

RBE SSC CGL 2025 Live Mock May 18,2025

Q. 1	<p>In a certain code language, 'LACE' is coded as 'PDEF' and 'OPEN' is coded as 'SSGO'. How will 'HIDE' be coded in the given language?</p> <p>a) LFFL X</p> <p>b) LLEF X</p> <p>c) LLFF ✓</p> <p>d) LEFL X</p>
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The correct answer is: c

$\begin{array}{cccc} +4 & +3 & +2 & +1 \\ L & A & C & E \\ \downarrow & \downarrow & \downarrow & \downarrow \\ P & D & E & F \end{array}$

$\begin{array}{cccc} +4 & +3 & +2 & +1 \\ O & P & E & N \\ \downarrow & \downarrow & \downarrow & \downarrow \\ S & S & G & O \end{array}$

$\begin{array}{cccc} +4 & +3 & +2 & +1 \\ H & I & D & E \\ \downarrow & \downarrow & \downarrow & \downarrow \\ L & L & F & F \end{array}$ (Ans)

Explanation:

Q. 2

Select the option figure which is NOT embedded in the figure (X) given below (rotation is NOT allowed).



(X)

- a)  ✗
- b)  ✗
- c)  ✓
- d)  ✗

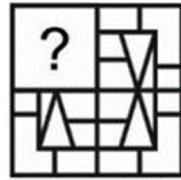
The correct answer is: c

Explanation:



Q. 3

Select the figure from the given options that can replace the question mark (?) and complete the pattern.



The correct answer is: d

Explanation:



Q. 4

In a certain code language, 'THINK' is written as '\$9836' and 'KNIT' is written as '98\$6'. How will 'H' be written in that language?

- a) \$
- b) 9
- c) 8
- d) 3

The correct answer is: d

Given:

Explanation:

- 'THINK' is written as '\$9836'
- 'KNIT' is written as '98\$6'

So, the code for 'H' is 3.

Q. 5

Select the term from among the given options that can replace the question mark (?) in the following series.

PB 47, NZ 53, LX 59, JV 61, ?

- a) IS 69
- b) HT 71
- c) HU 70
- d) HT 67

The correct answer is: d

Explanation:

$$\begin{array}{ccc}
 P & B & 47 \\
 \downarrow 2 & \downarrow 2 & \\
 N & Z & 53 \\
 \downarrow 2 & \downarrow 2 & \\
 L & X & 59 \\
 \downarrow 2 & \downarrow 2 & \\
 J & V & 61 \\
 \downarrow 2 & \downarrow 2 & \\
 \boxed{H} & T & 67 \quad (\text{Ans}) \\
 & & (\text{prime no.})
 \end{array}$$

Q. 6

The position of how many letters will remain unchanged if each of the letter in the word 'CALIBRE' is arranged in English alphabetical order?

- a) Three
- b) Two
- c) Zero
- d) One

Explanation:

The correct answer is: c

C A L I B R E

A B C E I L R

None of the letters remain unchanged.

Q. 7

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- All insects are sparrows.
- All vultures are sparrows.
- All sparrows are peahens.

Conclusions:

- I. No insect is a peahen.
- II. Some peahens are vultures.
- III. All peahens are insects.

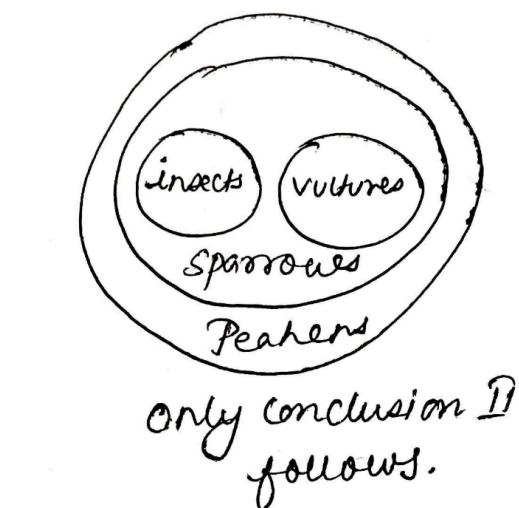
a) All conclusions follow. X

b) Both conclusions I and III follow. X

c) Only conclusion II follows. ✓

d) Either conclusion II or III follows. X

Explanation:



Q. 8

Select the set in which the numbers are related in the same way as are the numbers of the given sets.

(4, 9, 33)

(9, 7, 60)

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc., to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

a) (11, 121, 1329) X

b) (6, 36, 212) X

c) (9, 81, 724) X

d) (8, 64, 509) ✓

The correct answer is: d

$$\textcircled{1} \cdot (4, 9, 33)$$

$$\Rightarrow 4 \times 9 - 3 = 33$$

$$\textcircled{2} \cdot (9, 7, 60)$$

$$\Rightarrow 9 \times 7 - 3 = 60$$

$$(8, 64, 509)$$

$$\textcircled{3} \cdot (8, 64, 509)$$

$$\Rightarrow 8 \times 64 - 3 = 509$$

Explanation:

Q. 9

Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below.

(The words must be considered as meaningful English words and must NOT be related to each other based on the number of letters/number of consonants/vowels in the word)

Capacitance : Farad

- a) Frequency : Volt X
- b) Temperature : Ampere X
- c) Inductance : Henry ✓
- d) Pressure : Ohm X

The correct answer is: c

Explanation:

1. Frequency : Volt - Volt is the unit of electrical potential, not frequency.
2. Temperature : Ampere - Ampere is the unit of electric current, not temperature.
3. Inductance : Henry - Henry is the unit of measurement for inductance.
4. Pressure : Ohm - Ohm is the unit of electrical resistance, not pressure.

The correct answer is: **Inductance : Henry** (Henry is the unit of measurement for inductance).

Q. 10

Six letters K, L, M, N, O and P are written on different faces of a dice. Three positions of this dice are shown in the figure. Find the letter on the face opposite to M.



- a) K X
- b) L X
- c) P X
- d) N ✓

Explanation:

The correct answer is: d

Opposite faces of the given dice are L – O, M – N and K – P.

Q. 11

Three Statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All koreans are chinese.

All japanese are chinese.

All chinese are filipinos.

Conclusions:

I. All koreans are filipinos.

II. All filipinos are japanese.

III. Some filipinos are koreans.

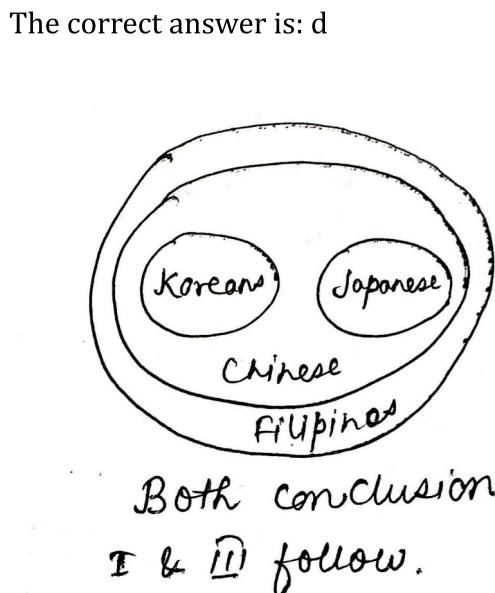
a) All conclusions follow. X

b) Both conclusions I and II follow. X

c) Both conclusions II and III follow. X

d) Both conclusions I and III follow. ✓

Explanation:



Q. 12

Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the one that is different. The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.

- a) EMSU ✓
- b) ILNS ✗
- c) GNOR ✗
- d) CKQW ✗

The correct answer is: a

Explanation:

$$\begin{array}{cccc}
 E & M & S & U \\
 \downarrow & \downarrow & \downarrow & \downarrow \\
 5 + 13 + 19 + 21 = 58 \\
 (\text{odd one out})
 \end{array}
 \quad
 \begin{array}{cccc}
 G & N & O & R \\
 \downarrow & \downarrow & \downarrow & \downarrow \\
 7 + 14 + 15 + 18 = 54
 \end{array}$$

$$\begin{array}{cccc}
 I & L & N & S \\
 \downarrow & \downarrow & \downarrow & \downarrow \\
 9 + 12 + 14 + 19 = 54
 \end{array}
 \quad
 \begin{array}{cccc}
 C & K & Q & W \\
 \downarrow & \downarrow & \downarrow & \downarrow \\
 3 + 11 + 17 + 23 = 54
 \end{array}$$

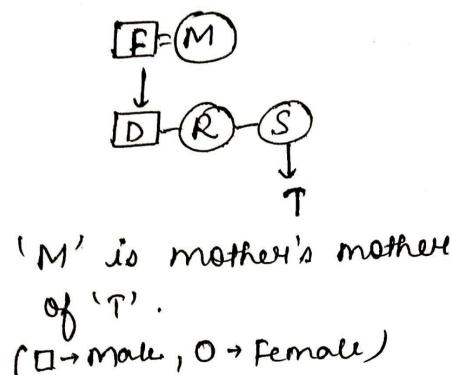
Q. 13

In a certain code language,
 $X + Y$ means 'X is the sister of Y',
 $X - Y$ means 'X is the son of Y',
 $X \times Y$ means 'X is the husband of Y',
 $X \div Y$ means 'X is the mother of Y'.

Based on the above, how is M related to T if 'D - F \times M \div R + S \div T'?

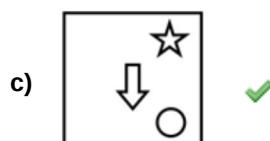
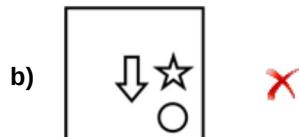
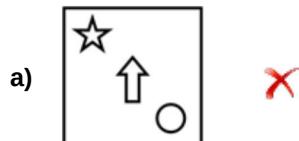
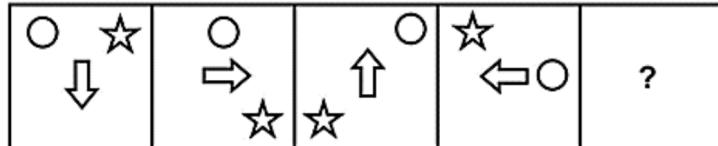
- a) Mother's father ✗
- b) Father's mother ✗
- c) Mother's mother ✓
- d) Father's brother ✗

The correct answer is: c

Explanation:

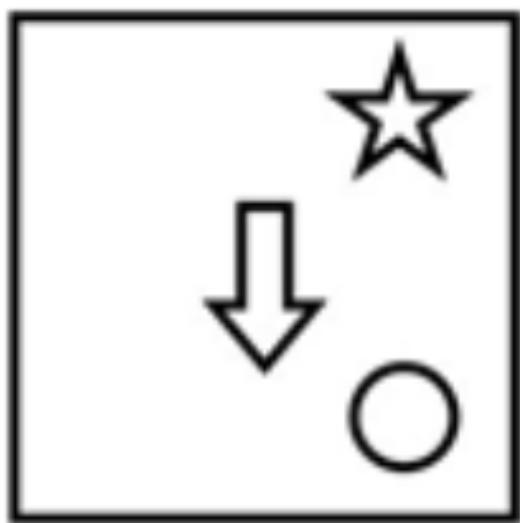
Q. 14

Select the figure from among the given options that can replace the question mark (?) in the following series.



The correct answer is: c

Explanation:



Q. 15

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

93, 77, 62, ?, 35, 23

a) 48 ✓

b) 46 ✗

c) 49 ✗

d) 47 ✗

The correct answer is: a

Explanation:

$$\begin{array}{ccccccc}
 93 & , & 77 & , & 62 & , & ? \\
 \underbrace{-16} & & \underbrace{-15} & & \underbrace{-14} & & \underbrace{-13} \\
 & & & & & & -12 \\
 \therefore ? = 48
 \end{array}$$

Q. 16

Which of the following terms will replace the question mark (?) in the given series?
YKVN, WMTP, UORR, SQPT, ?

a) QSNU ✗

b) RSNU ✗

c) QSOV ✗

d) QSNV ✓

The correct answer is: d

Explanation:

$$\begin{array}{cccc}
 Y & K & V & N \\
 \downarrow -2 & \downarrow +2 & \downarrow -2 & \downarrow +2 \\
 W & M & T & P \\
 \downarrow -2 & \downarrow +2 & \downarrow -2 & \downarrow +2 \\
 V & O & R & R \\
 \downarrow -2 & \downarrow +2 & \downarrow -2 & \downarrow +2 \\
 S & Q & P & T \\
 \downarrow -2 & \downarrow +2 & \downarrow -2 & \downarrow +2 \\
 \boxed{Q \quad S \quad N \quad V} & & & (\text{Ans})
 \end{array}$$

Q. 17

The same operation(s) are followed in all the given number pairs except one. Find that odd number pair.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc., to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

- a) 96 : 64 X
- b) 126 : 84 X
- c) 63 : 42 X
- d) 124 : 76 ✓

The correct answer is: d

$$\text{a) } 96 : 64 \\ \Rightarrow 64 \times 1.5 = 96$$

$$\text{b) } 126 : 84 \\ \Rightarrow 84 \times 1.5 = 126$$

$$\text{c) } 63 : 42 \\ \Rightarrow 42 \times 1.5 = 63$$

$$\text{d) } 76 : 124 \\ \Rightarrow 76 \times 1.5 = 114 \quad (\neq 124)$$

\therefore option(d) is odd one
Q.E.D.

Explanation:

Q. 18

Select the set in which the numbers are related in the same way as are the numbers of the following set.

(76, 64, 52)

(89, 73, 57)

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

a) (92, 79, 26)



b) (78, 73, 88)



c) (63, 71, 79)



d) (77, 72, 87)



The correct answer is: c

$$\text{I. } (76, 64, 52)$$

$$\Rightarrow \frac{76+52}{2} = \frac{128}{2}$$

$$\Rightarrow \textcircled{64}$$

$$\text{II. } (89, 73, 57)$$

$$\Rightarrow \frac{(89+57)}{2} = \frac{146}{2}$$

$$\Rightarrow \textcircled{73}$$

$$\text{III. } (63, 71, 79)$$

$$\Rightarrow \frac{(63+79)}{2} = \frac{142}{2}$$

$$\Rightarrow \textcircled{71}$$

Explanation:

Q. 19

What will come in place of the question mark (?) in the following equation if '+' and '−' are interchanged and '×' and '÷' are interchanged?
 $36 - 9 \div 8 + 108 \times 12 = ?$

- a) 86 X
- b) 99 ✓
- c) 104 X
- d) 98 X

The correct answer is: b

$$36 - 9 \div 8 + 108 \times 12 = ?$$

If '+' and '−' are interchanged and '×' and '÷' are interchanged, then

$$\Rightarrow 36 + 9$$

$$8 - 108$$

Explanation:

$$\Rightarrow 36 + 72 - 9$$

$$\Rightarrow 108 - 9 = 99$$

Q. 20

Select the option in which the numbers share the same relationship as that shared by the given pair of numbers.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

8 : 128

9 : 162

a) 13 : 148 Xb) 16 : 456 Xc) 11 : 244 Xd) 6 : 72 ✓

The correct answer is: d

$$\textcircled{I} \quad 8 : 128$$

$$\Rightarrow 8 \times (8 \times 2) = 64 \times 2$$

$$\Rightarrow 128$$

$$\textcircled{II} \quad 9 : 162$$

$$\Rightarrow 9 \times (9 \times 2) = 81 \times 2$$

$$\Rightarrow 162$$

$$\textcircled{III} \quad 6 : 72 \text{ (option d)}$$

$$\Rightarrow 6 \times (6 \times 2) = 36 \times 2$$

$$\Rightarrow 72$$

Explanation:

Q. 21

Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

Y _ Z Y Y _ Y _

a) Y Y Y Z Y Y Z ✓

b) Y Y Z Z B B Y ✗

c) Z Y Y Z Z Y Y ✗

d) Z Z Y Z V Y Y ✗

Explanation:

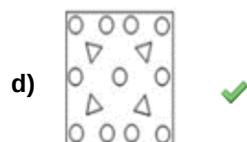
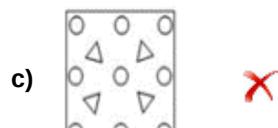
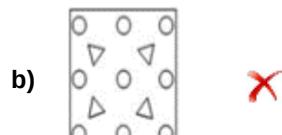
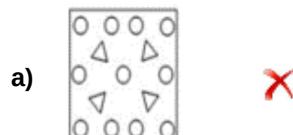
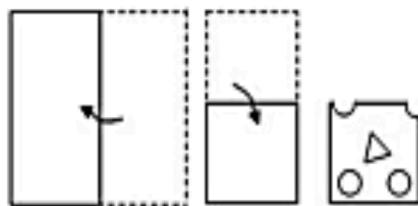
The correct answer is: a

Y Y Y Z / Y Y Y Z / Y Y Y Z

The correct letter combination to fill the blanks is Y Y Y Z Y Y Z.

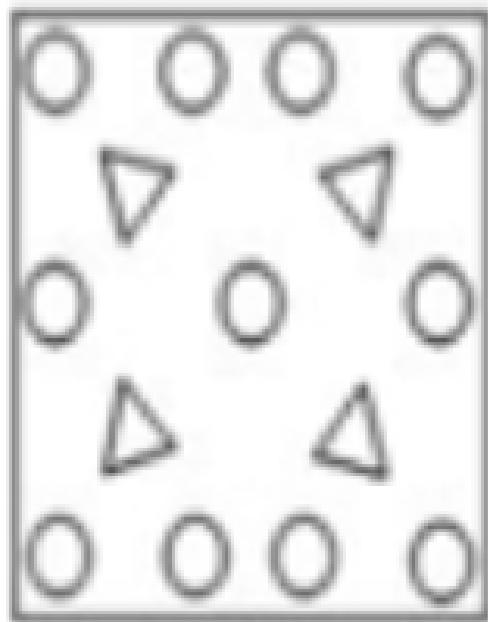
Q. 22

The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?



The correct answer is: d

Explanation:



Q. 23

Select the correct mirror image of the given combination when the mirror is placed at MN as shown below.

W O N D E R L I S T



M
N

- a) T S I D E R L I S T ✗
- b) W O N D E R L I S T ✓
- c) O W N D E R L I S T ✗
- d) T S P E R L I N O W ✗

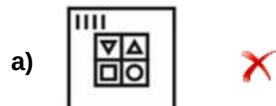
The correct answer is: b

Explanation:

W O N D E R L I S T

Q. 24

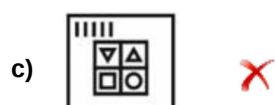
Select the figure from among the given options that can replace the question mark (?) in the following series.



X



✓



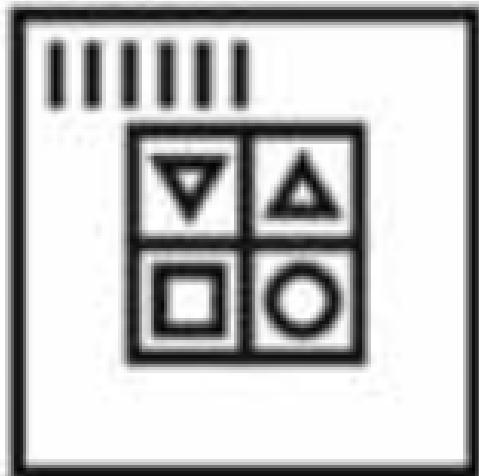
X



X

The correct answer is: b

Explanation:



a

Q. 25

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and '×' and '÷' are interchanged?

$$6848 \times 8 + 56 - 26 \div 12 = ?$$

- a) 1112 ✓
- b) 1262 ✗
- c) 1122 ✗
- d) 1232 ✗

The correct answer is: a

$$6848 \times 8 + 56 - 26 \div 12 = ?$$

If '+' and '-' are interchanged and '×' and '÷' are interchanged, then

$$\Rightarrow 6848$$

$$8 - 56 + 26$$

Explanation:

12

$$\Rightarrow 856 - 56 + 312 = 1168 - 56$$

$$\Rightarrow 1112$$

Q. 26	<p>In October 2024, the Uttar Pradesh government launched a scholarship scheme for students studying which language across the state?</p> <p>a) Urdu </p> <p>b) Hindi </p> <p>c) Sanskrit </p> <p>d) Pali </p>
Explanation:	<p>The correct answer is: Sanskrit.</p> <p>Explanation:</p> <p>In October 2024, the Uttar Pradesh government launched a scholarship scheme specifically aimed at promoting Sanskrit education across the state. This initiative reflects the government's commitment to preserving and encouraging the study of Sanskrit, which holds immense cultural and historical significance in India.</p> <p>Key Features of the Scheme:</p> <p>Target Beneficiaries:</p> <ol style="list-style-type: none">1. The scholarship is designed for students enrolled in Sanskrit schools and colleges.2. It aims to support learners pursuing Sanskrit as a primary subject, ensuring financial assistance for their education.

Q. 27	<p>To whom did Mahatma Gandhi send a letter in March 1930, explaining why the British rule in India was considered a 'curse'?</p> <p>a) Lord Irwin </p> <p>b) Lord Wellesley </p> <p>c) Lord Adam </p> <p>d) Lord Mountbatten </p>
Explanation:	<p>The correct answer is: Lord Irwin.</p> <p>Explanation:</p> <p>In March 1930, Mahatma Gandhi wrote a famous letter to Lord Irwin, the then Viceroy of India, explaining why he considered British rule in India a "curse." This letter, dated March 2, 1930, was a precursor to the Salt Satyagraha (Dandi March), a pivotal event in India's struggle for independence.</p> <p>Key Points from the Letter:</p> <ol style="list-style-type: none">1. Criticism of British Rule:<ul style="list-style-type: none">◦ Gandhi outlined the exploitative nature of British policies, which had impoverished millions of Indians.◦ He highlighted issues such as economic exploitation, cultural degradation, and the oppressive military and civil administration.2. Non-Violence and Satyagraha:<ul style="list-style-type: none">◦ Gandhi emphasized his commitment to non-violence, stating that his fight was against the system of British rule, not against individual Englishmen.◦ He announced his intention to break the Salt Laws, which symbolized the unjust taxation policies of the British.3. Call for Justice:<ul style="list-style-type: none">◦ Gandhi urged Lord Irwin to consider the plight of Indians and take steps toward granting India self-rule (Swaraj).◦ He expressed disappointment over the lack of progress in achieving Dominion Status, which had been promised earlier.

Q. 28	<p>How many variants are there in Hindustani music that makes in all twelve notes to a saptak?</p> <p>a) 9 </p> <p>b) 6 </p> <p>c) 2 </p> <p>d) 5 </p>
Explanation:	<p>The correct answer is 5.</p> <p>Hindustani Saptak:</p> <ol style="list-style-type: none">1. 7 Shuddha Swaras (Natural Notes):<ul style="list-style-type: none">◦ These are: Sa (Shadja), Re (Rishabh), Ga (Gandhar), Ma (Madhyam), Pa (Pancham), Dha (Dhaivat), Ni (Nishad).2. 5 Vikrit Swaras (Variant Notes):<ul style="list-style-type: none">◦ These include:<ul style="list-style-type: none">▪ Komal Re (Flat Rishabh)▪ Komal Ga (Flat Gandhar)▪ Tivra Ma (Sharp Madhyam)▪ Komal Dha (Flat Dhaivat)▪ Komal Ni (Flat Nishad)

<p>Q. 29</p> <p>Article 165 of the Constitution of India deals with the appointment of which of the following?</p> <p>a) Chief Justice of the High Court X</p> <p>b) Chief Minister X</p> <p>c) Judges of the High Court X</p> <p>d) Advocate General of the State ✓</p>
<p>The correct answer is: Advocate General of the State.</p> <p>Explanation:</p> <p>Article 165 of the Indian Constitution provides for the appointment of the Advocate General of the State, who is the highest law officer of a state. This position is crucial in providing legal advice to the state government and ensuring that its actions comply with the Constitution and the law.</p> <p>Key Provisions of Article 165:</p> <ul style="list-style-type: none"> 1. Appointment: <ul style="list-style-type: none"> ◦ The Advocate General is appointed by the Governor of the state. ◦ The person must be qualified to be appointed as a judge of a High Court, which means they should have been: <ul style="list-style-type: none"> ▪ An advocate for at least 10 years, or ▪ A judge in a judicial office for at least 10 years. 2. Responsibilities: <ul style="list-style-type: none"> ◦ Advising the state government on legal matters. ◦ Representing the state in legal proceedings in the High Court or Supreme Court. ◦ Performing legal duties as assigned by the Governor. 3. Tenure and Removal: <ul style="list-style-type: none"> ◦ The Advocate General holds office during the pleasure of the Governor, which means there is no fixed term. ◦ The Governor can remove them at any time. 4. Role in Governance: <ul style="list-style-type: none"> ◦ The Advocate General ensures that the state's legal actions align with constitutional provisions. ◦ They play a critical role in cases involving the interpretation of the Constitution. <p>Other options explained:</p> <ul style="list-style-type: none"> 1. Chief Justice of the High Court: <ul style="list-style-type: none"> ◦ The appointment of High Court Chief Justices is governed by Article 217. 2. Chief Minister: <ul style="list-style-type: none"> ◦ The appointment of the Chief Minister is addressed under Article 164, which deals with the Council of Ministers in states. 3. Judges of the High Court: <ul style="list-style-type: none"> ◦ The appointment of High Court judges is dealt with under Article 217.

Q. 30	<p>Which ruler of Haryanka Dynasty annexed several important and powerful kingdoms in its vicinity such as Kosala, Kashi and Vajji?</p> <p>a) Shishunaga </p> <p>b) Nagadarshaka </p> <p>c) Ajatashatru </p> <p>d) Udayabhadra </p>
Explanation:	<p>The correct answer is: Ajatashatru.</p> <p>Explanation:</p> <p>Ajatashatru, a prominent ruler of the Haryanka Dynasty, was known for his aggressive expansionist policies and military conquests. He ruled Magadha from 492 BCE to 460 BCE and played a pivotal role in transforming Magadha into a powerful kingdom in ancient India.</p> <p>Key Conquests:</p> <ol style="list-style-type: none">1. Kosala:<ul style="list-style-type: none">◦ Ajatashatru annexed Kosala by defeating King Prasenjit, his maternal uncle. This conflict arose when Prasenjit reclaimed Kashi, which had been given to Ajatashatru's father, Bimbisara, as dowry.◦ Ajatashatru retained Kashi after his victory, strengthening Magadha's position.2. Kashi:<ul style="list-style-type: none">◦ Kashi, a strategically important region, was retained by Ajatashatru after his conquest of Kosala. It became a vital part of Magadha's expanding territory.3. Vajji:<ul style="list-style-type: none">◦ Ajatashatru waged a prolonged war against the Vajji Confederation, which included the Lichchhavis. Despite Vajji's strong republican governance, Ajatashatru defeated them using innovative war strategies and weapons, such as:<ul style="list-style-type: none">▪ Rathamusala: A chariot equipped with maces for mass killing.▪ Mahashilakantaka: A catapult-like war engine to hurl large stones.◦ He ultimately annexed Vaishali, the capital of Vajji, further consolidating Magadha's power.

Q. 31	<p>What was a unique feature of the Fifth Five Year Plan (1974-1979)?</p> <p>a) Exclusive focus on the service sector </p> <p>b) It was the first plan to focus on the environment. </p> <p>c) Emphasis on 'Garibi Hatao' (Eradicate Poverty) </p> <p>d) It introduced economic liberalisation. </p>
<p>The correct answer is: Emphasis on 'Garibi Hatao' (Eradicate Poverty).</p> <p>Explanation:</p> <p>The Fifth Five Year Plan (1974-1979) was a significant milestone in India's economic planning, as it marked a shift towards addressing poverty alleviation and achieving self-reliance. The slogan 'Garibi Hatao' (Eradicate Poverty), introduced by then Prime Minister Indira Gandhi, became the central theme of this plan.</p> <p>Key Features of the Fifth Five Year Plan:</p> <ol style="list-style-type: none">1. Focus on Poverty Alleviation:<ul style="list-style-type: none">◦ The plan aimed to reduce poverty by generating employment opportunities and improving the living standards of the poor.◦ Programs like the Minimum Needs Programme (MNP) were introduced to provide basic necessities such as education, healthcare, and housing.2. Self-Reliance:<ul style="list-style-type: none">◦ The plan emphasized reducing dependence on foreign aid and achieving self-sufficiency in food production and defence.3. Economic Growth with Social Justice:<ul style="list-style-type: none">◦ It aimed to balance economic growth with social equity, ensuring that the benefits of development reached the marginalized sections of society.4. Major Initiatives:<ul style="list-style-type: none">◦ Introduction of the Twenty-Point Programme (TPP) to address issues like land reforms, rural development, and employment generation.◦ Launch of the Command Area Development Programme (CADP) to optimize irrigation and agricultural productivity.	

Q. 32	<p>Which are the two wettest places on Earth that receive more than 1,080 cm of rainfall in a year?</p> <p>a) Gangtok and Amboli </p> <p>b) Mahabaleshwar and Neriamangalam </p> <p>c) Pasighat and Agumbe </p> <p>d) Cherrapunji and Mawsynram </p>
Explanation:	<p>The correct answer is: Cherrapunji and Mawsynram.</p> <p>Explanation:</p> <p>Cherrapunji and Mawsynram, both located in Meghalaya, India, hold the distinction of being the wettest places on Earth. These regions consistently receive over 1,080 cm of rainfall annually, making them meteorological phenomena. Here's a deeper look at why they are so extraordinary:</p> <p>Why Cherrapunji and Mawsynram Experience Such Rainfall:</p> <ol style="list-style-type: none">Geographical Location:<ul style="list-style-type: none">Located in the Khasi Hills of Meghalaya, these towns are situated near the Bay of Bengal.The moisture-laden monsoon winds from the Bay of Bengal hit the Khasi Hills, forcing the air to rise rapidly. As the air ascends, it cools and condenses, causing heavy rainfall.Rainfall Data:<ul style="list-style-type: none">Mawsynram holds the title of the wettest place on Earth, with an average annual rainfall of about 11,871 mm (1,187.1 cm).Cherrapunji, not far behind, receives approximately 11,777 mm (1,177.7 cm) of rainfall annually.

Q. 33	<p>Who among the following has the power to dissolve the legislative assembly of a state?</p> <p>a) Chief Secretary of the State X</p> <p>b) Chief Minister of the State X</p> <p>c) Governor of the State ✓</p> <p>d) Chief Justice of High Court X</p>
<p>Explanation:</p> <p>The correct answer is: Governor of the State.</p> <p>Explanation:</p> <p>The Governor of a state, under the Indian Constitution, has the constitutional authority to dissolve the Legislative Assembly of a state. This power is primarily exercised in specific situations, often in consultation with the state's Chief Minister or under the guidance of the central government.</p> <p>When Can the Governor Dissolve the Legislative Assembly?</p> <ol style="list-style-type: none">1. On the Advice of the Chief Minister:<ul style="list-style-type: none">◦ If the Chief Minister, heading the Council of Ministers, recommends the dissolution of the Legislative Assembly to call for new elections, the Governor may act on this advice. This is common when the ruling party decides to seek a fresh mandate.2. In Case of Political Instability:<ul style="list-style-type: none">◦ If no party can form a stable government or if the ruling party loses its majority, the Governor may dissolve the Assembly to pave the way for fresh elections.3. During President's Rule:<ul style="list-style-type: none">◦ If the President of India proclaims President's Rule in the state under Article 356, the Governor may dissolve the Legislative Assembly, subject to the President's approval.4. Completion of Term:<ul style="list-style-type: none">◦ The Legislative Assembly has a fixed term of five years. Upon completing its term, it is automatically dissolved, but formal dissolution is done by the Governor.	

Q. 34	<p>Who among the following launched the nationwide programme of Fit India Freedom Run 2.0?</p> <p>a) Narendra Modi </p> <p>b) Draupadi Murmu </p> <p>c) Amit Shah </p> <p>d) Anurag Thakur </p>
<p>Explanation:</p> <p>The correct answer is: Anurag Thakur.</p> <p>Explanation:</p> <p>The Fit India Freedom Run 2.0 was launched by Anurag Singh Thakur, the Union Minister for Youth Affairs and Sports, on August 13, 2021. This initiative was part of the Azadi Ka Amrit Mahotsav, celebrating 75 years of India's independence. The program aimed to encourage citizens to adopt fitness activities and make physical exercise a daily habit.</p> <p>Key Highlights of the Launch:</p> <p>1. Nationwide Participation:</p> <ul style="list-style-type: none">• The Freedom Run was organized across 750 districts and 75 villages in each district, covering iconic locations such as the Cellular Jail in Port Blair, Gateway of India in Mumbai, and the Attari Border in Punjab. <p>2. Fitness Pledge:</p> <ul style="list-style-type: none">• Anurag Thakur administered the Fitness Pledge, urging citizens to dedicate at least 30 minutes daily to physical activities under the slogan "Fitness Ki Dose, Aadha Ghanta Roz". <p>3. Objective:</p> <ul style="list-style-type: none">• The campaign aimed to promote fitness and combat issues like obesity, stress, and lifestyle diseases, making fitness a people's movement (Jan Bhagidari se Jan Aandolan).	

Q. 35

In the game of Basketball, each basket shall consist of a pressure-release NBA-approved metal safety ring _____ in inside diameter with a white cord net 18" in length.

a) 17"



b) 18"



c) 19"



d) 20"



The correct answer is: **18"**.

Explanation:

In basketball, the basket's design and dimensions are standardized to ensure uniformity across all levels of the game. According to NBA regulations, **each basket consists of a pressure-release metal safety ring** with an **18-inch inside diameter**. This specification allows players to score with consistency and ensures the hoop adheres to professional standards.

Key Features of the Basket:

Explanation:

1. Pressure-Release Ring:

- The ring is designed to safely absorb impacts, such as when players perform dunks. The pressure-release mechanism minimizes the chances of the hoop or backboard breaking.

2. Net:

- The ring is attached to a **white cord net** that is **18 inches in length**. The net ensures the ball passes visibly through the basket, improving the gameplay experience for players and spectators.

3. Backboard:

- The hoop is mounted on a rectangular backboard, which aids in rebounds and ensures stability.

Q. 36	<p>At room temperature and pressure, kinetic energy of the particles are minimum in case of:</p> <p>a) methane </p> <p>b) water </p> <p>c) iron </p> <p>d) kerosene </p>
Explanation:	<p>The correct answer is: iron.</p> <p>Explanation:</p> <p>The kinetic energy of particles is directly related to their state of matter and temperature. At room temperature and pressure:</p> <ul style="list-style-type: none">Particles in a solid have the least kinetic energy because they are tightly packed and can only vibrate around their fixed positions.Particles in liquids and gases, on the other hand, have more freedom of movement, resulting in higher kinetic energy.

Q. 38	<p>Newborns receive the BCG vaccine at birth. BCG stands for ____.</p> <p>a) Bacterial Capsular Genes X</p> <p>b) Bacillus Calmette-Guerin ✓</p> <p>c) Basal Cell Carcinoma X</p> <p>d) Bladder Cancer Gene X</p>
<p>The correct answer is: Bacillus Calmette-Guerin.</p> <p>Explanation:</p> <p>The BCG vaccine stands for Bacillus Calmette-Guerin vaccine. It is primarily used to protect against tuberculosis (TB), a serious infectious disease caused by the bacterium Mycobacterium tuberculosis. Here's a detailed look:</p> <p>Key Features of the BCG Vaccine:</p> <p>1. Development:</p> <ul style="list-style-type: none">◦ The vaccine was developed in 1921 by French scientists Albert Calmette and Camille Guérin, after whom it is named.◦ It uses a weakened strain of the bacteria Mycobacterium bovis, a relative of Mycobacterium tuberculosis, which does not cause disease but helps build immunity. <p>2. Purpose:</p> <ul style="list-style-type: none">◦ The vaccine is highly effective in preventing severe forms of tuberculosis, such as miliary TB and TB meningitis, particularly in infants and young children.◦ It is also sometimes used as an immunotherapy treatment for bladder cancer.	

Q. 39	<p>What is the percentage of urban population of India according to the 2011 Census?</p> <p>a) 31.16% </p> <p>b) 41.16% </p> <p>c) 35.16% </p> <p>d) 25.16% </p>
<p>The correct answer is: 31.16%.</p> <p>Explanation:</p> <p>According to the 2011 Census of India, the urban population constituted 31.16% of the total population. This marked a significant increase from the 27.81% recorded in the 2001 Census, reflecting the ongoing trend of urbanization in the country.</p> <p>Key Highlights:</p> <ol style="list-style-type: none">1. Urban Population:<ul style="list-style-type: none">Out of India's total population of 1.21 billion in 2011, approximately 377 million people lived in urban areas.2. Growth in Urbanization:<ul style="list-style-type: none">The urban population grew by 91 million during the decade (2001–2011), surpassing the growth in the rural population.The annual growth rate of the urban population was 2.76%, higher than the rural growth rate.3. Factors Contributing to Urbanization:<ul style="list-style-type: none">Rural-to-urban migration: People moved to cities in search of better employment opportunities and living standards.Reclassification of settlements: Many rural areas were reclassified as urban due to population growth and infrastructural development.Expansion of urban boundaries: Cities expanded their limits, incorporating nearby rural areas.	

Q. 40	<p>Who among the following was the leader of the 1857 Revolt from Kullu?</p> <p>a) Raja Pratap Singh ✓</p> <p>b) Abdul Ali Khan ✗</p> <p>c) Ujjwal Shahi ✗</p> <p>d) Maulvi Liaqat Ali ✗</p>
Explanation:	<p>The correct answer is: Raja Pratap Singh.</p> <p>Explanation:</p> <p>Raja Pratap Singh, a scion of the Shangri royal clan, led the 1857 Revolt in the Kullu district of present-day Himachal Pradesh. This uprising was part of India's First War of Independence, where various regions across the country resisted British colonial rule.</p> <p>Key Details of the Revolt in Kullu:</p> <p>Explanation:</p> <ul style="list-style-type: none">1. Leadership:<ul style="list-style-type: none">◦ Raja Pratap Singh spearheaded the rebellion against British annexation and their oppressive policies.◦ He was supported by local leaders like Bir Singh and Asham, who played significant roles in mobilizing the people.2. Motivation:<ul style="list-style-type: none">◦ The revolt was fueled by resentment against British interference in local governance and their exploitation of resources.◦ The rebellion also aimed to oppose the humiliation of Rai Gyan Singh, who was offered the title of Rai by the British.

Q. 41

Which of the following is a straight chain alkane composed of 4 carbon atoms that is commonly used as a fuel and aerosol propellant?

- a) Isobutane 
- b) 2-Methylbutane 
- c) 3-Dimethylbutane 
- d) Butane 

The correct answer is: **Butane**.

Explanation:

Butane is a **straight-chain alkane** composed of **4 carbon atoms** with the chemical formula C_4H_{10} . It is widely used as a **fuel** and **aerosol propellant** due to its properties as a combustible and easily liquefied gas.

Key Features of Butane:

Explanation:

1. Structure:

- Butane is a simple alkane with four carbon atoms arranged in a straight chain and ten hydrogen atoms filling the bonds.
- Its structure is linear, making it different from its branched isomers like **isobutane**.

2. Properties:

- Butane is **colourless** and **odourless** in its pure form.
- It is highly flammable and burns to produce **carbon dioxide (CO_2)** and **water (H_2O)**, releasing energy.

<p>Q. 42</p> <p>In the context of cell division, which chromosomal behaviour takes place at the leptotene stage?</p> <p>a) Chromosomes are un-synapsed X</p> <p>b) Synapsis is complete X</p> <p>c) Homologous chromosomes pair X</p> <p>d) Chromosomes begin to condense ✓</p>
<p>The correct answer is: Chromosomes begin to condense.</p> <p>Explanation:</p> <p>The leptotene stage is the first sub-stage of prophase I in meiosis, the type of cell division that reduces the chromosome number by half and is crucial for sexual reproduction. At the leptotene stage, the chromosomal behaviour is characterized by chromosome condensation.</p> <p>Key Features of the Leptotene Stage:</p> <ul style="list-style-type: none"> 1. Chromosome Condensation: <ul style="list-style-type: none"> ◦ During the leptotene stage, the chromosomes begin to condense and become visible under a microscope as thin, thread-like structures. ◦ These structures are not yet fully condensed, but they mark the beginning of chromosomal organization necessary for the subsequent stages of meiosis. 2. Formation of Chromomeres: <ul style="list-style-type: none"> ◦ Small bead-like structures, called chromomeres, appear along the length of the chromosomes due to the localized coiling of the chromatin. 3. Un-synapsed Chromosomes: <ul style="list-style-type: none"> ◦ The chromosomes are un-synapsed (not paired with their homologous partners) during the leptotene stage. Synapsis, the pairing of homologous chromosomes, occurs later in the zygotene stage. 4. Preparation for Pairing: <ul style="list-style-type: none"> ◦ The cell sets the stage for the pairing of homologous chromosomes, a process that begins in the zygotene stage and is completed during the pachytene stage. <p>Explanation:</p>

Q. 43	<p>In humans sound is produced by voice box. What is the other name used for voice box?</p> <p>a) Larynx ✓</p> <p>b) Lymph Nodes ✗</p> <p>c) Pharynx ✗</p> <p>d) Wind Pipe ✗</p>
Explanation:	<p>The correct answer is: Larynx.</p> <p>Explanation:</p> <p>The voice box, also known as the larynx, is a key organ involved in sound production in humans. Located in the upper part of the respiratory system, the larynx plays an important role in breathing, speaking, and protecting the airway during swallowing.</p> <p>Key Features of the Larynx:</p> <ol style="list-style-type: none">1. Structure:<ul style="list-style-type: none">◦ The larynx is made up of cartilage (including the prominent thyroid cartilage, commonly called the "Adam's apple"), muscles, and membranes.◦ Inside the larynx, you'll find the vocal cords or vocal folds, which are essential for sound production.2. Function in Sound Production:<ul style="list-style-type: none">◦ When air is expelled from the lungs, it passes through the larynx and causes the vocal cords to vibrate.◦ The frequency and tension of the vibrations create different pitches, which, combined with articulation by the tongue, lips, and mouth, produce speech.3. Other Functions:<ul style="list-style-type: none">◦ Protects the airway: During swallowing, the epiglottis, a flap-like structure in the larynx, closes to prevent food or liquid from entering the trachea (windpipe).◦ Breathing: It acts as a passageway for air to flow from the throat to the trachea and lungs.

Q. 44

Which of the following statements about phylum Arthropoda are correct?

- A. Animals of Arthropoda have joint appendages.
- B. They have compound eyes.
- C. These make up the majority of all animals on earth.
- D. The mode of reproduction in all Arthropods is vegetative.

a) Only C and D

b) Only B, C and D

c) Only A and C

d) Only A, B and C

The correct answer is: **Only A, B and C.**

Explanation:

Phylum Arthropoda is the largest and most diverse phylum in the animal kingdom. Here's a detailed look at why **statements A, B, and C are correct**, and **statement D is incorrect**:

Correct Statements:

1. **A. Animals of Arthropoda have joint appendages:**
 - **Arthropods** are named after this characteristic feature: "arthro" (jointed) + "poda" (feet or appendages).
 - They have **jointed appendages** that help in locomotion, feeding, and sensory functions. Examples include legs, antennae, and pincers.
2. **B. They have compound eyes:**
 - Most arthropods, such as insects and crustaceans, have **compound eyes**, which consist of multiple units called **ommatidia**.
 - These compound eyes provide a wide field of vision and detect motion effectively.
3. **C. These make up the majority of all animals on Earth:**
 - Arthropods constitute the **largest group of animals**, including insects, spiders, crustaceans, and millipedes. They account for over **80% of all known animal species**.

Explanation:

Q. 45	<p>Why will a person weigh more at the north or south pole?</p> <p>a) Due to Earth's distance from the sun X</p> <p>b) Due to variation in centrifugal force of earth with latitude ✓</p> <p>c) Due to variation in centripetal force of earth with altitude X</p> <p>d) Due to variation in centripetal force of earth with latitude X</p>
<p>Explanation:</p> <p>A person will weigh more at the north or south poles primarily due to the variation in centrifugal force experienced at different latitudes caused by Earth's rotation.</p> <p>Key Factors:</p> <ol style="list-style-type: none">1. Centrifugal Force Due to Earth's Rotation:<ul style="list-style-type: none">The Earth rotates about its axis, and this rotation creates a centrifugal force. This force acts outward and counteracts the gravitational force to some extent.The magnitude of this centrifugal force depends on the distance from the axis of rotation. It is maximum at the equator and zero at the poles, because the poles lie on the axis of rotation.2. Variation with Latitude:<ul style="list-style-type: none">At the equator, the centrifugal force reduces the effective gravitational force (the force you feel as "weight"). This makes a person weigh slightly less.At the poles, where there is no centrifugal force, the full gravitational force acts on the person, making their weight slightly higher.3. Shape of the Earth:<ul style="list-style-type: none">The Earth is not a perfect sphere; it is an oblate spheroid, meaning it is slightly flattened at the poles and bulges at the equator. This shape increases the distance from the center of the Earth to the equator compared to the poles, slightly reducing the gravitational force at the equator.	<p>The correct answer is: Due to variation in centrifugal force of Earth with latitude.</p> <p>Explanation:</p> <p>A person will weigh more at the north or south poles primarily due to the variation in centrifugal force experienced at different latitudes caused by Earth's rotation.</p> <p>Key Factors:</p> <ol style="list-style-type: none">1. Centrifugal Force Due to Earth's Rotation:<ul style="list-style-type: none">The Earth rotates about its axis, and this rotation creates a centrifugal force. This force acts outward and counteracts the gravitational force to some extent.The magnitude of this centrifugal force depends on the distance from the axis of rotation. It is maximum at the equator and zero at the poles, because the poles lie on the axis of rotation.2. Variation with Latitude:<ul style="list-style-type: none">At the equator, the centrifugal force reduces the effective gravitational force (the force you feel as "weight"). This makes a person weigh slightly less.At the poles, where there is no centrifugal force, the full gravitational force acts on the person, making their weight slightly higher.3. Shape of the Earth:<ul style="list-style-type: none">The Earth is not a perfect sphere; it is an oblate spheroid, meaning it is slightly flattened at the poles and bulges at the equator. This shape increases the distance from the center of the Earth to the equator compared to the poles, slightly reducing the gravitational force at the equator.

Q. 46	<p>Ramabai Ranade, a social activist and reformer, is remembered for starting the _____ in Pune in 1909.</p> <p>a) Seva Sadan for Women's Welfare ✓</p> <p>b) Indian Council of Child Welfare ✗</p> <p>c) Abhinandan Educational and Welfare Society ✗</p> <p>d) Widows Welfare Association ✗</p>
Explanation:	<p>The correct answer is: Seva Sadan for Women's Welfare.</p> <p>Explanation:</p> <p>Ramabai Ranade, a pioneering social reformer and advocate for women's rights, established the Seva Sadan Society in Pune in 1909. This institution was dedicated to the welfare and empowerment of women, particularly those who were distressed or marginalized.</p> <p>Key Features of Seva Sadan:</p> <ol style="list-style-type: none">1. Purpose:<ul style="list-style-type: none">◦ The Seva Sadan was founded to provide education, vocational training, and support to women, enabling them to become self-reliant and economically independent.◦ It focused on rehabilitating widows and divorcees, who faced significant social stigma during that era.2. Activities:<ul style="list-style-type: none">◦ The institution offered training in skills such as nursing, tailoring, and other professions to help women secure livelihoods.◦ It also provided literacy programs and encouraged women to pursue education.

Q. 47	<p>Who of the following Union Ministers launched the Bhu-Neer portal in September 2024?</p> <p>a) Dharmendra Pradhan </p> <p>b) CR Patil </p> <p>c) Piyush Goyal </p> <p>d) Nalin Prabhat </p>
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The correct answer is: **CR Patil**.

Explanation:

The **Bhu-Neer portal** was launched by **Shri CR Patil**, the Union Minister for Jal Shakti, on **September 19, 2024**, during the concluding ceremony of the **8th India Water Week**. This portal is a significant step towards improving groundwater regulation and management across India.

Key Features of the Bhu-Neer Portal:

1. Purpose:

- The portal was developed by the **Central Ground Water Authority (CGWA)** in collaboration with the **National Informatics Centre (NIC)**.
- It aims to streamline the process of obtaining groundwater withdrawal permits and ensure transparency in groundwater usage.

2. User-Friendly Features:

- The portal includes a **PAN-based single ID system** for users.
- It provides **No Objection Certificates (NOCs)** with QR codes for easy verification.
- Users can track application status, make payments, and access groundwater-related policies.

Q. 48	<p>As per the Henley Passport Index of October 2024, which country tops the Henley Passport Index?</p> <p>a) Singapore ✓</p> <p>b) Japan ✗</p> <p>c) Finland ✗</p> <p>d) UAE ✗</p>
Explanation:	<p>The correct answer is: Singapore.</p> <p>Explanation:</p> <p>According to the Henley Passport Index of October 2024, Singapore retained its position as the world's most powerful passport. Singaporean passport holders enjoy visa-free or visa-on-arrival access to 195 destinations, making it the most globally mobile passport.</p> <p>Comparison with Other Countries:</p> <ul style="list-style-type: none"> Countries like France, Germany, Italy, Japan, and Spain tied for second place, offering access to 192 destinations. The United States ranked 8th, with visa-free access to 186 destinations. India ranked 83rd, allowing visa-free access to 58 destinations.
Q. 49	<p>In which state was Ningol Chakkouba celebrated recently?</p> <p>a) Assam ✗</p> <p>b) Mizoram ✗</p> <p>c) Nagaland ✗</p> <p>d) Manipur ✓</p>
Explanation:	<p>The correct answer is: Manipur.</p> <p>Explanation:</p> <p>Ningol Chakkouba is a traditional festival celebrated in Manipur, primarily by the Meitei community. It is a unique and heartwarming occasion that strengthens familial bonds, particularly between married women (Ningols) and their parental families.</p> <p>Key Features of Ningol Chakkouba</p> <ul style="list-style-type: none"> The festival is celebrated on the second day of the lunar month of Hiyangei (October–November) in the Meitei calendar. Married women (Ningols) are invited back to their parental homes for a feast and are showered with love, gifts, and blessings.

Q. 50	<p>Who has written the recently published book "My Beloved Life"?</p> <p>a) Suresh Prabhu </p> <p>b) Amitava Kumar </p> <p>c) Hemant Panghariya </p> <p>d) Kewat Bhattacharya </p>
Explanation:	<p>The correct answer is: Amitava Kumar.</p> <p>Explanation:</p> <p>Amitava Kumar, a renowned Indian author, journalist, and professor, wrote the book "My Beloved Life", which was published in February 2024. The novel is a deeply moving narrative that traces the life of its protagonist, Jadunath Kunwar, from his humble beginnings in a small Indian village to his eventual death during the COVID-19 pandemic in 2020.</p> <p>The book explores themes of love, loss, resilience, and the sweeping changes in India over decades, from Independence to Partition, and Gandhi to Modi.</p> <p>It blends the mythical with the mundane, offering a poignant reflection on life's complexities.</p>

Q. 51

Study the given table and answer the question that follows.
The following table shows the population of a city at the end of the years mentioned.

Year	Population
2012	64.5
2013	68.4
2014	72.6
2015	83.8
2016	100.6
2017	112.8
2018	128.4
2019	134.6
2020	156.8
2021	176.4

Which of the following years has the highest rate of increase compared to the previous year?

- a) 2019
- b) 2016
- c) 2015
- d) 2018

The correct answer is: b

$$\text{Rate of increase in 2019} = \frac{6.2}{128.4} \times 100 = 4.8$$

$$\text{Rate of increase in 2016} = \frac{16.8}{83.8} \times 100 = 20.04$$

$$\text{Rate of increase in 2015} = \frac{11.2}{72.6} \times 100 = 15.4$$

$$\text{Rate of increase in 2018} = \frac{15.6}{112.8} \times 100 = 13.8$$

Explanation:

Q. 52

In an election between two candidates, the defeated candidate secured 38% of the valid votes polled and lost the election by 1,80,000 votes. If 2,50,000 votes were declared invalid and 25% people did not cast their vote, what was the approximate number of people (in lakh) in the electorate who did NOT cast their votes?

- a) 3.33 ✓
- b) 3 ✗
- c) 4.2 ✗
- d) 6.66 ✗

The correct answer is: a

Explanation:

$$\begin{aligned}
 &\text{Defeated} \quad \text{Winner} \\
 &38\% \quad 62\% \\
 &\text{Difference} = 24\% = 1,80,000 \\
 &\frac{100\%}{24} = \frac{1,80,000}{24} \times 100 \\
 &\text{Valid Votes Polled} = 7,50,000 \\
 &\text{Invalid Votes} = 2,50,000 \\
 &\text{Total Votes Polled} \approx 10,00,000 \\
 &25\% - \text{Didn't cast} \\
 &75\% - \text{Votes cast} \\
 &75\% \rightarrow 10,00,000 \\
 &25\% \rightarrow \frac{10,00,000 \times 25}{75} \approx 3.33 \text{ lakh}
 \end{aligned}$$

Q. 53

A sum of ₹1250 has to be distributed among A, B, C and D. Total share of B and D is equal to $(14/11)$ of total share of A and C. Share of D is half of share of A. Share of C is 1.2 times of share of A. What are the shares of A, B, C and D respectively?

- a) Rs 250, Rs 575, Rs 300, Rs 125 ✓
- b) Rs 250, Rs 550, Rs 325, Rs 125 ✗
- c) Rs 225, Rs 575, Rs 300, Rs 150 ✗
- d) Rs 200, Rs 600, Rs 300, Rs 130 ✗

The correct answer is: a

$$\begin{aligned} B+D &: A+C \\ 14 &: 11] \times 2 \\ 28 &: 22 \Rightarrow 50 \text{ unit} \\ D : A &, C : A \\ 1 : 2] \times 5 & 6 : 5] \Rightarrow 11 \times 2 \\ 5 : 10 & 12 : 10 \end{aligned}$$

Explanation:

$$\begin{aligned} A &\rightarrow 10 \text{ unit} \\ C &\rightarrow 12 \text{ unit} \\ D &\rightarrow 5 \text{ unit} \\ B &\rightarrow 23 \text{ unit} \end{aligned}$$

$$50 \text{ unit} \rightarrow 1250$$

$$1 \text{ unit} \rightarrow 25$$

$$\therefore A \Rightarrow 10 \times 25 = ₹ 250$$

$$B \Rightarrow 23 \times 25 = ₹ 575$$

$$C \Rightarrow 12 \times 25 = ₹ 300$$

$$D \Rightarrow 5 \times 25 = ₹ 125$$

Q. 54

Rahna decided to buy a scooty that costs ₹50,000. The shopkeeper agreed to sell the scooty under the condition of ₹30,000 cash down payment and ₹5,000 each month for five months. Find the rate of interest at which the shopkeeper sold the scooty under the installment scheme.

- a) 60%
- b) 110%
- c) 120%
- d) 40%

The correct answer is: c

$$5000 \times 5 + \frac{5000 \times R \times (4+3+2+1)}{12 \times 100} = 20,000 + \frac{20000 \times R}{12 \times 100}$$

$$25,000 + \frac{5000 \times R}{1200} = 20,000 + \frac{10000 \times R}{1200}$$

$$5000 = \frac{1000 R}{12} - \frac{500 R}{12}$$

$$5000 = \frac{500 R}{12}$$

$$\Rightarrow R = 120 \text{ .} \%$$

Explanation:

Q. 55

Three people, A, B, and C, invest in a business in the ratio 3 : 4 : 6. It was decided that 12% of the profits will go to charity. If the total profit was ₹3,00,000, then find the approximate share of C in the profit (in ₹).

- a) 121864 X
- b) 121876 X
- c) 121856 X
- d) 121846 ✓

The correct answer is: d

$$A : B : C$$

$$\text{Invest} \quad 3 : 4 : 6 \Rightarrow 13$$

$$\text{Total Profit} = ₹ 3,00,000$$

12% goes to charity

Remaining profit = 88%.

$$\therefore 3,00,000 \times \frac{88}{100} = ₹ 264,000$$

$$\text{Share of C} = \frac{6}{13} \times 264,000$$

$$= ₹ 121,846 \text{ (Approx)}$$

Explanation:

Q. 56

The cost price of an article is increased by 25% and later the new price is decreased by 25%. If the latest price of the article is ₹18750. Find the original cost price of the article.

- a) 20,000 ✓
- b) 25,000 ✗
- c) 23,000 ✗
- d) 30,000 ✗

The correct answer is: a

$$\begin{aligned} CP &= 100 \text{ unit} \\ &\quad \left. \right\} +25\% \\ CP &= 125 \text{ unit} \\ &\quad \left. \right\} -25\% \end{aligned}$$

$$\begin{aligned} CP &= 125 \times \frac{3}{4} \text{ unit} \\ &\approx 93.75 \text{ unit} \end{aligned}$$

$$\begin{aligned} 93.75 \text{ unit} &\longrightarrow 18750 \\ 1 \text{ unit} &\longrightarrow 200 \\ 100 \text{ unit} &\longrightarrow 200 \times 100 = 20,000 \\ \therefore \text{original } CP &\approx ₹20,000 \end{aligned}$$

Explanation:

Q. 57

Find the mean proportion of 5.76 and 0.88. (rounded off to two decimal places)

- a) 2.15 X
- b) 2.85 X
- c) 2.34 X
- d) 2.25 ✓

The correct answer is: d

Mean proportion of A and B =

$$\sqrt{A \times B}$$

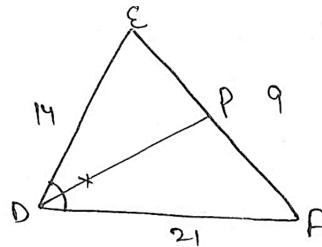
Therefore,

$$\text{Mean proportion of 5.76 and 0.88} = \sqrt{5.76 \times 0.88} = 2.25$$

Q. 58

In a triangle DEF, DP is the bisector of $\angle D$, meeting EF at P. If DE = 14 cm, DF = 21 cm, and EF = 9 cm, find EP.

- a) 3.6 cm ✓
- b) 6.3 cm ✗
- c) 2.7 cm ✗
- d) 5.4 cm ✗



As we know,

Internal angle bisector theorem,

$$\frac{DE}{EP} = \frac{DF}{PF}$$

$$\Rightarrow \frac{14}{EP} = \frac{21}{PF}$$

$$\Rightarrow \frac{PF}{EP} = \frac{3}{2} \rightarrow 5 \longrightarrow 9$$

$$\therefore 2 \longrightarrow \frac{9}{5} \times 2 = 3.6 \text{ cm}$$

Explanation:

Q. 59

If $\operatorname{cosec} \theta = \frac{10}{8}$, then evaluate $(\sec^2 \theta - 1) \times \cot^2 \theta \times (1 + \cot^2 \theta)$.

- a) $25/16$
- b) $50/32$
- c) $100/64$
- d) All of the above

The correct answer is: d

$$\operatorname{cosec} \theta = \frac{10}{8}$$

$$\begin{aligned}
 &\Rightarrow (\sec^2 \theta - 1) \times \cot^2 \theta \times (1 + \cot^2 \theta) \\
 &\Rightarrow \tan^2 \theta \times \cot^2 \theta \times \operatorname{cosec}^2 \theta \quad \left[\begin{array}{l} 1 + \tan^2 \theta = \sec^2 \theta \\ 1 + \cot^2 \theta = \operatorname{cosec}^2 \theta \end{array} \right] \\
 &\Rightarrow 1 \times \operatorname{cosec}^2 \theta \\
 &\Rightarrow \operatorname{cosec}^2 \theta \\
 &\Rightarrow \left(\frac{10}{8}\right)^2 = \frac{100}{64} = \frac{50}{32} = \frac{25}{16} \\
 &\therefore \text{All are correct}
 \end{aligned}$$

Explanation:**Q. 60**

A pipe can fill an overhead tank in 15 hours. But due to a leak at the bottom, it is filled in 25 hours. If the tank is full, how much time will the leak take to empty it?

- a) $9 (3/8)$
- b) $37 (1/2)$
- c) $38 (4/7)$
- d) $20 (2/5)$

Explanation:

$$\text{Time} = (25 * 15) / (25 - 15) = 37.5$$

Q. 61

If $a^3 + b^3 + c^3 = 3abc$ and a, b, c are positive numbers, then find $\frac{3a+4b+7c}{9a+2b+3c}$?

- a) 0 X
- b) 2 X
- c) 5 X
- d) 1 ✓

The correct answer is: d

If $a^3 + b^3 + c^3 = 3abc$ then, a=b=c if a,b & c are positive integers.

Now,

Explanation:

$$\frac{3a+4b+7c}{9a+2b+3c} = 1$$

Q. 62

$$\text{If } \frac{2x}{x+2} + \frac{1}{2x+4} - \frac{12-x}{2x^2+4x} = a + \frac{b}{x}, \text{ where } a \text{ and } b \text{ are integers, then the value of } ab = \text{_____}.$$

- a) -3 X
- b) -6 ✓
- c) 3 X
- d) 6 X

Explanation:

$$\begin{aligned} \frac{2n}{n+2} + \frac{1}{2n+4} - \frac{12-n}{2n^2+4n} &= a + \frac{b}{n} \\ \frac{4n^2 + n - 12 + n}{2 \times n \times (n+2)} &= a + \frac{b}{n} \\ \frac{4n^2 + 2n - 12}{2n(n+2)} &= a + \frac{b}{n} \\ \frac{2(2n^2 + n - 6)}{2n(n+2)} &= a + \frac{b}{n} \\ \frac{2n^2 + 4n - 3n - 6}{n(n+2)} &= a + \frac{b}{n} \\ \frac{2n(n+2) - 3(n+2)}{n(n+2)} &= a + \frac{b}{n} \\ \frac{(2n-3)(n+2)}{n(n+2)} &= a + \frac{b}{n} \\ 2 - \frac{3}{n} &= a + \frac{b}{n} \\ a &= 2 \\ b &= -3 \\ ab &= 2 \times (-3) \\ &= -6 \end{aligned}$$

Q. 63

If the point of intersection of lines $x+y=4$ and $2x-y=8$ lies on $y = kx+9$, what is the value of $-4k$?

- a) -9 X
- b) $4/9$ X
- c) 9 ✓
- d) $-9/4$ X

The correct answer is: c

$$\begin{array}{r} x + y = 4 \\ + 2x - y = 8 \\ \hline 3x = 12 \end{array}$$

$$x = 4.$$

$$\therefore y = 0.$$

Put $x=4, y=0$ in $y = kx+9$.

$$\Rightarrow y = kx+9$$

$$\Rightarrow 0 = 4k+9$$

$$\therefore k = -\frac{9}{4}$$

$$-4k = 9$$

Explanation:

Q. 64

A policeman is chasing a thief at a speed of 18 km/h, and the thief is running at a speed of 12 km/h. If the policeman started 45 minutes late, find the time taken by the policeman to catch the thief.

- a) 1 hr
- b) 2 hrs
- c) 1.5 hrs
- d) 2.5 hrs

The correct answer is: c

$$\text{Speed of thief} = 12 \text{ km/h}$$

$$\text{Speed of Police} = 18 \text{ km/h}$$

$$\text{Distance by thief in } 45 \text{ min} = 12 \times \frac{3}{4}$$

$$= 9 \text{ km.}$$

Now,

$$\Rightarrow \frac{9}{(18-12)} = \frac{9}{6} = 1.5 \text{ hrs.}$$

$$\therefore \text{Time taken by Police to catch} = 1.5 \text{ hrs.}$$

Q. 65

The sum of the length, breadth and height of a cuboid is 28 cm. If the total surface area of the cuboid is 588 square cm, what will be the length of its diagonal?

- a) 12 X
- b) 16 X
- c) 18 X
- d) 14 ✓

The correct answer is: d

$$l + b + h = 28 \text{ cm.}$$

$$\text{To.S.A} \Rightarrow 2(lb + bh + lh) = 588 \text{ cm}^2$$

Now,

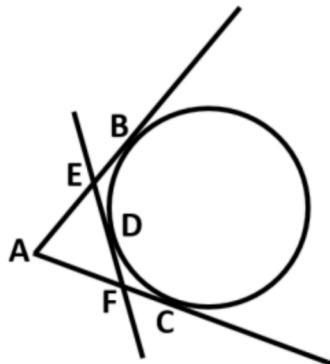
$$\begin{aligned} \Rightarrow (l+b+h)^2 &= (28)^2 \\ \Rightarrow l^2 + b^2 + h^2 + 2(lb + bh + lh) &= 784 \\ \Rightarrow l^2 + b^2 + h^2 &\approx 784 - 588 \\ \therefore l^2 + b^2 + h^2 &= 196 \text{ cm}^2. \end{aligned}$$

$$\begin{aligned} \text{Diagonal of cuboid} &= \sqrt{l^2 + b^2 + h^2} \\ &\approx \sqrt{196} \\ &= 14 \text{ cm.} \end{aligned}$$

Explanation:

Q. 66

In the given figure, AB, AC and EF are tangents to a circle. If AC = 15.25 cm and DE = 3.45 cm, then the length of AE is:



- a) 11.80 ✓
- b) 11 ✗
- c) 11.08 ✗
- d) 12 ✗

The correct answer is: a

$$\begin{aligned} \Rightarrow AB &= AC \quad [\text{Tangent from same point}] \\ BE &= DE \quad [\quad " \quad] \\ DF &= CF \quad [\quad " \quad] \end{aligned}$$

Explanation:

$$\begin{aligned} \text{Now,} \\ \Rightarrow AB &= AE + BE \\ \Rightarrow 15.25 &= AE + 3.45 \\ \Rightarrow AE &= 15.25 - 3.45 \\ \therefore AE &= 11.80 \text{ cm.} \end{aligned}$$

Q. 67

If $\tan^2\theta + \tan^4\theta = 1$, then:

- a) $\cot^2\theta + \cot^4\theta = 1$ X
- b) $\cos^2\theta + \cos^4\theta = 1$ ✓
- c) $\sin^2\theta - \sin^4\theta = 1$ X
- d) $\cosec^2\theta + \cosec^4\theta = 1$ X

The correct answer is: b

$$\begin{aligned} &\Rightarrow \tan^2\theta + \tan^4\theta = 1 \\ &\Rightarrow \tan^2\theta (\tan^2\theta + 1) = 1 \\ &\Rightarrow \tan^2\theta \times \sec^2\theta = 1 \\ &\Rightarrow \tan^2\theta = \frac{1}{\sec^2\theta} \\ &\therefore \tan^2\theta = \cos^2\theta. \end{aligned}$$

So,

$$\cos^2\theta + \cos^4\theta = 1.$$

Explanation:

Q. 68

 $9^{15} + 9^{16} + 9^{17}$ is divisible by which of the following given number?

- a) Only 13 X
- b) Only 7 X
- c) Both 13 and 7 ✓
- d) 11 X

The correct answer is: c

$$= 9^{15} + 9^{16} + 9^{17}$$

$$= 9^{15}(1 + 9 + 9^2)$$

Explanation:

$$= 9^{15} \times 91$$

$$= 9^{15} \times 13 \times 7$$

Therefore,

Both 13 and 7 is correct

Q. 69

If $\frac{\tan x}{\sec x} = \frac{\sqrt{3}}{2}$, then the value of $(\sin x + \cos x)^2$?

a) $\frac{\sqrt{3+2}}{2}$ X

b) $\frac{2-\sqrt{3}}{2}$ X

c) $\frac{\sqrt{3-2}}{2}$ X

d) $\frac{2+\sqrt{3}}{2}$ ✓

The correct answer is: d

$$\Rightarrow \frac{\tan n}{\sec n} = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \frac{\sin n}{\cos n \cdot \sec n} = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \sin n = \frac{\sqrt{3}}{2}$$

$$\therefore n = 60^\circ$$

Now,

$$\Rightarrow (\sin n + \cos n)^2$$

$$\Rightarrow (\sin 60^\circ + \cos 60^\circ)^2$$

$$\Rightarrow \left(\frac{\sqrt{3}}{2} + \frac{1}{2}\right)^2$$

$$\Rightarrow \frac{(\sqrt{3}+1)^2}{4}$$

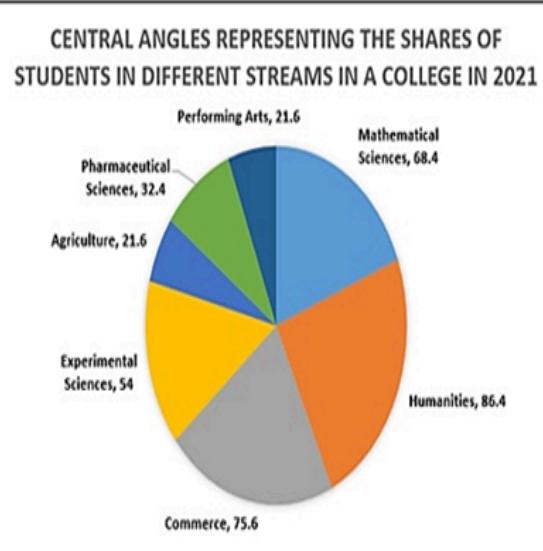
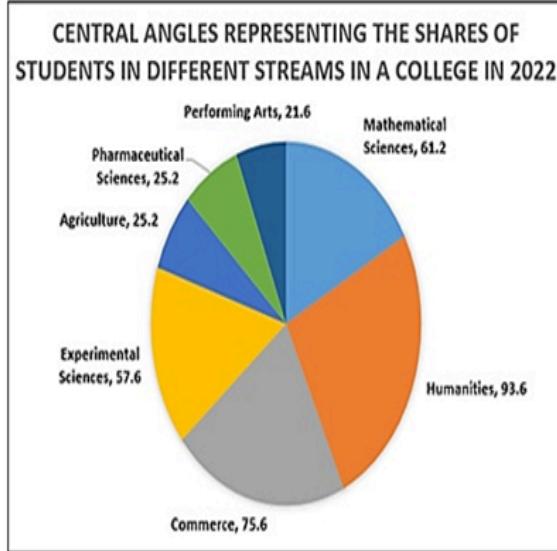
$$\Rightarrow \frac{4+2\sqrt{3}}{4}$$

$$\Rightarrow \frac{2+\sqrt{3}}{2}$$

Explanation:

Q. 70

The shares of students studying in different streams of a college in the years 2021 and 2022 are as reflected in the two pie charts given below.



The total number of students opting for humanities in the college was 15600 in both the given years. What was the percentage change in the total number of students in the college from 2021 to 2022? {Give your answer correct to the nearest integer value}

- a) 7% X
- b) 8% ✓
- c) 6% X
- d) 9% X

Explanation:

Let total population in 2021 = A
 Let total population in 2022 = B
 $86.4 \times A \div 360 = 93.6 \times B \div 360$
 $A/B = 936/864$
 $\% \text{ change} = (936-864)/936 \times 100\%$
 $= 7.69\% = 8\%(\text{approx.})$

Q. 71

If $a = \frac{1}{a-\sqrt{6}}$ ($a > 0$), then the value of $(a + \frac{1}{a})$ is:

- a) $\sqrt{15}$ X
- b) $\sqrt{6}$ X
- c) $\sqrt{7}$ X
- d) $\sqrt{10}$ ✓

$$a = \frac{1}{a - \sqrt{6}}$$

$$\Rightarrow a - \sqrt{6} = \frac{1}{a}$$

$$\Rightarrow a - \frac{1}{a} = \sqrt{6}$$

$$\Rightarrow a + \frac{1}{a} = \sqrt{(a - \frac{1}{a})^2 + 4}$$

$$a + \frac{1}{a} = \sqrt{6 + 4} = \sqrt{10}$$

Explanation:

Q. 72

The following table shows scores in different subjects obtained by Akshay in school. Study the table and answer the question that follows.

Subject	Marks obtained	Total Marks
English	73	100
Hindi	56	80
Science	45	75
Mathematics	90	125
IT	45	60

In which subject did he score the highest mark (in%)

- a) Hindi
- b) IT
- c) English
- d) Mathematics

The correct answer is: b

$$\text{Percentage of marks in Hindi} = \frac{56}{80} \times 100 = 70\%$$

$$\text{Percentage of marks in IT} = \frac{45}{60} \times 100 = 75\%$$

$$\text{Percentage of marks in English} = \frac{73}{100} \times 100 = 73\%$$

$$\text{Percentage of marks in Mathematics} = \frac{90}{125} \times 100 = 72\%$$

Explanation:

Q. 73

A shopkeeper makes a profit of 15% after allowing a discount of 12% on the marked price of an article. Find his profit percentage if the article is sold at the marked price, allowing no discount.

- a) 30.58% X
- b) 30.78% X
- c) 30.68% ✓
- d) 30.98% X

The correct answer is: c

$$\text{Profit} = 15\% = \frac{3}{20}$$

$$\text{Discount} = 12\% = \frac{3}{25}$$

Explanation:

C P	S P	M P.
20	23	
	22	25
<u>440</u>	50.6	57.5
		Difference = 13.5

$$\text{Profit \%} = \frac{13.5}{440} \times 100$$

$$= 30.68\%$$

Q. 74

If $x = a \cos\theta + b \sin\theta$ and $y = a \sin\theta - b \cos\theta$, the value of $x^2 + y^2$ is:

- a) $a^2 - b^2$ X
- b) $a^2 + b^2$ ✓
- c) $a - b$ X
- d) $a+b$ X

The correct answer is: b

Explanation:

$$\begin{aligned} \Rightarrow a \sin\theta + b \cos\theta &= m \\ a \cos\theta - b \sin\theta &= n \\ [a^2 + b^2] &= m^2 + n^2 \end{aligned}$$

Q. 75

Naman bought few apples for Rs.720 from a shop. He negotiated the price and the shopkeeper reduced it by Rs. 2 per apple. Due to this, Naman could buy four more apples than what he had bought earlier. How many apples did he originally buy?

- a) 28 X
- b) 36 ✓
- c) 40 X
- d) 52 X

The correct answer is: b

$$\begin{aligned}
 & \text{No. of apples} = n \\
 & \text{Price of apples} = P \\
 \Rightarrow & P \times n = 720, P = \frac{720}{n} \\
 & \text{Now,} \\
 & \text{Reduced price} = (P-2) \\
 & \text{No. of Apples} = (n+4) \\
 \Rightarrow & (P-2)(n+4) = 720 \\
 \Rightarrow & \left(\frac{720}{n}-2\right)(n+4) = 720 \\
 \Rightarrow & (720-2n)(n+4) = 720n \\
 \Rightarrow & 720n + 2880 - 2n^2 - 8n = 720n \\
 \Rightarrow & 2n^2 + 8n - 2880 = 0 \\
 \Rightarrow & n^2 + 4n - 1440 = 0 \\
 \therefore & n = 36. \\
 \text{originally no. of apples} & = 36.
 \end{aligned}$$

Explanation:

Q. 76

Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- A. He works hard and is never downcast.
- B. He also brings strength of mind and industry in his life.
- C. He finds thousands of ways to clear an issue.
- D. A person with high determination can solve all his problems.

- a) DCAB ✓
- b) ABCD ✗
- c) BCDA ✗
- d) CBAD ✗

The correct order is **DCAB**.

Explanation:

- **Sentence D** introduces the main idea, which is about a person with high determination being able to solve problems.
- **Sentence C** supports this idea by stating that such a person finds many ways to clear an issue, elaborating on their determination.
- **Sentence A** continues the thought by describing the person's character, mentioning that they work hard and maintain a positive attitude.
- **Sentence B** concludes the paragraph by adding that the person brings strength of mind and industry to their life, which ties back to their determination and hard work.

Thus, the correct order is **DCAB**.

Q. 77

Select the option that correctly expresses the given sentence in passive voice.

The workers built a new bridge across the river.

- a) A new bridge is built by the workers across the river. ✗
- b) A new bridge built across the river by the workers. ✗
- c) A new bridge was built by the workers across the river. ✓
- d) A new bridge will be built by the workers across the river. ✗

The correct option is: **A new bridge was built by the workers across the river.**

Explanation:

- The sentence is in the active voice: "The workers built a new bridge across the river."
- To change it to passive voice, the object ("a new bridge") becomes the subject, and the subject ("the workers") comes after the verb with "by."
- "Built" is the past tense of the verb, so the passive form should also be in the past tense: "was built."

Q. 78

Parts of the following sentence have been given as options. Select the option that contains an error.

While proceeding on / leave he had orally / committed that he will / resume after two days.

a) resume after two days

b) While proceeding on

c) committed that he will

d) leave he had orally

The correct option containing an error is "committed that he will."

Explanation:

- The phrase "committed that he will" is incorrect in this context because of the tense mismatch.
- The sentence is in the past tense ("he had orally committed"), so the reported speech needs to align with the past tense as well. Instead of using "will," which is future tense, it should be "would," which is the past tense form of "will" in reported speech.

Correct sentence:

"While proceeding on leave, he had orally committed that he would resume after two days."

Q. 79

Select the most appropriate synonym of the given word.

Arid

a) Wet

b) Dry

c) Humid

d) Moist

The most appropriate synonym for "Arid" is Dry.

Explanation:

- "Arid" means extremely dry, lacking moisture, or having little rainfall.
- "Dry" directly conveys this lack of moisture, making it the best synonym.
- "Wet" and "Humid" refer to moisture or moisture-heavy conditions, which are the opposite of arid.
- "Moist" refers to a slightly damp or humid state, not as extreme as "dry," so it's not a strong synonym for "arid."

Q. 80	<p>Select the most appropriate ANTONYM of the underlined word in the following sentence to fill in the blank.</p> <p>The room was spacious, but the closet felt _____.</p> <p>a) Roomy <input checked="" type="checkbox"/> X</p> <p>b) Open <input checked="" type="checkbox"/> X</p> <p>c) Cramped <input checked="" type="checkbox"/> ✓</p> <p>d) Airy <input checked="" type="checkbox"/> X</p>
Explanation:	<p>The correct answer is: Cramped.</p> <p>Explanation: The word spacious means having a lot of space or roomy. The antonym of "spacious" is "cramped," which means confined or lacking sufficient space. Therefore, the sentence contrasts the spacious room with the cramped closet, making "cramped" the most appropriate choice. The other options ("roomy," "open," and "airy") are synonyms or related to spaciousness, not antonyms.</p>

Q. 81	<p>Select the most appropriate meaning of the phrase in bold.</p> <p>After losing his job, he decided to turn over a new leaf.</p> <p>a) To repeat past mistakes <input checked="" type="checkbox"/> X</p> <p>b) To ignore problems <input checked="" type="checkbox"/> X</p> <p>c) To give up on life <input checked="" type="checkbox"/> X</p> <p>d) To start fresh and make positive changes <input checked="" type="checkbox"/> ✓</p>
Explanation:	<p>The most appropriate meaning of the phrase "turn over a new leaf" is To start fresh and make positive changes.</p> <p>Explanation:</p> <ul style="list-style-type: none"> • The expression "turn over a new leaf" means to begin anew, often with the intention of making better choices or improvements in one's life. • It doesn't mean repeating past mistakes, ignoring problems, or giving up on life. • It's about turning to a new chapter or trying to improve oneself, which aligns with starting fresh and making positive changes.

Q. 82	<p>Select the option that expresses the following sentence in active voice. The package will have been delivered by the courier before noon.</p> <p>a) The courier will have delivered the package before noon. ✓</p> <p>b) The package will deliver the courier before noon. ✗</p> <p>c) The courier will deliver the package before noon. ✗</p> <p>d) The package will have delivered the courier before noon. ✗</p>
Explanation:	<p>The correct answer is: (a) "The courier will have delivered the package before noon"</p> <p>Explanation: The original sentence is in passive voice: "The package will have been delivered by the courier before noon."</p> <ul style="list-style-type: none"> The subject of the sentence is the package, and the action (delivering) is being performed by the courier. To convert it to active voice, the doer of the action (the courier) becomes the subject, and the receiver of the action (the package) becomes the object. The verb tense (future perfect) remains the same: "will have delivered." <p>Thus, the active voice version is: "The courier will have delivered the package before noon."</p>
Q. 83	<p>Select the option that can be used as a one word substitute for the given group of words. A person who is excessively frugal or stingy with money.</p> <p>a) Miser ✓</p> <p>b) Spendthrift ✗</p> <p>c) Altruist ✗</p> <p>d) Philanthropist ✗</p>
Explanation:	<p>The one-word substitute for "a person who is excessively frugal or stingy with money" is Miser.</p> <p>Explanation:</p> <ul style="list-style-type: none"> A Miser is someone who hoards wealth and is extremely reluctant to spend money, even on things they need, because they are excessively frugal or stingy. A Spendthrift is the opposite, someone who spends money freely and wastefully. An Altruist is someone who selflessly helps others and doesn't focus on hoarding money. A Philanthropist is someone who gives away large amounts of money to charitable causes, again the opposite of a miser.

Q. 84

Choose the correct adverb to substitute the bracketed part in the sentence.
She solved the math problem (most quickly) than her classmates.

- a) quickest 
- b) more quicker 
- c) more quick 
- d) more quickly 

The correct adverb to substitute the bracketed part is **more quickly**.

Explanation:

- Explanation:**
- In comparative sentences, the adverb "quickly" should be used in its comparative form, which is "more quickly."
 - "Quickest" is the superlative form and is not appropriate for comparisons between two people.
 - "More quicker" and "more quick" are grammatically incorrect; "quicker" already serves as the comparative form of "quick," but in this case, we need the comparative form of the adverb "quickly," which is "more quickly."

Q. 85

Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

1. Stephen Hawking was a renowned theoretical physicist who made groundbreaking contributions to our understanding of black holes and the origins of the universe.
2. Despite being diagnosed with ALS at the age of 21, Hawking defied the odds and continued his research for decades, becoming an inspiration to millions
3. His work on Hawking radiation, which suggests that black holes emit energy, revolutionized the field of physics and earned him numerous accolades.
4. Hawking's ability to communicate complex scientific ideas to the public, through books like *A Brief History of Time*, made him a global icon of science and perseverance.

- a) 1243
- b) 1432
- c) 2431
- d) 1324

The correct order is **1 3 2 4**.

Explanation:

- **Sentence 1:** Introduces Stephen Hawking and his contributions as a renowned theoretical physicist.
- **Sentence 3:** Follows by highlighting one of his key contributions, Hawking radiation.
- **Sentence 2:** Explains how, despite his ALS diagnosis, he continued his groundbreaking work and became an inspiration.
- **Sentence 4:** Concludes by discussing his global fame and ability to communicate complex ideas, making him a science icon.

So, the correct order is **1 3 2 4**.

Q. 86

Select the correctly spelt word.

- a) Entrepreneur
- b) Enterpreneur
- c) Entreprenuer
- d) Enterprenuer

The correctly spelled word is **Entrepreneur**.

Explanation:

Explanation: "Entrepreneur" is the correct spelling for a person who starts and manages a business, taking on financial risks in the hope of profit.

Q. 87	<p>What does the idiom "Burn bridges" mean?</p> <p>a) To start a fire unintentionally X</p> <p>b) To sever relationships irreparably ✓</p> <p>c) To learn a new skill X</p> <p>d) To be in a dangerous situation X</p>
Explanation:	<p>The correct meaning of the idiom "Burn bridges" is: To sever relationships irreparably.</p> <p>Explanation:</p> <ul style="list-style-type: none"> "Burning bridges" means to destroy a relationship or opportunity, making it impossible to go back or repair the damage. It usually refers to actions that end a connection in a permanent or destructive way.
Q. 88	<p>In the following questions, a sentence has been given in direct/indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in indirect/direct speech.</p> <p>They said, "We were playing football when it started raining."</p> <p>a) They said that they had been playing football when it started raining. ✓</p> <p>b) They said that they were playing football when it started raining. X</p> <p>c) They said that they are playing football when it started raining. X</p> <p>d) They said that they had played football when it started raining. X</p>
Explanation:	<p>The correct option is: They said that they had been playing football when it started raining.</p> <p>Explanation:</p> <ul style="list-style-type: none"> The original sentence is in direct speech: "We were playing football when it started raining." When converting to indirect speech, the past continuous tense ("were playing") changes to the past perfect continuous tense ("had been playing") to maintain the sequence of tenses. The time reference ("when it started raining") remains unchanged because it is a subordinate clause describing the timing of the action.

Q. 89	<p>Select the most appropriate ANTONYM of the underlined word in the following sentence to fill in the blank:</p> <p>The forest was teeming with wildlife, but the desert was _____.</p> <p>a) Bustling X</p> <p>b) Barren ✓</p> <p>c) Abundant X</p> <p>d) Swarming X</p>
	<p>The correct antonym for "teeming" in this sentence is "Barren".</p> <p>Explanation:</p> <ul style="list-style-type: none"> • "Teeming" means full of life or abundance, like the forest that is rich with wildlife. • Barren refers to a place that is empty or lacking life, which contrasts with "teeming." <p>Explanation: Let's look at the other options:</p> <ul style="list-style-type: none"> • Bustling means full of activity, which might seem similar but is not the best opposite of "teeming" in this context. • Abundant means plentiful, which is similar to "teeming" not the opposite. • Swarming means large groups moving together, which also implies abundance and is not the opposite of "teeming". <p>Therefore, "Barren" is the most appropriate antonym.</p>
Q. 90	<p>Select the most appropriate synonym of the given word.</p> <p>Pensive</p> <p>a) Carefree X</p> <p>b) Thoughtful ✓</p> <p>c) Happy X</p> <p>d) Energetic X</p> <p>The most appropriate synonym for Pensive is Thoughtful.</p> <p>Explanation:</p> <ul style="list-style-type: none"> • Pensive refers to being deeply thoughtful, often in a serious or reflective manner. • Thoughtful also means being considerate and reflective, which aligns well with the meaning of "pensive". • The other options, such as Carefree, Happy, and Energetic, are all unrelated to the reflective or serious nature implied by "pensive". <p>So, Thoughtful is the closest synonym to Pensive.</p>

Q. 91

Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- A. Strengthening the process of information sharing and enhancing liaison between counterterrorism and anti-drug agencies of the states is important.
B. In this regard, the intelligence bureau has made a very important contribution in maintaining peace in the country since independence.
C. Our country's coastal security also has to be made impenetrable by keeping a close eye on even the smallest and most isolated port to make India more peaceful.
D. India's fight is against terrorism as well as its support system and unless it fights strictly against both of them, victory over terrorism cannot be achieved.

- a) BCAD
- b) BACD
- c) DABC
- d) CABD

The correct order is **DABC**.

Explanation:

- Explanation:**
- Sentence D sets the context by discussing India's fight against terrorism and its support systems, which introduces the main theme of the paragraph.
 - Sentence A follows logically by emphasizing the importance of strengthening information sharing and collaboration between agencies to combat terrorism and related issues.
 - Sentence B adds further depth by mentioning the contribution of the Intelligence Bureau in maintaining peace, supporting the idea of collaboration and intelligence-sharing.
 - Sentence C concludes the paragraph by highlighting the need for enhanced coastal security to ensure a peaceful country, tying it back to the broader issue of national security.

Thus, the correct order is **DABC**.

<p>Q. 92</p> <p>Parts of the following sentence have been given as options. Select the option that contains an error.</p> <p>Bangladesh has come / into existence / thirty-six years ago. / No error</p> <p>a) Bangladesh has come ✓</p> <p>b) into existence ✗</p> <p>c) thirty-six years ago ✗</p> <p>d) No error ✗</p>	<p>The error is in "Bangladesh has come", and it should be "Bangladesh came".</p> <p>Explanation:</p> <ul style="list-style-type: none"> The phrase "has come" uses the present perfect tense, which is incorrect when referring to a specific event that happened at a defined point in the past (like "thirty-six years ago"). The present perfect tense is used for actions that either have relevance to the present or have just been completed. Since "thirty-six years ago" points to a specific time in the past, the simple past tense should be used instead. <p>Correct sentence: "Bangladesh came into existence thirty-six years ago."</p>
<p>Q. 93</p> <p>Choose the sentence with the correct use of a preposition:</p> <p>a) She is good in playing tennis. ✗</p> <p>b) She is good at playing tennis. ✓</p> <p>c) She is good on playing tennis. ✗</p> <p>d) She is good for playing tennis. ✗</p>	<p>The correct sentence is She is good at playing tennis.</p> <p>Explanation:</p> <ul style="list-style-type: none"> The preposition "at" is used when referring to being skilled or proficient in a particular activity or task. So, the correct phrase is "good at" when talking about someone's ability in a specific area, such as playing tennis. "In" and "on" are not used in this context for describing skills. "For" would generally refer to purpose or suitability, which doesn't fit when talking about proficiency in an activity. <p>Thus, the correct sentence is: "She is good at playing tennis".</p>

Q. 94

Select the correct spelling to fill in the blank.
His arguments were filled with ____ making it difficult to follow his logic.

- a) contradictons
- b) contradictions
- c) contridictions
- d) contradictons

Explanation:

The correct spelling is **contradictions**.

Explanation:

- **Contradictions** refers to statements or ideas that oppose or conflict with each other, making it difficult to follow a logical argument or reasoning.

So, the correct sentence is: His arguments were filled with **contradictions**, making it difficult to follow his logic.

Q. 95

In the following questions, a sentence has been given in direct/indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in indirect/direct speech.

John said, "I am going to the market to buy some groceries."

- a) John said that he is going to the market to buy some groceries.
- b) John said that he was going to the market to buy some groceries.
- c) John said that he had gone to the market to buy some groceries.
- d) John said that he will go to the market to buy some groceries.

Explanation:

The correct answer is **John said that he was going to the market to buy some groceries**.

Explanation:

In indirect speech, when the reporting verb (like "said") is in the past tense, we generally shift the tense of the reported speech one step back. This means:

"I am going" (present continuous) changes to "he was going" (past continuous).

So, "I am going to the market" becomes "he was going to the market" in indirect speech.

Q. 96

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Japan's involvement in World War II (1) _____ a significant impact on global history. The country, which had been rapidly industrializing, sought to expand its influence across Asia. In 1941, Japan (2) _____ a surprise attack on Pearl Harbor, which led to the United States entering the war. This decision (3) _____ by many as a turning point in the conflict. Despite initial successes, Japan faced severe setbacks as the war progressed. The atomic bombings of Hiroshima and Nagasaki in 1945 (4) _____ the world and ultimately led to Japan's surrender. Today, the events of the war (5) _____ remembered as a reminder of the devastating consequences of conflict.

Select the most appropriate option to fill in blank no. 1

- a) have
- b) has
- c) had
- d) having

The correct option to fill in blank no. 1 is "had."

Explanation:

Explanation:

- The sentence refers to Japan's involvement in World War II and the **impact** it had on global history. The use of "**had**" is appropriate here because the event (Japan's involvement in World War II) occurred in the past and the impact it had on global history is being reflected upon from a past perspective.
- "**Had**" is the correct past tense of the verb "**have**" to describe an action or event that happened in the past and had an effect during that time.

Q. 97

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Japan's involvement in World War II (1) ____ a significant impact on global history. The country, which had been rapidly industrializing, sought to expand its influence across Asia. In 1941, Japan (2) ____ a surprise attack on Pearl Harbor, which led to the United States entering the war. This decision (3) ____ by many as a turning point in the conflict. Despite initial successes, Japan faced severe setbacks as the war progressed. The atomic bombings of Hiroshima and Nagasaki in 1945 (4) ____ the world and ultimately led to Japan's surrender. Today, the events of the war (5) ____ remembered as a reminder of the devastating consequences of conflict.

Select the most appropriate option to fill in blank no. 2.

- a) Penetrated X
- b) Developed X
- c) Escaped X
- d) Launched ✓

The correct option to fill in blank no. 2 is "**Launched**".

Explanation:

The phrase "**a surprise attack**" suggests an action of initiating or starting something. "**Launched**" fits perfectly because it means to begin or carry out a planned attack.

- Explanation:**
- "**Penetrated**" means to pass through something or break into it, which doesn't fit in the context of launching an attack.
 - "**Developed**" refers to something evolving or progressing, which doesn't fit the idea of a surprise attack.
 - "**Escaped**" means to get away from a situation, which doesn't make sense in the context of an attack.

Therefore, the correct choice is "**Launched**", as it refers to the action of initiating a surprise attack. The correct sentence is: **In 1941, Japan launched a surprise attack on Pearl Harbor.**

Q. 98

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Japan's involvement in World War II (1) ____ a significant impact on global history. The country, which had been rapidly industrializing, sought to expand its influence across Asia. In 1941, Japan (2) ____ a surprise attack on Pearl Harbor, which led to the United States entering the war. This decision (3) ____ by many as a turning point in the conflict. Despite initial successes, Japan faced severe setbacks as the war progressed. The atomic bombings of Hiroshima and Nagasaki in 1945 (4) ____ the world and ultimately led to Japan's surrender. Today, the events of the war (5) ____ remembered as a reminder of the devastating consequences of conflict.

Select the most appropriate option to fill in blank no. 3.

a) was seen ✓

b) is seen ✗

c) were seen ✗

d) are seen ✗

The correct option to fill in blank no. 3 is "Was seen."

Explanation:

- The sentence is talking about a past event and refers to how the decision was viewed at the time. Since it's referring to a singular "decision," we use "**was seen**," the past tense, to indicate how the decision was perceived in the past.
- "**Is seen**" and "**are seen**" are present tense forms, which would not be appropriate because the passage is discussing past events.
- "**Were seen**" is used for plural subjects, but here "decision" is singular, so "**was seen**" is the correct choice.

Thus, the correct sentence is: **This decision was seen by many as a turning point in the conflict.**

Q. 99

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Japan's involvement in World War II (1) _____ a significant impact on global history. The country, which had been rapidly industrializing, sought to expand its influence across Asia. In 1941, Japan (2) _____ a surprise attack on Pearl Harbor, which led to the United States entering the war. This decision (3) _____ by many as a turning point in the conflict. Despite initial successes, Japan faced severe setbacks as the war progressed. The atomic bombings of Hiroshima and Nagasaki in 1945 (4) _____ the world and ultimately led to Japan's surrender. Today, the events of the war (5) _____ remembered as a reminder of the devastating consequences of conflict.

Select the most appropriate option to fill in blank no. 4.

- a) Suffocated
- b) Confused
- c) Shocked
- d) Amused

The correct option to fill in blank no. 4 is "Shocked."

Explanation:

- The atomic bombings of Hiroshima and Nagasaki in 1945 had a profound and devastating impact on the world. The word "**shocked**" appropriately conveys the strong emotional reaction of surprise and horror that people around the world would have experienced upon learning about the bombings.
- "**Suffocated**" refers to difficulty in breathing or being deprived of oxygen, which doesn't fit the context of the bombings' global reaction.
- "**Confused**" means being unsure or unclear, which doesn't capture the intense emotional response to such catastrophic events.
- "**Amused**" means finding something funny or entertaining, which is completely inappropriate in this context.

Therefore, the correct sentence is: **The atomic bombings of Hiroshima and Nagasaki in 1945 shocked the world and ultimately led to Japan's surrender.**

Q. 100

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Japan's involvement in World War II (1) _____ a significant impact on global history. The country, which had been rapidly industrializing, sought to expand its influence across Asia. In 1941, Japan (2) _____ a surprise attack on Pearl Harbor, which led to the United States entering the war. This decision (3) _____ by many as a turning point in the conflict. Despite initial successes, Japan faced severe setbacks as the war progressed. The atomic bombings of Hiroshima and Nagasaki in 1945 (4) _____ the world and ultimately led to Japan's surrender. Today, the events of the war (5) _____ remembered as a reminder of the devastating consequences of conflict.

Select the most appropriate option to fill in blank no. 5.

- a) is
- b) are
- c) was
- d) were

The correct option to fill in blank no. 5 is "are."

Explanation:

- The phrase "Today, the events of the war" refers to a present-day reflection or remembrance of historical events. Since the sentence is in the present tense (referring to something that is still remembered today), we use "are" to maintain the correct subject-verb agreement.
- "Is" is incorrect because it is singular, and "the events of the war" is a plural subject.
- "Was" and "were" are in the past tense, which would not align with the present context of the sentence ("Today").

Therefore, the correct sentence is: **Today, the events of the war are remembered as a reminder of the devastating consequences of conflict.**