- Example: The police officer signaled for the driver to pull over.
- Hence, the correct phrase should be "pulled over" to indicate that the

truck driver moved to the side of the road and stopped.

65. Fill in the blank with the most appropriate option.

Banda Bahadur was defeated by Farrukhsiyar and put to death in 1716, \(\textit{____}\) the Shikh polity, once again, became leaderless.

| A | thus |
|---|---------------|
| В | however EBITE |
| С | because |
| D | henceforth |

Solution

- In the given sentence, the word 'thus' is used to indicate the consequence of Banda Bahadur's defeat.
- The word 'thus' is appropriate here because it correctly connects the cause (Banda Bahadur's defeat) with the effect (the Sikh polity

becoming leaderless).

- Other options like 'however', 'because', and 'henceforth' do not fit the context as well as 'thus'.
- Correct sentence: Banda Bahadur was defeated by Farrukhsiyar and put to death in 1716, thus the Sikh polity, once again, became

leaderless.

66. Select the incorrectly spelt word from the given sentence.

An increasingly smart navigation aids in the cockpit brought far greater precision and effeciency to route planning.

| A | effeciency |
|---|---|
| В | precision EEIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII |
| С | navigation |
| D | increasingly |

Solution

- The word "effeciency" is incorrectly spelt.
- The correct spelling is "efficiency".
- "Efficiency" means the state or quality of being efficient, or able to accomplish something with the least waste of time and effort; competency in performance.
- Example: The new software increases the efficiency of the data

processing system.

67. Choose the most appropriate antonym of the underlined word.

And death and \(\underline{bereavement} \) are hardly the only troubles that this conflict brings to a Palestinian childhood.



Solution

- The word "bereavement" means the state of sorrow over the death or departure of a loved one.
- Example: She has been struggling to cope with bereavement after her father's death.

"Comfort" refers to a state of physical ease and freedom from pain or

constraint. It also means consolation in a time of distress or sadness.

- Example: She found comfort in the support of her friends during her tough times.
- Hence, we can infer that the opposite of 'bereavement' is 'comfort'.
- Distress: Extreme anxiety, sorrow, or pain. Example: The news of the accident caused her great distress.

- Tribulation: A cause of great trouble or suffering. Example: They faced many tribulations during their journey.
- Sorrow: A feeling of deep distress caused by loss, disappointment, or other misfortune. Example: Her sorrow was evident when she spoke about her late husband.

68. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

Technologies that circumvent censorship is increasingly becoming a matter of life and death.



Solution

- In the third part of the given sentence, the singular form of the verb 'is' is incorrect.
- In the given sentence, the subject 'Technologies' is plural.
- Therefore, the plural form of the verb 'are' should be used in place of

the singular form 'is'.

• Correct sentence: Technologies that circumvent censorship are

increasingly becoming a matter of life and death.

69. Identify the segment that contains a grammatical error. If there is no error, select "No error'.

I loved Joe - perhaps for no best reason / in those early days than / because the dear fellow let me love him.



Solution

- In the second part of the given sentence, the phrase 'for no best reason' is incorrect.
- The correct phrase should be 'for no better reason', which is the correct comparative form.
- In the provided sentence, "better" is grammatically correct as a comparative form because it compares the speaker's reasons for loving Joe.
- The phrase "no better reason" implies that the speaker couldn't find

any reasons that were superior or more compelling than the simple

fact that Joe allowed the speaker to love him.

- Using "better" here sets up an implicit comparison with all other possible reasons, indicating that none of them were more valid or stronger than the reason given.
- Correct sentence: I loved Joe perhaps for no better reason in those early days than because the dear fellow let me love him.

70. The sentence has been divided into three parts, identify the error segment in the sentence given below. Choose no error if there is no error in the sentence.

She travelled to the/ conference accordingly to/ her manager's instructions.



Solution

- In the second part of the given sentence, the phrase 'accordingly to' is incorrect.
- The correct phrase should be 'according to'.
- Therefore, the correct form should be 'according to'.
- "Accordingly" is an adverb meaning "as a result" or "therefore."
- It would not fit the context because the sentence is specifying that
 - her travel was done in compliance with the instructions, not as a

result of them.

• The word "according" is grammatically correct because it is part of the phrase "according to", which means "in agreement with" or "as

stated by." This phrase serves to indicate that her actions were in line with her manager's instructions.

• Correct sentence: She travelled to the conference according to her manager's instructions.

71. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.

Play your ace



Solution

- The phrase "Play your ace" means to use your best resource or the most effective strategy you have.
- Example: When negotiations were failing, she decided to play her ace and revealed the secret information she had.
- "Use your best resource" refers to utilizing the most valuable or

effective tool, skill, or piece of information you have.

• Example: In the final round of the competition, he played his ace by

showcasing his unique talent.

72. Select the sentence with no spelling errors.

A

But he always replied only with a superior smile when asked by reporters to put the philsophy and the tripel ethic into words.

B

But he always replied only with a supereor smile when asked by reporters to put the philosophy and the triple ethic into words.

С

But he always replied only with a superior smile when asked by reporters to put the philosophy and the triple ethic into words.

D

But he always replied only with a superior smile when asked by reporters to put the philusophy and the triple ethic into words.

Solution

- The word "philosophy" means the study of the fundamental nature of knowledge, reality, and existence.
- Example: He studied philosophy at the university to better

understand the nature of human existence.

- "Triple" refers to something that is three times as much or as many.
- Example: The company achieved triple the sales compared to last

year.
73. Select the most appropriate option for the given blank.

| Please give me one more \(| <pre>}\) to prove my innocence.</pre> |
|----------------------------|---------------------------------------|
|----------------------------|---------------------------------------|

| A | bet |
|---|--|
| | |
| B | chance E E E E E E E E E E E E E E E E E E E |
| | |
| С | occasion |
| | |
| D | blind |

Solution

- "Chance" refers to an opportunity to do something; a situation that makes it possible to do something; opportunity.
- Example: She was given a chance to explain her side of the story.
- The context tells us that the author requested someone to provide him another opportunity to establish his innocence.
- Hence, we can infer that the appropriate word to fill in the blank is

'chance'.

74. Choose the idiom/phrase that can substitute the highlighted group of words meaningfully.

Stop preaching. You must understand that *it is tougher to do something in reality than to say or think*.



Solution

- The phrase "Easier said than done" means that it is easy to talk about something but much more difficult to actually do it.
- Example: Quitting smoking is easier said than done.
- Explanation: The phrase accurately captures the essence of the

statement, which is about the difficulty of doing something in reality compared to just talking about it.

- Example: Building a successful business is easier said than done.
- Bolt from the blue: A sudden, unexpected event. Example: The news

of his resignation was a bolt from the blue.

• Make no bones about: To speak openly and directly about

something. Example: She made no bones about her dissatisfaction

with the project.

• Chew the cud: To think deeply about something. Example: He sat quietly, chewing the cud over the recent events.

75. Improve the underlined part of the sentence. Choose 'No improvement' as an answer if the sentence is grammatically correct.

The flowers have a \(\underline{very \space strongly}\) scent.

| A | very strongest |
|---|----------------|
| | |
| В | very strong |
| | |
| С | very stronger |
| | |
| D | No improvement |

Solution

- The adjective 'strongly' is incorrect in this context as it is an adverb, not an adjective.
- The correct adjective to describe the noun 'scent' is 'strong'.
- Therefore, the correct phrase is 'very strong scent'.

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76.

Read the passage carefully and select the correct answer for the given blanks out of the four alternatives.

Welcoming the Italian Prime Minister on her first (1) \(\textit{____}\) India, the President said that she was happy to see a young and confident woman (2) \ (\textit{____}\) Italy. She noted that Ms. Meloni is not only the first woman Prime Minister of Italy but also the (3) \(\textit{____}\) ever Prime Minister of her country. The President said that India and Italy enjoy excellent friendly relations. As modern and mature democracies, India and Italy are committed to achieving economic growth based (4) \(\textit{____}\) the rule of law, respect for human rights, and inclusive development. She expressed confidence that this visit would reenergize India-Italy (5) \(\textit{____}\) relations.

A. Select the most appropriate option for blank (1).





Solution

• The word "visit" means to go to see and spend time with (someone) socially; trip.

- Example: I plan to visit my grandparents this weekend.
- The context tells us that the President greeted the Italian Prime Minister warmly on her first trip to India.
- B. Select the most appropriate option for blank (2).

| A | lea | ding | | | |
|---|-----|--------|--|--|--|
| | | | | | |
| B | exe | cuting | | | |
| | | | | | |
| С | pro | curing | | | |
| | | | | | |
| D | exp | anding | | | |

Solution

- "Leading" refers to guiding or directing a group towards achieving a goal.
- Example: She is leading the team to success with her innovative strategies.
- The context tells us that the President expressed her satisfaction at

seeing a young, self-assured woman in charge of her country.

• Hence, we can infer that the most appropriate option for the blank is

'leading'.

• Executing: Carrying out or putting into effect a plan, order, or course of action. Example: The team is executing the project plan flawlessly.

- Procuring: Obtaining something, especially with effort or difficulty.
 Example: He is responsible for procuring the necessary supplies for the event.
- Expanding: Making something larger or more extensive. Example: The company is expanding its operations to new markets.
- C. Select the most appropriate option for blank (3).



Solution

- "Youngest" refers to the person who is the least old among a group of people.
- Example: She is the youngest member of our family.
- 'Youngest' grammatically appropriate as the sentence compares Ms.

Meloni with all other Prime Ministers in the history of Italy,

indicating she holds the topmost position in terms of youth among them.

• Using "youngest" highlights that she is younger than any previous Prime Minister, which aligns with the structure of the sentence comparing her unique attributes.

D. Select the most appropriate option for blank (4).



Solution

- The preposition "on" must fit the blank grammatically.
- The correct phrase is "based on," which means "founded on" or "guided by."
- This indicates that the economic growth is supported or grounded in the principle of the rule of law.
- Using "on" establishes the correct relationship between economic growth and the rule of law.
- $\boldsymbol{\mathcal{O}}$
- Along: Moving in a constant direction on (a more or less horizontal

surface). Example: They walked along the beach.

- To: Expressing motion in the direction of (a particular location). Example: She went to the market.
- At: Expressing location or arrival in a particular place or position. Example: He is at the door.

E. Select the most appropriate option for blank (5).



Solution

- The word "bilateral" refers to something involving two sides, parties, or countries.
- Example: The two countries signed a bilateral agreement to enhance trade relations.
- The context tells us that she conveyed her optimism that this visit would revitalise bilateral ties between Italy and India.
- Hence, we can infer that the correct word should be 'bilateral', as it fits the context of the statement.
- Corporeal: Something that is tangible or physical. Example: The

ghost was said to have no corporeal form.

- Solitary: Existing alone; without companions. Example: He lived a solitary life in the mountains.
- Exclusive: Restricted to a particular group or individual. Example:

The club has exclusive membership criteria.

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