

## RBE SSC CGL 2025 Live Mock July 07,2025

Q. 1

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

WTQ, NJF, CXS, ?

a) PKF 

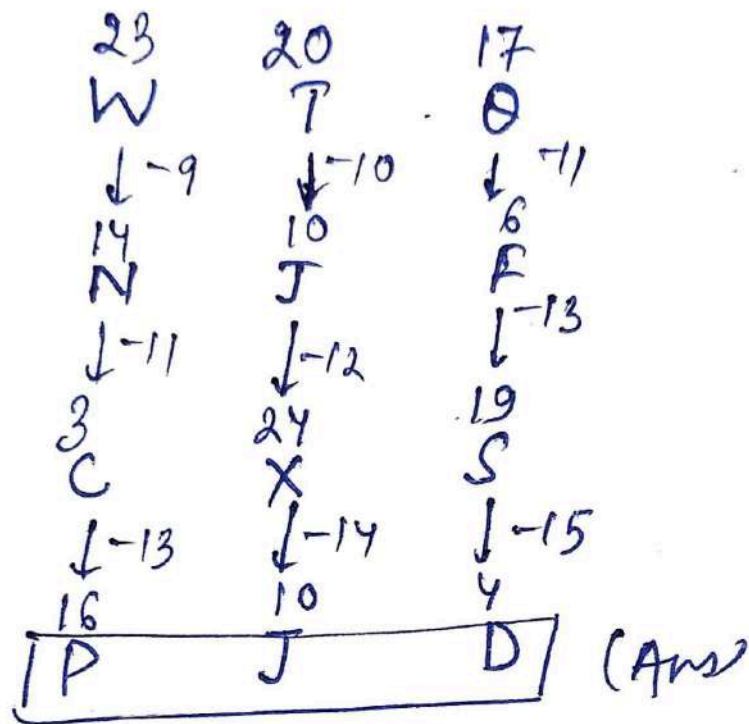
b) OJD 

c) PJD 

d) OIC 

The correct answer is: c

Explanation:



Q. 2

Z is the sister of Y. Y is married to M. M is the son of T. T is married to L. L is the mother of P. X is the mother of Y. J is the father of Z. How is X related to J?

a) Wife ✓

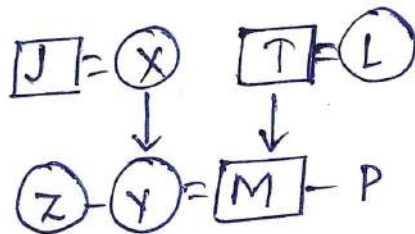
b) Sister ✗

c) Daughter ✗

d) Mother ✗

Explanation:

The correct answer is: a



'X' is wife of 'J'.  
(□ → Male, ○ → Female)

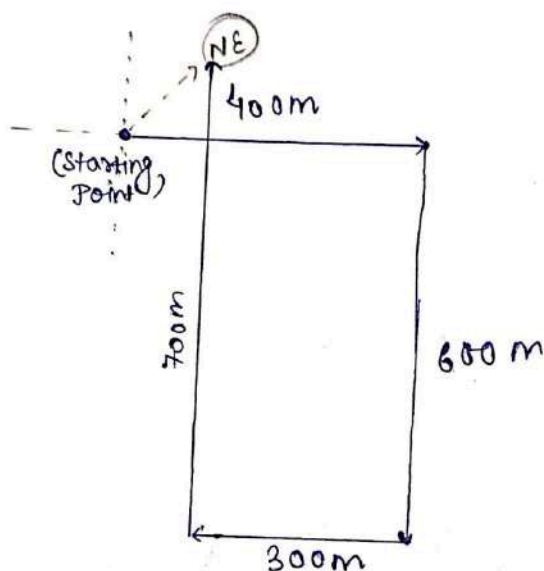
Q. 3

Piyush walks 400 metres towards the east. From there, he turns right and walks 600 metres. Again, he turns right and walks 300 metres. Finally, he turns right and walks 700 metres. In which direction is he facing and in which direction is he with reference to his starting point?

- a) East, North-East ☒
- b) North, North-West ☒
- c) North, North ☒
- d) North, North-East ☒

The correct answer is: d

Explanation:



He is facing North and with reference to starting point he is facing north-east.

Q. 4

In a certain code language,

'P + Q' means 'P is the mother of Q',

'P - Q' means 'P is the brother of Q',

'P \* Q' means 'P is the father of Q',

'P @ Q' means 'P is the sister of Q'.

Based on the above, which of the following options represents 'A' is the father's mother's sister of 'E'?

a)  $A + B - C * D @ E$  ✗

b)  $A @ B + C - D * E$  ✓

c)  $A @ B * C + D - E$  ✗

d)  $A + B @ C * D - E$  ✗

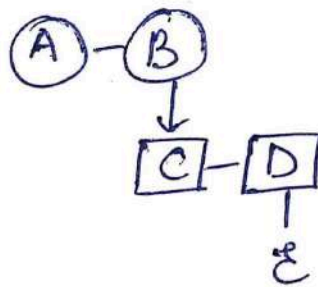
The correct answer is: b

from option (b),

$A @ B + C - D * E$

( $\bigcirc \rightarrow$  Female,  $\square \rightarrow$  Male)

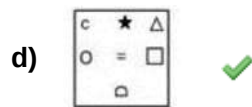
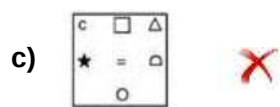
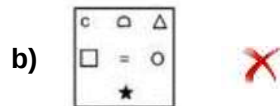
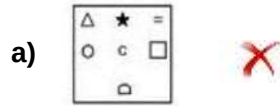
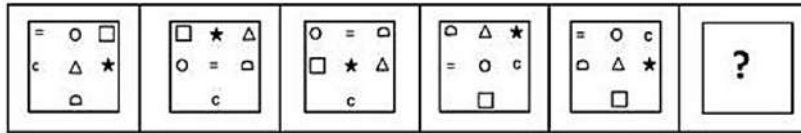
Explanation:



'A' is the father's mother's sister of 'E'.

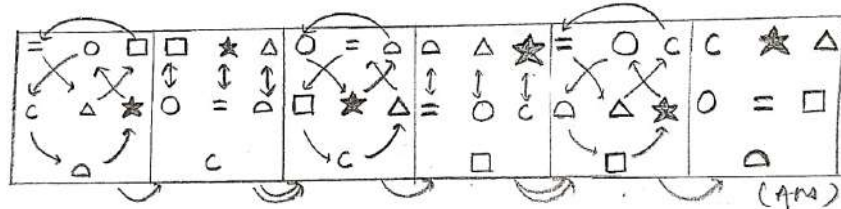
Q. 5

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







The correct answer is: d

Explanation:



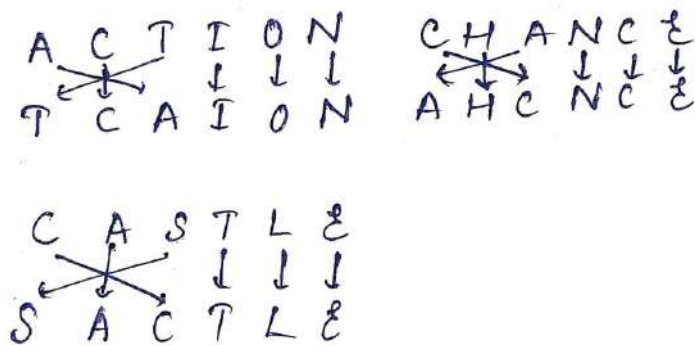
Q. 6

**ACTION** is related to **TCAION** in a certain way based on the English alphabetical order. In the same way, **CHANCE** is related to **AHCNCE**. To which of the following is **CASTLE** related, following the same logic?

- a) **SACLET** 
- b) **SACTLE** 
- c) **SCAELT** 
- d) **SACELT** 

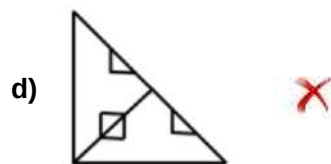
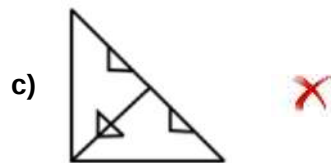
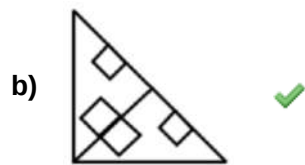
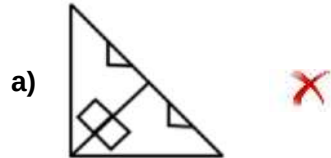
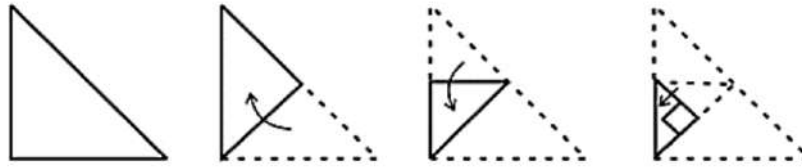
The correct answer is: b

**Explanation:**



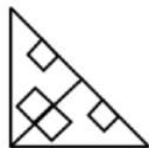
Q. 7

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: b

Explanation:



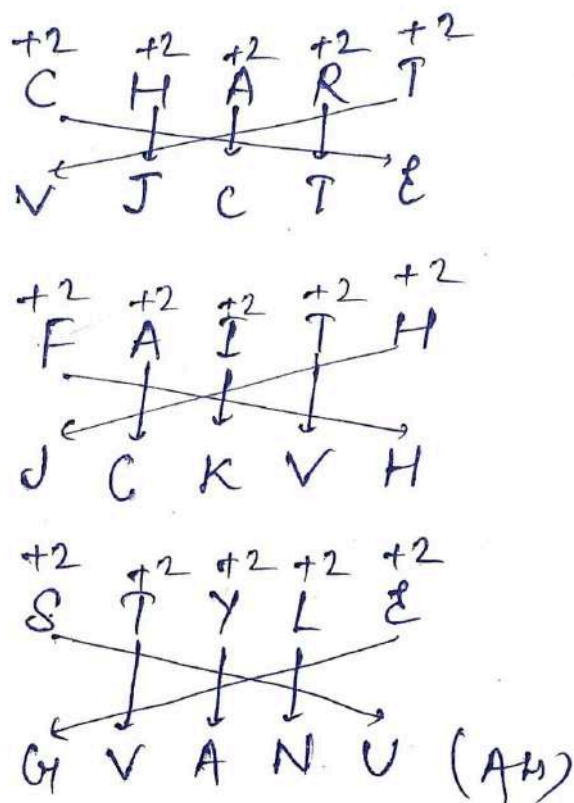
Q. 8

CHART is related to VJCTE in a certain way based on the English alphabetical order. In the same way, FAITH is related to JCKVH. To which of the following is STYLE related, following the same logic?.

- a) GVBMU 
- b) GUBNU 
- c) GVANU 
- d) GUANU 

The correct answer is: c

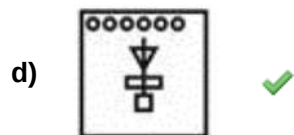
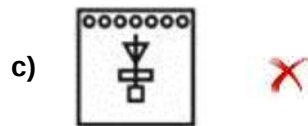
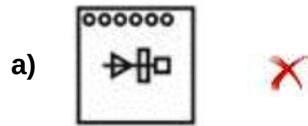
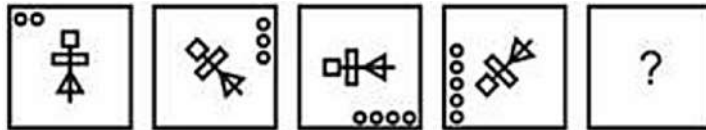
Explanation:





Q. 9

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



The correct answer is: d


**Explanation:**





Q. 10

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

6, 11, ?, 121, 601, 3601

a) 29 

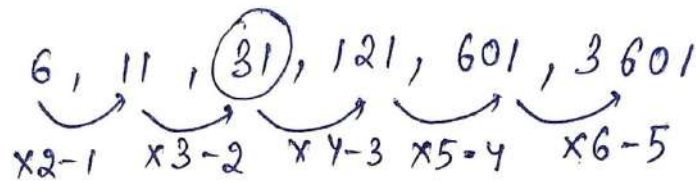
b) 35 

c) 31 

d) 27 

The correct answer is: c

Explanation:



6, 11, 31, 121, 601, 3601

$\times 2 - 1$     $\times 3 - 2$     $\times 4 - 3$     $\times 5 - 4$     $\times 6 - 5$

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:

No lily is a rose.

All lily are daffodils.





All daffodils are jasmines.

Conclusions:

I. All roses are daffodils.

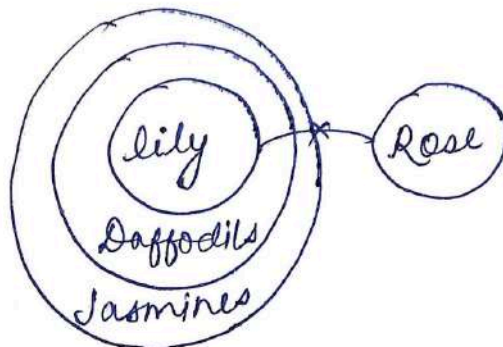
II. Some jasmines are roses.

III. No jasmine is a rose.

- a) Only conclusion II follows 
- b) Only conclusion III follows 
- c) Either conclusion II or III follows 
- d) Only conclusion I follows 

Explanation:

The correct answer is: c



Either conclusion II or  
III follows.

Q. 12

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

- REFERENCE
- M
- N
- a) REFERENCE ✗
- b) REFERENCE ✗
- c) REFERENCE ✗
- d) REFERENCE ✓

Explanation:

The correct answer is: d

REFERENCE


Q. 13


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


(54, 27, 37)


(48, 24, 34)

(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) (38, 16, 26) 

b) (44, 22, 33) 

c) (58, 29, 39) 

d) (42, 21, 32) 

Explanation:

The correct answer is: c

Logic:

(a)  $(1\text{st no.})/2 = 2\text{nd no.}$

(b)  $2\text{nd no.} + 10 = 3\text{rd no.}$

I. (54, 27, 37)

$$54/2=27$$

$$27 + 10 = 37$$

II. (48, 24, 34)

$$48/2=24$$

$$24 + 10 = 34$$

(c) (58, 29, 39)

$$58/2=29$$

$$29 + 10 = 39$$

Q. 14

Which letter cluster can replace the question mark (?) to complete the given series?

BAGY, FXIX, ?, NRMV, ROOU

a) KUJW 

b) KJUW 

c) JKUW 

d) JUKW 

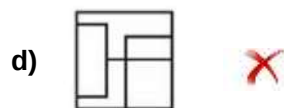
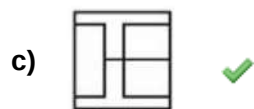
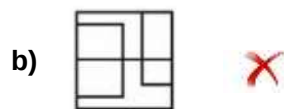
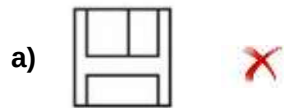
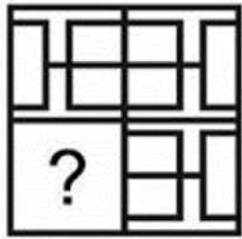
The correct answer is: d

Explanation:

B    A    G    Y  
 $\downarrow +4$   $\downarrow -3$   $\downarrow +2$   $\downarrow -1$   
 F    X    I    X  
 $\downarrow +4$   $\downarrow -3$   $\downarrow +2$   $\downarrow -1$   
 J    U    K    W (Ans)  
 $\downarrow +4$   $\downarrow -3$   $\downarrow +2$   $\downarrow -1$   
 N    R    M    V  
 $\downarrow +4$   $\downarrow -3$   $\downarrow +2$   $\downarrow -1$   
 R    O    O    U

Q. 15

Select the figure from the options that can replace the question mark (?) and complete the pattern (rotation is NOT allowed).



The correct answer is: c

Explanation:



Q. 16

Select the option that represents the letters which, when sequentially placed from left to right in the blanks below, will complete the letter series.  
g e \_ f \_ f g \_ e e \_ e \_ g g \_ e \_ e \_ g

- a) e e g e f e f g 
- b) e e g f f e f f 
- c) e e g f g e f f 
- d) e e g f f e f e 

Explanation:

The correct answer is: b





g e e f / e f g / g e e f / e f g / g e e f / e f g

The correct combination of letters to fill in the blanks is e e g f f e f f.

Q. 17

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

PLY: DZM :: NIL : BWZ :: MON:?

- a) BDA 
- b) ACB 
- c) BCD 
- d) ABD 

The correct answer is: b

Explanation:

$\begin{array}{ccc} +14 & +14 & +14 \\ P & L & Y \\ \downarrow & \downarrow & \downarrow \\ D & Z & M \end{array}$ 
 $\begin{array}{ccc} +14 & +14 & +14 \\ N & I & L \\ \downarrow & \downarrow & \downarrow \\ B & W & Z \end{array}$

$\begin{array}{ccc} +14 & +14 & +14 \\ M & O & N \\ \downarrow & \downarrow & \downarrow \\ \boxed{A} & \boxed{C} & \boxed{B} \end{array}$  (Ans)

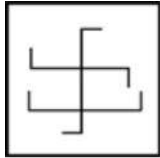


Q. 18

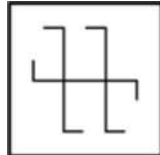
Select the option in which the given figure is embedded (rotation is NOT allowed).



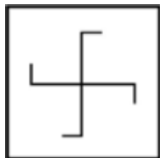
a)



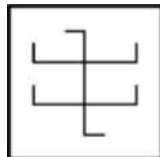
b)



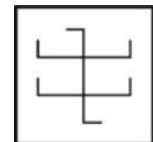
c)



d)







Explanation:



The correct answer is: d

Q. 19

In a certain code language, 'DEVIL' is coded as 'BGTKJ' and 'TAXES' is coded as 'RCVGQ'. How will 'SMART' be coded in the given language?

- a) QPXTR 
- b) QOYTR 
- c) QPYUR 
- d) QOXTR 

The correct answer is: b

Explanation:









-2	+2	-2	+2	-2
D	E	V	I	L
↓	↓	↓	↓	↓
B	G	T	K	J

-2	+2	-2	+2	-2
T	A	X	E	S
↓	↓	↓	↓	↓
R	C	V	G	Q

-2	+2	-2	+2	-2
S	M	A	R	T
↓	↓	↓	↓	↓
Q	O	Y	P	R

Q. 20	<p>If A means <math>-</math>, B means <math>+</math>, C means <math>\times</math>, and D means <math>\div</math>, then what will be the value of the given expression?  <math>96 \text{ A } 24 \text{ B } 72 \text{ D } 9 \text{ C } 13 \text{ B } 19 = ?</math></p> <p>a) 175 </p> <p>b) 186 </p> <p>c) 195 </p> <p>d) 205 </p>
Explanation:	<p>The correct answer is: c</p> <p><math>96 \text{ A } 24 \text{ B } 72 \text{ D } 9 \text{ C } 13 \text{ B } 19</math></p> <p><math>\Rightarrow 96 - 24 + 72 \div 9 \times 13 + 19</math></p> <p><math>\Rightarrow 96 - 24 + 104 + 19</math></p> <p><math>\Rightarrow 219 - 24 = 195</math></p>
Q. 21	<p>43 is related to 1860 by certain logic. Following the same logic, 57 is related to 3260. To which of the following is 63 related, following the same logic? (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.)</p> <p>a) 3960 </p> <p>b) 3970 </p> <p>c) 3980 </p> <p>d) 3990 </p>
Explanation:	<p>The correct answer is: c</p> <p>Logic: <math>(1\text{st no.})^2 + 11 = 2\text{nd number}</math></p> <ul style="list-style-type: none"> <li><math>(43)^2 + 11 = 1860</math></li> <li><math>(57)^2 + 11 = 3260</math></li> <li><math>(63)^2 + 11 = 3980</math></li> </ul>

Q. 22

Three of the following four are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group? The odd one out is not based on the number of consonants/vowels or their position in the letter cluster

a) GLO b) PUX c) RWY d) SXA 

The correct answer is: c

Explanation:

G L O  
+5 +3

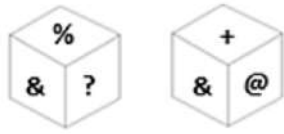
P U X  
+5 +3





R W Y (odd)  
+5 +2

S X A  
+5 +3

Q. 23

Six symbols %, &, ?, +, \$ and @ are written on different faces of a dice. Two positions of this dice are shown in the figure below. Find the symbol on the face opposite to the one having @.



- a) % 
- b) ? 
- c) & 
- d) \$ 





Explanation:

The correct answer is: b

Opposites of the given dice are: & - \$, % - + and ? - @.

Q. 24

All of the letters in the word 'HOSTILITY' are arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter which is fourth from the left end and the one which is fifth from the right end in the new letter-cluster thus formed?

- a) Five 
- b) Two 
- c) Three 
- d) Four 

Explanation:

The correct answer is: b

H O S T I L I T Y





H I I L O S T T Y





The letter which is fourth from the left end is L.





The letter which is fifth from the right is O.

Letters between L and O are M and N.





There are two letters between M and N.





<b>Q. 25</b>	<p>Which number will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and '×' and '÷' are interchanged?</p> $63 \times 9 - 8 \div 3 + 18 = ?$ <p>a) 11 </p> <p>b) 16 </p> <p>c) 9 </p> <p>d) 13 </p>
<b>Explanation:</b>	<p>The correct answer is: d</p> $63 \times 9 - 8 \div 3 + 18 = ?$ <p>If '+' and '-' are interchanged and '×' and '÷' are interchanged, then</p> $\Rightarrow 63 \div 9 + 8 \times 3 - 18$ $\Rightarrow 7 + 24 - 18$ $\Rightarrow 31 - 18 = 13$





Q. 26	<p>Protection of life and liberty is included under which Article of the Constitution of India?</p> <p>a) Article 20 </p> <p>b) Article 24 </p> <p>c) Article 21 </p> <p>d) Article 23 </p>
Explanation:	<p>The correct answer is: <b>Article 21</b>.</p> <p><b>Article 21</b> of the Indian Constitution guarantees the fundamental right to the <b>protection of life and personal liberty</b>. It states:</p> <p>"No person shall be deprived of his life or personal liberty except according to the procedure established by law."</p> <p>This article is a cornerstone of the fundamental rights provided to individuals under the Indian Constitution. Over the years, the scope of Article 21 has been expanded by judicial interpretations to include a range of rights necessary for leading a dignified life, such as:</p> <ul style="list-style-type: none"><li>• <b>Right to Privacy</b></li><li>• <b>Right to a Pollution-Free Environment</b></li><li>• <b>Right to Livelihood</b></li><li>• <b>Right to Shelter</b></li><li>• <b>Right to Health and Medical Care</b></li></ul> <p>The Supreme Court of India has upheld Article 21 as one of the most significant protections for individuals, ensuring the preservation of their dignity and personal freedom.</p>

Q. 27	<p>Which country has recently launched the Green Transition Alliance India (GTAI) initiative to strengthen sustainable energy cooperation with India while supporting global carbon neutrality?</p> <p>a) Denmark </p> <p>b) Germany </p> <p>c) Sweden </p> <p>d) Norway </p>
Explanation:	<p>The correct answer is <b>Denmark</b>.</p> <p><b>Explanation:</b></p> <p><b>Denmark</b> recently launched the <b>Green Transition Alliance India (GTAI)</b> initiative to strengthen collaboration with India on <b>sustainable energy solutions</b> and accelerate their shared commitment to achieving <b>global carbon neutrality</b>. This initiative is part of the broader <b>Green Strategic Partnership (GSP)</b> signed between India and Denmark in <b>2020</b>, aimed at fostering cooperation in green energy and climate action.</p>




Q. 28	<p>In 1936, The Independent Labour Party was founded by ____.</p> <p>a) Mohan Singh Bhakhna </p> <p>b) BR Ambedkar </p> <p>c) Bal Gangadhar Tilak </p> <p>d) Bhagat Singh </p>
Explanation:	<p>The correct answer is: <b>B.R. Ambedkar</b>.</p> <p>Dr. B.R. Ambedkar founded the Independent Labour Party (ILP) in <b>1936</b>. This political organization was established to address the socio-economic issues faced by marginalized communities, particularly the labour class and Dalits (formerly known as untouchables). The ILP aimed to challenge the <b>Brahmanical and capitalist structures</b> of society and advocate for equality and justice.</p> <p>The party made a significant impact in the <b>1937 Bombay Presidency elections</b>, securing <b>15 out of 17 seats</b> it contested. It also opposed the <b>Industrial Disputes Bill of 1937</b>, which sought to limit workers' rights to strike.</p> <p>Ambedkar's leadership of the ILP marked a pivotal moment in India's political history, as it combined social reform with political action to uplift the oppressed.</p>


<b>Q. 29</b>	<p><b>Grammy award winner, Carnatic musician Thetakudi Harihara Vinayakram, fondly known as Vikku, is known for his mastery of which of the following musical instruments?</b></p> <p>a) Violin </p> <p>b) Veena </p> <p>c) Ghatam </p> <p>d) Sitar </p>
<b>Explanation:</b>	<p>The correct answer is <b>Ghatam</b>.</p> <p><b>Explanation:</b></p> <p><b>Thetakudi Harihara Vinayakram</b>, fondly known as <b>Vikku Vinayakram</b>, is a renowned Carnatic musician and percussionist celebrated for his mastery of the <b>Ghatam</b>, an earthen pot used as a percussion instrument in Indian classical music. He is credited with popularizing the Ghatam on global platforms and is often referred to as the <b>God of Ghatam</b>.</p> <p><b>About the Ghatam:</b></p> <ul style="list-style-type: none"><li>• The Ghatam is a <b>large, narrow-mouthed earthenware pot</b> used in Carnatic music. It produces rhythmic sounds when struck with fingers, palms, or knuckles.</li><li>• Unlike other percussion instruments like the tabla or mridangam, the Ghatam does not have a membrane over its mouth, making it unique in its sound production.</li></ul>


Q. 30	<p>Under which theme did UNESCO observe International Literacy Day on 8 September 2024?</p> <p>a) Promoting Multilingual Education: Literacy for Mutual Understanding and Peace </p> <p>b) Transforming Literacy Learning Spaces </p> <p>c) Literacy and Multilingualism </p> <p>d) Literacy for a human-centered recovery: Narrowing the digital divide </p>
Explanation:	<p>The correct answer is <b>Promoting Multilingual Education: Literacy for Mutual Understanding and Peace</b>.</p> <p><b>Explanation:</b></p> <p>On <b>8 September 2024</b>, UNESCO observed <b>International Literacy Day</b> under the theme "<b>Promoting Multilingual Education: Literacy for Mutual Understanding and Peace</b>". This theme emphasized the importance of adopting a <b>multilingual approach</b> to literacy development, focusing on the cognitive, pedagogical, and socio-economic benefits of using <b>first-language-based education</b>. It highlighted how multilingual education can foster <b>mutual understanding, social cohesion, and peace</b> in diverse societies.</p>


Q. 31

According to the 2024 Global Hunger Index (GHI), India's GHI score is 27.3, which is considered 'serious'. What was India's rank in the 2024 GHI report?

a) 105<sup>th</sup> 

b) 111<sup>th</sup> 

c) 99<sup>th</sup> 

d) 107<sup>th</sup> 

The correct answer is **105th**.

**Explanation:**





In the **2024 Global Hunger Index (GHI)**, India ranked **105th** out of **127 countries**<sup>2</sup>. The GHI score of **27.3** categorizes India's hunger level as '**serious**', reflecting ongoing challenges related to food insecurity and malnutrition.





**Key Indicators Contributing to India's GHI Score:**





1. **Undernourishment**: Approximately **13.7%** of India's population suffers from insufficient caloric intake.
2. **Child Stunting**: **35.5%** of children under the age of five have low height for their age, indicating chronic undernutrition.
3. **Child Wasting**: **18.7%** of children under five have low weight for their height, reflecting acute undernutrition. This is the **highest globally**.
4. **Child Mortality**: The mortality rate for children under five is **2.9%**, partly due to inadequate nutrition and unhealthy environments.





India's rank highlights the need for stronger interventions to address hunger and malnutrition, especially compared to neighbouring countries like **Bangladesh, Nepal, and Sri Lanka**, which performed better in the index.

**Explanation:**





<b>Q. 32</b>	<p>According to Census of India 2011, female adolescents in the age group of 10-19 years had a share of:</p> <p>a) 52.7% </p> <p>b) 47.3% </p> <p>c) 31.3% </p> <p>d) 20.9% </p>
<b>Explanation:</b>	<p>The correct answer is <b>47.3%</b>.</p> <p><b>Explanation:</b></p> <p>According to the <b>Census of India 2011</b>, female adolescents in the age group of <b>10-19 years</b> constituted <b>47.3%</b> of the total adolescent population in India. This age group is significant as it represents a critical phase of physical, emotional, and social development, often referred to as the <b>formative years</b>.</p>

Q. 33	<p>Which slogan was associated with the extremist phase of the Indian National Movement?</p> <p>a) Freedom is My Birthright and I Shall Have It </p> <p>b) Give me Blood, and I Shall Give Your Freedom </p> <p>c) Sarfaroshi ki Tamanna, Ab Humare Dil Me Hai </p> <p>d) Inquilab Zindabad </p>
Explanation:	<p>The correct answer is <b>Freedom is My Birthright and I Shall Have It</b>.</p> <p><b>Explanation:</b></p> <p>This slogan was famously associated with <b>Bal Gangadhar Tilak</b>, one of the prominent leaders of the <b>Extremist phase</b> of the Indian National Movement. Tilak, often referred to as the "Father of Indian Unrest," used this slogan to inspire Indians to demand <b>Swaraj (self-rule)</b> and to assert their rights against British colonial rule. It became a rallying cry for the Extremist leaders who believed in more assertive and direct methods of resistance compared to the Moderates.</p> <p><b>Other options explained:</b></p> <ul style="list-style-type: none"> <li>• <b>Give me Blood, and I Shall Give You Freedom:</b> This slogan was given by <b>Subhas Chandra Bose</b> during the later revolutionary phase of the freedom struggle.</li> <li>• <b>Sarfaroshi ki Tamanna, Ab Humare Dil Me Hai:</b> This was a patriotic poem by <b>Ram Prasad Bismil</b>, associated with the revolutionary movement rather than the Extremist phase.</li> <li>• <b>Inquilab Zindabad:</b> Coined by <b>Maulana Hasrat Mohani</b>, this slogan became popular during the revolutionary phase and was widely used by <b>Bhagat Singh</b> and his associates.</li> </ul>

Q. 34	<p>According to the Constitution of India, who conducts the Election of the Vice-President of India?</p> <p>a) The Parliament of India </p> <p>b) The Legislature Councils of all States </p> <p>c) The Legislative Assemblies of all States </p> <p>d) The Election Commission of India </p>
Explanation:	<p>The correct answer is <b>The Election Commission of India</b>.</p> <p><b>Explanation:</b></p> <p>According to <b>Article 66</b> of the <b>Constitution of India</b>, the <b>Election Commission of India (ECI)</b> is responsible for conducting the election of the <b>Vice-President of India</b>. The Vice-President is elected through an indirect election process by an <b>Electoral College</b>, which comprises members of both houses of <b>Parliament</b>, including the <b>Rajya Sabha</b> and <b>Lok Sabha</b>, but <b>not the State Legislatures</b>.</p> <p><b>Key Details:</b></p> <ul style="list-style-type: none"> <li>• <b>Electoral College:</b> The election is conducted by a secret ballot using the <b>proportional representation system through a single transferable vote</b>. Members of the State Legislatures, Legislative Councils, and Assemblies do not participate in this election; it is restricted to members of Parliament.</li> <li>• <b>Role of the Election Commission:</b> <ul style="list-style-type: none"> <li>◦ The Election Commission oversees the process, ensuring fairness and transparency.</li> <li>◦ It prepares the <b>electoral roll</b>, conducts the voting, and declares the results.</li> </ul> </li> </ul>

Q. 35	<p>Under the leadership of which of the following revolutionaries was Chittagong Armoury Raid conducted?</p> <p>a) Rash Behari Bose </p> <p>b) Badal Gupta </p> <p>c) Hemu Kalani </p> <p>d) Surya Sen </p>
Explanation:	<p>The correct answer is: <b>Surya Sen</b>.</p> <p>The Chittagong Armoury Raid, conducted on <b>April 18, 1930</b>, was a daring revolutionary act led by <b>Surya Sen</b>, also known as "Master Da." Surya Sen was a school teacher and a prominent leader in the Indian independence movement. He organized a group of revolutionaries under the banner of the <b>Indian Republican Army</b>, Chittagong Branch, to challenge British colonial rule.</p> <p>The raid aimed to seize weapons and ammunition from the British police and auxiliary forces' armouries in Chittagong (now in Bangladesh). The revolutionaries also disrupted communication lines by cutting telephone and telegraph wires and proclaimed a <b>Provisional Revolutionary Government</b>. Although the raid did not achieve its ultimate goal of sparking a widespread uprising, it inspired many acts of resistance across India.</p> <p>Surya Sen's leadership and the bravery of his team, which included notable figures like <b>Pritilata Waddedar</b> and <b>Kalpana Dutta</b>, remain a symbol of courage and sacrifice in India's struggle for independence.</p>



Q. 36	<p>A transverse wave consists of _____ that make one cycle.</p> <p>a) two crests and two troughs </p> <p>b) two crests and one trough </p> <p>c) one crest and one trough </p> <p>d) one crest and two troughs </p>
Explanation:	<p>The correct answer is <b>one crest and one trough</b>.</p> <p><b>Explanation:</b></p> <p>A <b>transverse wave</b> is a wave where the particles of the medium move <b>perpendicularly</b> to the direction of the wave's propagation. In one complete cycle of a transverse wave, there is:</p> <ol style="list-style-type: none"><li>1. <b>One Crest:</b> The highest point of the wave above the equilibrium position.</li><li>2. <b>One Trough:</b> The lowest point of the wave below the equilibrium position.</li></ol> <p>These two features—one crest and one trough—together represent a full cycle of a transverse wave.</p> <p><b>Key Characteristics:</b></p> <ul style="list-style-type: none"><li>• The <b>amplitude</b> of the wave measures the maximum displacement of the crest or trough from the equilibrium position.</li><li>• The <b>wavelength</b> is the distance between consecutive crests or troughs.</li></ul>

Q. 37

In which of the following Indian states is the primitive form of cultivation (slash and burn agriculture) called 'Bewar' or 'Dahiya'?

- a) Karnataka 
- b) Kerala 
- c) Madhya Pradesh 
- d) Uttar Pradesh 

**Explanation:**

The correct answer is **Madhya Pradesh**.

**Explanation:**

Shifting agriculture, also known as **slash-and-burn agriculture**, is practiced in several states across India. In **Madhya Pradesh**, the primitive form of cultivation known as '**Bewar**' or '**Dahiya**' refers to **slash and burn agriculture**, a traditional farming method practiced by tribal communities, particularly in forested regions. This technique involves clearing patches of land by cutting down vegetation and burning it to prepare the soil for agriculture. After cultivation, the land is left fallow to restore fertility.

Different regions have their unique names and methods for this form of cultivation. Here's an overview:

**1. Jhumming – Northeast India**

- Practiced in states like **Arunachal Pradesh, Assam, Nagaland, Manipur, Tripura, Mizoram, and Meghalaya**.
- **Process:** Farmers clear patches of forest by cutting and burning vegetation. Crops are cultivated for a few years, and the land is then left fallow to regain fertility.
- **Crops Grown:** Rice, maize, millet, and vegetables.
- **Tribes Involved:** Naga, Mizo, Khasi, and Garo tribes.

**2. Kumri – Karnataka and Andhra Pradesh**

- Practiced in the **Western Ghats** and parts of tribal Andhra Pradesh.
- **Process:** Similar to other forms of shifting agriculture, but often combined with forest resource use.
- **Crops Grown:** Millets, pulses, and minor cereals.
- **Communities Involved:** Forest-dwelling tribal groups.

**3. Penda, Beera, or Dahiya – Central India (Madhya Pradesh, Chhattisgarh, Odisha)**

- In **Madhya Pradesh** and **Chhattisgarh**, this method is widely known as **Bewar** or **Dahiya**, particularly among the **Baiga** and **Gond** tribes.
- **Process:** Vegetation is cleared, burned, and crops are sown. After a few harvests, the land is abandoned to regenerate.
- **Crops Grown:** Millets, pulses, and minor cereals.

**4. Podu or Podum – Odisha and Andhra Pradesh**

- Practiced in the hilly and tribal regions of these states.
- **Process:** Involves cutting trees, burning vegetation, and cultivating the land temporarily.
- **Crops Grown:** Rice, legumes, and oilseeds.
- **Tribes Involved:** Kondhs and other forest-dwelling groups.

**5. Poonam Krishi – Western India (Gujarat, Maharashtra)**

- Practiced in parts of Gujarat and Maharashtra.
- **Process:** It is a form of shifting agriculture adapted to the semi-arid regions, often combined with traditional irrigation techniques.

- **Crops Grown:** Sorghum, pearl millet, and pulses.

## 6. Kuruwa – Jharkhand

- Practiced by the tribal population in **Jharkhand**.
- **Process:** Similar to Podu or Jhumming, focusing on sloping terrains.
- **Crops Grown:** Paddy, millets, and maize.

### Environmental Concerns and Alternatives:





While shifting agriculture is a traditional practice deeply embedded in tribal communities' cultures, it has raised concerns due to:

- **Deforestation:** Clearing forests affects biodiversity and carbon sequestration.
- **Soil Erosion:** Burning and cultivation often lead to soil degradation.

Efforts are being made to introduce sustainable agricultural techniques such as **agroforestry** and **terrace farming** to mitigate these issues.

Q. 38

Which of the following was the unique feature of Dholavira's city layout during the Indus Valley Civilisation?

- a) It was divided into three distinct parts. 
- b) It was divided into eight parts. 
- c) It was divided into two distinct parts. 
- d) It was a single unique tomb. 

Explanation:

The correct answer is: **It was divided into three distinct parts.**

Dholavira, a prominent site of the Indus Valley Civilization located in present-day Gujarat, India, had a unique city layout that set it apart from other Harappan sites. The city was divided into three distinct sections: the **Citadel**, the **Middle Town**, and the **Lower Town**. This tripartite division showcased advanced urban planning and a clear social hierarchy.

Each section had its own specific purpose:

- **The Citadel:** This was the most fortified and elevated area, likely housing administrative and elite structures.
- **The Middle Town:** This area was for the middle class and included residential buildings.
- **The Lower Town:** This was the largest section, accommodating the general population and workshops.

**Q. 39****Article 51A of the Indian constitution provides for \_\_\_\_.****a) Fundamental Rights****b) Union Executive****c) Fundamental Duties****d) Directive Principles of State Policy**

The correct answer is: **Fundamental Duties.**





**Article 51A** of the Indian Constitution lists the **Fundamental Duties** of Indian citizens. These duties were added through the **42nd Constitutional Amendment Act, 1976**, based on the recommendations of the **Swaran Singh Committee**. They are intended to remind citizens of their responsibilities toward the nation and society.





Here's a detailed explanation of each duty:

**Explanation:**





1. **(a) Respect the Constitution, National Flag, and National Anthem** Citizens are required to honour the Constitution, uphold its ideals, and respect the symbols of India's sovereignty and pride, including the flag and anthem.
2. **(b) Cherish and follow the noble ideals of the freedom struggle** Citizens should imbibe and promote the values and principles of liberty, equality, and justice, as demonstrated by leaders during India's fight for independence.
3. **(c) Uphold and protect the sovereignty, unity, and integrity of India** Citizens must safeguard the nation's independence and strive to maintain its unity and territorial integrity.
4. **(d) Defend the country and render national service when required** It is the duty of every citizen to serve the nation in times of need, such as during emergencies or conflicts.
5. **(e) Promote harmony and spirit of common brotherhood** Citizens should work towards eliminating social barriers like caste, religion, or language, and embrace a sense of equality and fraternity, while renouncing untouchability and other discriminatory practices.
6. **(f) Value and preserve the rich heritage of Indian culture** Citizens should protect and appreciate the country's cultural legacy, including art, music, literature, and traditions.
7. **(g) Protect and improve the natural environment** This includes safeguarding forests, lakes, rivers, and wildlife, and striving to maintain a clean and healthy environment.
8. **(h) Develop scientific temper, humanism, and spirit of inquiry and reform** Citizens are encouraged to adopt a rational approach, promote innovation, and contribute to the betterment of society through a progressive mindset.
9. **(i) Safeguard public property and abjure violence** Citizens are responsible for protecting public assets, avoiding their misuse or destruction, and abstaining from violence in any form.
10. **(j) Strive for excellence in all spheres of individual and collective activity** It is the duty of citizens to constantly seek improvement in every field and contribute to the development and progress of the nation.
11. **(k) Provide opportunities for education to children** It is the responsibility of parents or guardians to ensure that their children or wards receive education, in line with the **Right to Education** under Article 21A, for children between the ages of 6 and 14 years.





These **Fundamental Duties** reflect the moral obligations and responsibilities of every citizen toward the nation, society, and the environment. Although they are **non-justiciable**, meaning they cannot be enforced in a court of law, they provide a framework for ethical and responsible citizenship.





Q. 40	<p>Which of the following statements about the Vice President of India is INCORRECT?</p> <p>a) The Vice President is elected for five years. </p> <p>b) Members of State legislatures do not take part in his elections. </p> <p>c) He acts as the ex-officio Chairman of the Rajya Sabha. </p> <p>d) He can be removed from his office by the President approved through a resolution passed by the Lok Sabha and Rajya Sabha. </p>
Explanation:	<p>The incorrect statement is: "<b>He can be removed from his office by the President approved through a resolution passed by the Lok Sabha and Rajya Sabha.</b>"</p> <p>The Vice President of India <b>cannot be removed by the President alone</b>. Instead, there is a specific procedure for the removal of the Vice President laid down in the Constitution of India:</p> <ol style="list-style-type: none"> <li>1. The Vice President can be <b>removed through a resolution passed in the Rajya Sabha</b> by a <b>majority of its members</b> and agreed to by the Lok Sabha.</li> <li>2. This resolution requires a <b>14-day prior notice</b> to be submitted by members of the Rajya Sabha before it can be taken up for consideration.</li> </ol> <p><b>Other options explained:</b></p> <ul style="list-style-type: none"> <li>• <b>The Vice President is elected for five years:</b> This is correct. The Vice President serves a term of 5 years but can continue in office until a successor is elected.</li> <li>• <b>Members of State legislatures do not take part in his elections:</b> This is correct. Only the <b>members of both Houses of Parliament</b>, including elected and nominated members, vote in the Vice President's election.</li> <li>• <b>He acts as the ex-officio Chairman of the Rajya Sabha:</b> This is correct. The Vice President is constitutionally designated as the presiding officer of the Rajya Sabha.</li> </ul>





Q. 41	<p>Which one of the following animals is not triploblastic?</p> <p>a) Jellyfish </p> <p>b) Ascaris </p> <p>c) Earthworms </p> <p>d) Planaria </p>
Explanation:	<p>The correct answer is: <b>Jellyfish</b>.</p> <p><b>Jellyfish</b> are not triploblastic; they are <b>diploblastic</b> organisms. This means that they possess only <b>two germ layers</b> during embryonic development: the <b>ectoderm</b> (outer layer) and <b>endoderm</b> (inner layer). Between these layers, they have a jelly-like non-cellular substance called the <b>mesoglea</b>, but this is not equivalent to a true germ layer.</p> <p>In contrast:</p> <ul style="list-style-type: none"><li>• <b>Ascaris</b> (a parasitic roundworm), <b>Earthworms</b>, and <b>Planaria</b> are <b>triploblastic</b>. They develop from three germ layers: the <b>ectoderm</b>, <b>mesoderm</b>, and <b>endoderm</b>. This triploblastic structure allows for the development of more complex tissues and organ systems.</li></ul> <p><b>Diploblastic organisms</b>, like jellyfish, have simpler body structures compared to triploblastic organisms.</p>











Q. 42	<p>What is the similarity between fermentation in yeast and anaerobic respiration taking place in muscle cells of humans?</p> <p>a) Lactic acid is formed </p> <p>b) Take place in Cytoplasm </p> <p>c) Ethanol is formed </p> <p>d) Take place in mitochondria </p>
Explanation:	<p>The correct answer is: <b>Take place in Cytoplasm.</b></p> <p>Both <b>fermentation in yeast</b> and <b>anaerobic respiration in human muscle cells</b> occur in the <b>cytoplasm</b> of the cell. This is because both processes involve the breakdown of glucose to produce energy in the absence of oxygen (anaerobic conditions).</p> <p><b>Key Differences:</b></p> <ul style="list-style-type: none"> <li>• <b>Fermentation in Yeast:</b> <ul style="list-style-type: none"> <li>◦ Produces <b>ethanol</b> and <b>carbon dioxide</b> as by-products.</li> <li>◦ It is used in baking, brewing, and other industrial processes.</li> <li>◦ Example pathway: Glucose → Ethanol + CO<sub>2</sub> + Energy.</li> </ul> </li> <li>• <b>Anaerobic Respiration in Muscle Cells:</b> <ul style="list-style-type: none"> <li>◦ Produces <b>lactic acid</b> as a by-product, which can lead to muscle fatigue.</li> <li>◦ Occurs during intense physical activity when oxygen supply is insufficient.</li> <li>◦ Example pathway: Glucose → Lactic Acid + Energy.</li> </ul> </li> </ul> <p>Both processes start with <b>glycolysis</b>, where glucose is broken down into pyruvate in the cytoplasm, but they diverge in their end-products depending on the organism and conditions.</p>





Q. 43	<p>Which of the following elements has only one letter in its symbol?</p> <p>a) Copper </p> <p>b) Carbon </p> <p>c) Chlorine </p> <p>d) Calcium </p>
Explanation:	<p>The correct answer is: <b>Carbon</b>.</p> <p>Carbon has the chemical symbol <b>C</b>, which is a single letter. Here's how it compares to the other options:</p> <ul style="list-style-type: none"><li>• <b>Copper</b>: Its symbol is <b>Cu</b>, derived from the Latin name "cuprum."</li><li>• <b>Chlorine</b>: Its symbol is <b>Cl</b>.</li><li>• <b>Calcium</b>: Its symbol is <b>Ca</b>.</li></ul> <p>The simplicity of Carbon's symbol reflects its importance as a fundamental element in chemistry, especially in organic compounds and life sciences.</p>





Q. 44	<p>Which of the following is NOT a physical change?</p> <p>a) Heating of iron rod to red hot </p> <p>b) Curdling of milk </p> <p>c) Evaporation of diesel </p> <p>d) Sublimation of <math>\text{NH}_4\text{Cl}</math> </p>
Explanation:	<p>The correct answer is: <b>Curdling of milk.</b></p> <p>Curdling of milk is <b>NOT</b> a physical change because it involves a <b>chemical reaction</b>. During curdling, the proteins in milk (especially casein) undergo structural changes caused by an acid or enzyme, leading to the formation of curd. This process is irreversible, and the original milk cannot be recovered, which is a hallmark of a chemical change.</p> <p><b>Other options explained:</b></p> <ul style="list-style-type: none"><li>• <b>Heating of iron rod to red hot:</b> This is a physical change because heating does not alter the chemical composition of iron; it simply changes its temperature and color temporarily.</li><li>• <b>Evaporation of diesel:</b> This is a physical change as diesel transitions from liquid to vapor without a change in its chemical composition.</li><li>• <b>Sublimation of <math>\text{NH}_4\text{Cl}</math> (Ammonium Chloride):</b> This is also a physical change where ammonium chloride changes directly from solid to gas (or gas to solid) without altering its chemical nature.</li></ul> <p>Physical changes are typically reversible and do not involve a transformation at the molecular level, whereas chemical changes result in new substances being formed.</p>

Q. 45	<p>Which of these festivals is considered the most sacred Buddhist festival, commemorating the birth, enlightenment and Mahaparinirvana (passing away) of Buddha Shakyamuni?</p> <p>a) Saga Dawa </p> <p>b) Tamladu </p> <p>c) Sangken </p> <p>d) Ojiyale </p>
Explanation:	<p>The correct answer is <b>Saga Dawa</b>.</p> <p><b>Explanation:</b></p> <p><b>Saga Dawa</b>, also known as the '<b>Triple Blessed Festival</b>', is considered the most sacred Buddhist festival. It commemorates the <b>birth, enlightenment, and Mahaparinirvana (passing away)</b> of <b>Buddha Shakyamuni</b>. This festival is observed on the <b>15th day of the fourth month</b> of the <b>Tibetan Buddhist calendar</b>, which usually falls in May or June in the Gregorian calendar.</p>





Q. 46	<p>Which of the following is one of the metals used in LED semiconductor technology?</p> <p>a) Copper </p> <p>b) Zinc </p> <p>c) Gallium </p> <p>d) Iron </p>
Explanation:	<p>The correct answer is: <b>Gallium</b>.</p> <p>Gallium is a critical metal used in <b>LED semiconductor technology</b>. Specifically, it is employed in the form of compounds like <b>Gallium Arsenide (GaAs)</b> and <b>Gallium Nitride (GaN)</b>. These compounds have excellent electronic properties, making them ideal for light-emitting diodes (LEDs).</p> <p>Here's why Gallium is important:</p> <ul style="list-style-type: none"><li>• <b>Gallium Nitride (GaN)</b>: Widely used in LEDs due to its ability to emit bright light across various wavelengths, including blue and ultraviolet. This makes it crucial for modern LED lighting, displays, and even Blu-ray technology.</li><li>• <b>Gallium Arsenide (GaAs)</b>: Utilized in high-speed electronics and certain types of LEDs due to its efficiency in converting electricity into light.</li></ul>

Q. 47	<p>Chitra Visweswaran is a famous dancer of which of the following dance genres?</p> <p>a) Sattriya </p> <p>b) Kuchipudi </p> <p>c) Kathakali </p> <p>d) Bharatnatyam </p>
Explanation:	<p>The correct answer is: <b>Bharatnatyam</b>.</p> <p>Chitra Visweswaran is a renowned exponent of <b>Bharatnatyam</b>, one of the oldest and most revered classical dance forms of India. Originating from the temples of Tamil Nadu, Bharatnatyam is characterized by intricate footwork, expressive hand gestures, and elaborate costumes. It is deeply rooted in spirituality and devotion, often narrating stories from Hindu mythology.</p> <p>Chitra Visweswaran has made significant contributions to the propagation and teaching of Bharatnatyam. She established the <b>Chidambaram Academy of Performing Arts</b> in Chennai, where she trains future generations of dancers. Her performances and choreographies have earned her numerous accolades, including the <b>Padma Shri</b> award.</p>

Q. 48	<p>In cricket which of the following fielding positions is behind the batsman?</p> <p>a) First slip </p> <p>b) Mid off </p> <p>c) Cover </p> <p>d) Mid-wicket </p>
Explanation:	<p>The correct answer is: <b>First slip</b>.</p> <p>In cricket, the <b>first slip</b> position is located behind the batsman on the off-side, close to the wicketkeeper. Fielders in the slip cordon are positioned to catch the ball if the batsman edges it after a delivery. Slip fielding is crucial in formats like Test cricket, where bowlers aim to induce edges to get batters out.</p> <p><b>Other positions:</b></p> <ul style="list-style-type: none"><li>• <b>Mid-off:</b> Positioned on the off-side, away from the batsman, closer to the bowler.</li><li>• <b>Cover:</b> Found on the off-side, roughly halfway between the batsman and the boundary.</li><li>• <b>Mid-wicket:</b> Positioned on the leg-side, near the batsman, closer to the bowler.</li></ul>

Q. 49	<p>Which of the following is NOT a component of the Indian money supply?</p> <p>a) Time deposits </p> <p>b) Foreign currency reserves </p> <p>c) Demand deposits </p> <p>d) Currency in circulation </p>
Explanation:	<p>The correct answer is: <b>Foreign currency reserves</b>.</p> <p>Foreign currency reserves are <b>not considered a component of the Indian money supply</b>. The money supply refers to the total amount of money available in an economy at a specific time, which includes liquid cash and deposits accessible for public and commercial use. Foreign currency reserves are held by the <b>Reserve Bank of India (RBI)</b> for purposes like stabilizing the currency, managing inflation, and facilitating international trade, but they are not directly part of the money supply accessible in the economy.</p> <p><b>Key components of the Indian money supply include:</b></p> <ol style="list-style-type: none"><li>1. <b>Time Deposits:</b> These are fixed deposits in banks, not immediately liquid but part of the broader definition of the money supply (like M3).</li><li>2. <b>Demand Deposits:</b> These are funds in bank accounts that can be withdrawn on demand, such as savings accounts and current accounts.</li><li>3. <b>Currency in Circulation:</b> Refers to physical money (notes and coins) circulating among the public.</li></ol> <p>Foreign currency reserves are managed separately by the central bank for macroeconomic stability, and hence they are excluded from the money supply measures like M1, M2, or M3.</p>

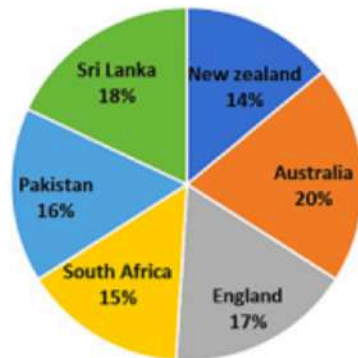


Q. 50	<p>Recently, which state government has launched 'PARTH Yojana', under which the youth of the state will be given training for recruitment in Army, Police and Paramilitary forces?</p> <p>a) Rajasthan </p> <p>b) Uttar Pradesh </p> <p>c) Madhya Pradesh </p> <p>d) Haryana </p>
Explanation:	<p>The correct answer is: <b>Madhya Pradesh</b>.</p> <p>The <b>PARTH Yojana</b> was recently launched by the government of Madhya Pradesh. This initiative aims to provide structured training to the youth of the state for recruitment into the <b>Indian Army, Police, and Paramilitary forces</b>. The scheme was introduced by Chief Minister Mohan Yadav during the <b>State-Level Youth Festival</b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"><li>• To instill patriotism and employability among the youth.</li><li>• To reduce unemployment by preparing candidates for competitive recruitment processes.</li></ul> <p>This initiative reflects the state's commitment to empowering its youth and channeling their energy into productive career paths.</p>

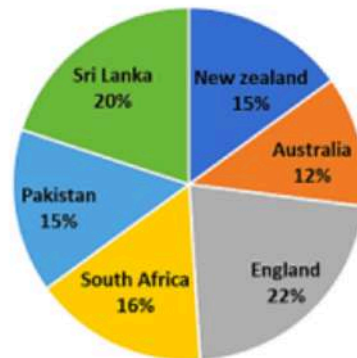
Q. 51

The pie chart I given below shows the runs scored by a player against 6 different countries during 2019-2020. Pie chart 2 shows the runs scored by the same player against the same 6 countries during 2020-2021.

Total runs scored during  
2019-2020 = 4000



Total runs scored during  
2020-2021 = 5000



Find the difference between the total runs scored against New Zealand and Pakistan during 2019-2020 and the total runs scored against Sri Lanka and Pakistan during 2020-2021.

- a) 550 ☒
- b) 500 ☐
- c) 650 ☐
- d) 600 ☐

Total runs scored against

$$\text{New Zealand (2019-20)} = 4000 \times \frac{14}{100} \\ = 560$$

$$\text{Pakistan (2019-20)} = 4000 \times \frac{16}{100} \\ = 640$$

$$\text{New Zealand + Pakistan} = 560 + 640 \\ = 1200$$

Explanation:

Total runs scored against

$$\text{Sri Lanka (2020-21)} = 5000 \times \frac{20}{100} \\ = 1000$$




$$\text{Pakistan (2020-21)} = 5000 \times \frac{15}{100} \\ = 750$$

$$\text{Sri Lanka + Pakistan} = 1000 + 750 \\ = 1750$$

$$\text{Difference} = 1750 - 1200 \\ = 550$$

Q. 52

The sum of the digits of a two-digit number is 11. The number obtained by interchanging its digits exceeds the given number by 27. What is the original number?

a) 83 b) 65 c) 74 d) 47 


Explanation:

option 4: 47

$$4 + 7 = 11, \quad 74 - 47 = 27$$

Q. 53

If  $x^2 + 1 = x$ , then the value of  $(x^{12} + x^9 + 1)$  is:

a) 0 b) 1 c) 2 d) -1 

Explanation:

The correct answer is: b

$$x^2 + 1 = x$$




$$x + \frac{1}{x} = 1$$

$$x^3 = -1$$

$$x^{12} + x^9 + 1 = (x^3)^4 + (x^3)^3 + 1$$

$$= 1 - 1 + 1 = 1$$

Q. 54

If  $(5x + 3y)^3 + (5x - 3y)^3 = 10(Ax^3 + Bxy^2)$ , then what is the value of  $\sqrt{(A \times B)}$ ?a) 15 b)  $12\sqrt{3}$  c)  $15\sqrt{3}$  d) 12 

The correct answer is: c

**Explanation:**

$$[x^3 + y^3 = (x^2 + y^2 + xy)(x + y)]$$

$$\Rightarrow (5x + 3y)^3 + (5x - 3y)^3 = 10(Ax^3 + Bxy^2)$$

$$\Rightarrow (5x + 3y + 5x - 3y)(25x^2 + 9y^2 + 30xy + 25x^2 + 9y^2 - 30xy - 25x^2 + 9y^2)$$

$$= 10(Ax^3 + Bxy^2)$$

$$\Rightarrow 10x(25x^2 + 27y^2) = 10(Ax^3 + Bxy^2)$$

$$\Rightarrow 10(25x^3 + 27xy^2) = 10(Ax^3 + Bxy^2)$$

$$A = 25, B = 27$$

$$\sqrt{A \times B} = \sqrt{25 \times 27}$$

$$= 15\sqrt{3}$$

Q. 55

Which of the following is equal to

$$\left( \frac{\tan^3 \theta}{\sec^2 \theta} + \frac{\cot^3 \theta}{\operatorname{cosec}^2 \theta} + 2 \sin \theta \cos \theta \right) \div (1 + \operatorname{cosec}^2 \theta + \tan^2 \theta) \text{ where } 0 < \theta < 90.$$

a)  $\operatorname{Cosec} \theta \sec \theta$ b)  $\sin \theta \cos \theta$ c)  $\sec \theta$ d)  $\operatorname{Cosec} \theta$ 

The correct answer is: b

Explanation:

$$\Rightarrow \left( \frac{\tan^3 \theta}{\sec^2 \theta} + \frac{\cot^3 \theta}{\operatorname{cosec}^2 \theta} + 2 \sin \theta \cos \theta \right) \div (1 + \operatorname{cosec}^2 \theta + \tan^2 \theta)$$

$$\Rightarrow \left( \frac{\sin^3 \theta}{\cos \theta} + \frac{\cos^3 \theta}{\sin \theta} + 2 \sin \theta \cos \theta \right) \div (\sec^2 \theta + \operatorname{cosec}^2 \theta)$$

$$\Rightarrow \left( \frac{\sin^4 \theta + \cos^4 \theta + 2 \sin^2 \theta \cos^2 \theta}{\sin \theta \cos \theta} \right) \div \left( \frac{1}{\cos^2 \theta} + \frac{1}{\sin^2 \theta} \right)$$




$$\Rightarrow \frac{(\sin^2 \theta + \cos^2 \theta)^2}{\sin \theta \cos \theta} \div \left( \frac{1}{\sin^2 \theta \cos^2 \theta} \right)$$

$$\Rightarrow \frac{1}{\sin \theta \cos \theta} \times \sin^2 \theta \cos^2 \theta$$

$$\Rightarrow \sin \theta \cdot \cos \theta$$

Q. 56

The value of  $\sin^2 15^\circ + \sin^2 25^\circ + \sin^2 35^\circ + \sin^2 45^\circ + \sin^2 55^\circ + \sin^2 65^\circ + \sin^2 75^\circ$  is:

a)  $7/2$  b) 7 c)  $7/3$  d) 4 

Explanation:

$$\begin{aligned}
 & \sin^2 15^\circ + \sin^2 25^\circ + \sin^2 35^\circ + \sin^2 45^\circ + \sin^2 55^\circ + \sin^2 65^\circ + \sin^2 75^\circ \\
 &= \sin^2 15^\circ + \sin^2 75^\circ + \sin^2 25^\circ + \sin^2 75^\circ + \sin^2 35^\circ + \sin^2 55^\circ + \sin^2 45^\circ \\
 &= 1 + 1 + 1 + \left(\frac{1}{\sqrt{2}}\right)^2 = 3 + \frac{1}{2} = \frac{7}{2}
 \end{aligned}$$

Q. 57

If  $\tan A = 7/5$  then find the value of  $\frac{11\sin A - \frac{42}{5}\cos A}{20\sin A + 21\cos A} = ?$

a)  $1/7$  ✓b)  $2/7$  ✗c)  $7$  ✗d)  $5$  ✗

The correct answer is: a

Explanation:

$$\begin{aligned} \tan A &= \frac{7}{5} \\ \Rightarrow \frac{11\sin A - \frac{42}{5}\cos A}{20\sin A + 21\cos A} &\quad \text{Divide by } (\cos A) \\ \Rightarrow \frac{11\tan A - \frac{42}{5}}{20\tan A + 21} &\quad \swarrow \\ \Rightarrow \frac{11 \times \frac{7}{5} - \frac{42}{5}}{20 \times \frac{7}{5} + 21} & \\ \Rightarrow \frac{\frac{77}{5} - \frac{42}{5}}{28 + 21} &= \frac{\frac{35}{5}}{49} = \frac{1}{7} \end{aligned}$$






Q. 58

The following table indicates the number of students studying in three subjects in four colleges.

What is the ratio of the total number of students studying in the Physics to that of studying in Mathematics in all four colleges taken together?

Subjects	Colleges			
	W	X	Y	Z
Physics	420	435	412	285
Chemistry	380	340	315	420
Mathematics	256	310	295	345

a) 576:731 b) 781:585 c) 775:601 d) 776:603 **Explanation:**

The correct answer is: d

Total no. of students studying physics =  $420+435+412+285 = 1552$

Total no. of students studying Mathematics =  $256+310+295+345 = 1206$

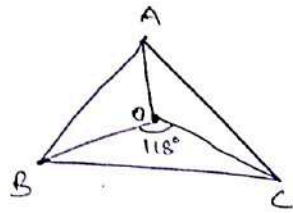
Ratio =  $1552 : 1206 = 776:603$

Q. 59

In  $\triangle ABC$ , O is an intersecting point of bisector of  $\angle B$  and  $\angle C$ . If  $\angle BOC = 118^\circ$ , then what will be the measure of  $\angle BAO$ ?

a)  $28^\circ$  ✓b)  $56^\circ$  ✗c)  $59^\circ$  ✗d)  $62^\circ$  ✗

The correct answer is: a



Explanation:

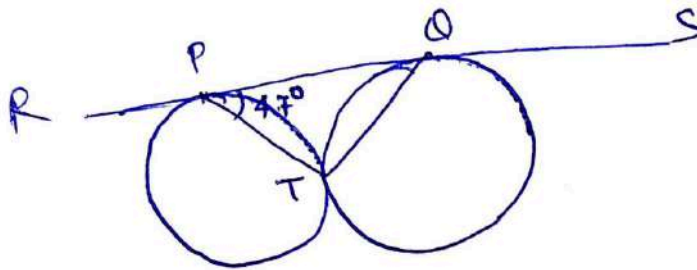
$$\begin{aligned} \angle BOC &= 118^\circ, \text{ O is incenter [OA, OB, OC are angle bisectors]} \\ \angle BOC &= 90^\circ + \frac{\angle A}{2} \\ \Rightarrow 118^\circ - 90^\circ &= \frac{\angle A}{2} \\ \Rightarrow 28 &= \frac{\angle A}{2} \\ \therefore \angle A &= 56^\circ \\ \angle BAO &= \frac{\angle A}{2} \quad [\text{OA bisect } \angle A] \\ &= 28^\circ \end{aligned}$$

Q. 60

Two circles touch each other externally at point T. RS is a direct common tangent line which touches the circles at point P and Q. If  $\angle TPQ = 47^\circ$ , what is the measure (in degree) of  $\angle PQT$ ?

- a) 42 ☒
- b) 43 ☒
- c) 44 ☒
- d) 46 ☒

The correct answer is: b



Explanation:

As we know that





$$\angle PTQ = 90^\circ.$$

$$\angle TPQ = 47^\circ \text{ (Given)}$$

$$\therefore \angle PQT = 90 - 47^\circ \\ = 43^\circ$$

Q. 61

When  $m$  is divided by 7, the remainder is 5. When  $m^2 + 3m - 7$  is divided by 7, what will be the remainder?

- a) 0   
b) 6   
c) 4   
d) 5 

Explanation:

The correct answer is: d

When  $m$  is divided by 7 gives remainder 5.

Now,





$$m^2 + 3m - 7 = 5^2 + 3 \times 5 - 7$$

$$= 25 + 15 - 7 = 33$$

When 33 divided by 7 gives remainder = 5

Q. 62

What should be the marked price of a radio with a purchase price of Rs. 2700 so that the shopkeeper gets a profit of 11.11% on it even after selling it at a discount of 33.33% on the marked price?

- a) 4200   
b) 4545   
c) 3500   
d) 4500 

Explanation:

The correct answer is: d





Cost price = Rs 2700

Profit = 11.11% =

$$\text{Selling price} = 2700 \times \frac{10}{9} = 3000$$


$$\text{Discount} = 33.33\% = \frac{1}{3}$$


$$\text{Marked price} = 3000 \times \frac{3}{2} = 4500$$

<b>Q. 63</b>	<p><b>Cost of 5 pens, 8 notebooks and 4 files is Rs 425. Cost of 3 pens, 11 notebooks and 5 files is Rs 165. What is the cost (in Rs) of 7 pens, 5 notebooks and 3 files?</b></p> <p>a) 850 </p> <p>b) 685 </p> <p>c) 585 </p> <p>d) 775 </p>
<b>Explanation:</b>	<p>The correct answer is: b</p> <p>5 Pens + 8 Notebooks + 4 files = 425__ (i)</p> <p>3 Pens + 11 Notebooks + 5 Files = 165 ____ (ii)</p> <p>On multiplying by 2 in equation (i)</p> <p>10 Pens + 16 Notebooks + 8 files = 850 ____ (iii)</p> <p>Subtracting equation (ii) from equation (iii)</p> <p>7 Pens + 5 Notebooks + 3 files = 850 - 165 = Rs 685</p>

Q. 64

In 't' years simple interest earned on a certain sum of money at the rate of 16% per annum is  $\frac{8}{15}$ th of the principal. If the rate of interest is reduced to three fourth of 16% and the simple interest remains the same, then which of the following statements about the changed value of time is true?

a) It remains the same as 't' 

b) It reduces to  $5\frac{1}{2}$  years 

c) It increases to  $4\frac{4}{9}$  years 

d) It increases to  $3\frac{2}{3}$  years 

Explanation:

The correct answer is: c

Let the principal Rs P

ATQ,

$$S.I = \frac{8P}{15}$$

Now,

$$\frac{8P}{15} = \frac{P \times 16 \times t}{100}$$

$$t = \frac{10}{3} = 3\frac{1}{3} \text{ yrs}$$

Now,

$$\text{Rate} = 16\% \times \frac{3}{4} = 12\%$$

Again,

$$\frac{8P}{15} = \frac{P \times 12 \times t}{100}$$

$$t = \frac{40}{9} = 4\frac{4}{9} \text{ yrs}$$

Q. 65

7 women and 7 girls can finish a piece of work in 12 days, whereas 8 women and 10 girls can finish it in 9 days. In how many days will one girl finish it working alone?

a) 116 days b) 136 days c) 126 days d) 146 days 

The correct answer is: c

Explanation:

$$\Rightarrow (7W + 7G) \times 12 = (8W + 10G) \times 9$$

$$\Rightarrow 28W + 28G = 24W + 30G$$

$$\Rightarrow 28W - 24W = 30G - 28G$$

$$\Rightarrow 4W = 2G$$

$$\Rightarrow \frac{W}{G} = \frac{2}{4}$$





$$\therefore \frac{W}{G} = \frac{1}{2} > \text{Efficiency}$$

$$\begin{aligned} \text{Total work} &= (7 \times 1 + 7 \times 2) \times 12 \\ &= 21 \times 12 \end{aligned}$$

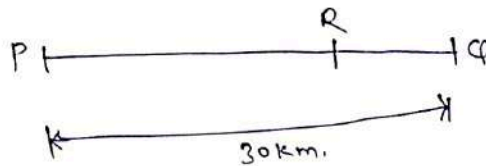
$$\begin{aligned} \text{Time by 1 Girl} &= \frac{21 \times 12}{2} \\ &= 126 \text{ days.} \end{aligned}$$

Q. 66

Alok starts walking from P at the speed of 12 km/h towards Q. Raman starts at same time from P towards Q at the speed of 18 km/h. Raman reaches Q and turns back and starts walking towards P. He meets Alok at R. If PQ is 30 km, then what is PR?

- a) 12   
 b) 24   
 c) 6   
 d) 18 

The correct answer is: b



Time taken by Raman to cover 30 km  $= \frac{30}{18} = \frac{5}{3}$  hr.

Distance covered by Alok in  $\frac{5}{3}$  hr  $= \frac{5}{3} \times 12 = 20$  km.

Remaining distance  $= 30 - 20 = 10$  km

Relative speed  $= 18 + 12 = 30$  km/h

Time taken to cover 10 km  $= \frac{10}{30} = \frac{1}{3}$  hr.

Distance covered by Raman in  $\frac{1}{3}$  hr  $= \frac{1}{3} \times 18 = 6$  km.





$$\begin{aligned} \therefore PR &= PQ - QR \\ &= 30 - 6 \\ &= 24 \text{ km.} \end{aligned}$$

Explanation:



Q. 67

The average of 15 numbers is 40. The average of first 6 numbers is 42 and average of last 6 numbers is 43. 7<sup>th</sup> number is twice than 8<sup>th</sup> number, but 5 more than 9<sup>th</sup>. What is the average of 7<sup>th</sup> and 9<sup>th</sup> number?

a) 71 b) 35 c) 25.8 d) 35.5 **Explanation:**

The correct answer is: d

Average of 15 no. = 40, Sum =  $15 \times 40 = 600$

Average of first 6 no. = 42, Sum =  $6 \times 42 = 252$

Average of last 6 no. = 43, Sum =  $6 \times 43 = 258$

ATQ,

7<sup>th</sup> no. =  $2x$

8<sup>th</sup> no. =  $x$

9<sup>th</sup> no. =  $2x-5$

Sum of 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> no. =  $600 - (252 + 258)$

$2x + x + 2x - 5 = 600 - 510$

$5x - 5 = 90$

$5x = 95$

$x = 19$

7<sup>th</sup> no. = 38

9<sup>th</sup> no. = 33

Average of 7<sup>th</sup> and 9<sup>th</sup> no. =  $\frac{38+33}{2} = 35.5$

Q. 68

A, B and C invest in a business in the ratio 5:4:7. C is a sleeping partner, so his share of profits will be half of what it would have been if he were a working partner. If they make Rs36,000 profit of which 20% is reinvested in the business, how much does B get (in Rs)?

a) 9216 ✓

b) 9246 ✗

c) 9116 ✗

d) 9326 ✗

The correct answer is: a





Explanation:

$$\begin{array}{ccc}
 & A & B & C \\
 \text{profit} \rightarrow & 5 \times 12 & 4 \times 12 & \frac{7}{2} \times 12 \\
 & 5 & 4 & \frac{7}{2} \\
 \rightarrow & 10 & 8 & 7
 \end{array}$$

$$\begin{aligned}
 \text{Profit} &= 36000 \times \frac{80}{100} \\
 &= 28800 \\
 B's \text{ share} &= \frac{28800 \times 8}{25} \\
 &= \text{Rs } 9216
 \end{aligned}$$

Q. 69





$\frac{765 \times 765 \times 765 + 235 \times 235 \times 235}{7.65 \times 7.65 + 2.35 \times 2.35 - 7.65 \times 2.35}$  is equal to:

- a) 10 
- b)  $10^2$  
- c)  $10^7$  
- d)  $10^5$  

The correct answer is: c





Explanation:

$$\begin{aligned}
 a &= 765, \quad b = 235 \\
 &\Rightarrow \frac{a^3 + b^3}{\frac{a^2}{100 \times 100} + \frac{b^2}{100 \times 100} - \frac{ab}{100 \times 100}} \\
 &\Rightarrow \frac{(a+b)(a^2+b^2-ab) \times (100 \times 100)}{(a^2+b^2-ab)} \\
 &\Rightarrow (a+b) \times (100 \times 100) \\
 &\Rightarrow (765 + 235) \times 10^4 \\
 &\Rightarrow (1000) \times 10^4 \\
 &\Rightarrow 10^7
 \end{aligned}$$

<b>Q. 70</b>	<p>A rectangular courtyard is 7m20cm long and 16m 65cm broad. It is to be paved with the square tiles of the same size. Find the least number of such square tiles required to pave the rectangular courtyard.</p> <p>a) 509 </p> <p>b) 600 </p> <p>c) 587 </p> <p>d) 592 </p>
<b>Explanation:</b>	<p>The correct answer is: d</p> <p>Length of courtyard = 720 cm</p> <p>Width of courtyard = 1665 cm</p> <p>HCF of (720,1665) = 45</p> <p>Therefore least no. of square tiles required</p> $\Rightarrow 720 \times 1665 = n \times 45 \times 45$ $n = 16 \times 37 = 592$

Q. 71

The radii of the two circles are 10 cm and 6 cm. If the distance between their centres is 30 cm, then the length of the transverse common tangent is equal to:





a)  $5\sqrt{161}$  cm b)  $4\sqrt{161}$  cm c)  $2\sqrt{161}$  cm d)  $3\sqrt{161}$  cm 

Explanation:

$$\begin{aligned}d &= 30 \text{ cm}, \quad R = 10 \text{ cm}, \quad r = 6 \text{ cm} \\ \text{Length of Transverse common tangent} \\ &= \sqrt{d^2 - (R+r)^2} \\ &= \sqrt{(30)^2 - (10+6)^2} = \sqrt{900 - 256} \\ &= \sqrt{644} = 2\sqrt{161} \text{ cm}\end{aligned}$$

Q. 72

The incomes of P, Q and R are in the ratio 11 : 13 : 10 and their expenditures are in the ratio 13 : 16 : 9. If R saves 50% of his income, then what is the ratio of the savings of P, Q and R?

a) 32:37:45 b) 33:34:47 c) 34:37:45 d) 33:34:45 

The correct answer is: c

Explanation:

	P	Q	R
Income $\rightarrow$	$11n$	$13n$	$10n$
Exp $\rightarrow$	$13y$	$16y$	$9y$
Saving $\rightarrow$	$11n - 13y$	$13n - 16y$	$10n - 9y$

A.T.Q





$$\Rightarrow 10n - 9y = \frac{1}{2} \times 10n$$

$$\Rightarrow 5n = 9y$$

$$\Rightarrow \frac{n}{y} = \frac{9}{5}$$

Ratio of savings

P	:	Q	:	R
$(99-65)$		$(117-80)$		$(90-45)$
34	:	37	:	45





<b>Q. 73</b>	<b>What is the number of digits required for numbering a book with 329 pages?</b> a) 879  b) 789  c) 329  d) 889 
<b>Explanation:</b>	The correct answer is: a No. of digits from page 1 to 9 = 9 No. of digits from page 10 to 99 = $90 \times 2 = 180$ No. of digits from page 100 to 329 = $230 \times 3 = 690$ Total no. of digits required = $690 + 180 + 9 = 879$

Q. 74

The table shows the percentage distribution of the population (only male and female) according to Gender and Literacy.

State	Percentage literate	Gender	
		Literate	Illiterate
		M : F	M : F
A	55	5 : 6	4 : 5
B	72	1 : 1	3 : 2
C	78	4 : 3	3 : 2

If the literate male population of state A is 5,00,000, then the total population of the state is:

- a) 20,000 
- b) 40,00,000 
- c) 20,00,000 
- d) 30,00,000 

Explanation:

The correct answer is: c

Literate male in state A = 5,00,000

Therefore,

Total literate male and female in state A = 11,00,000

55% = 11,00,000

100% = 20,00,000

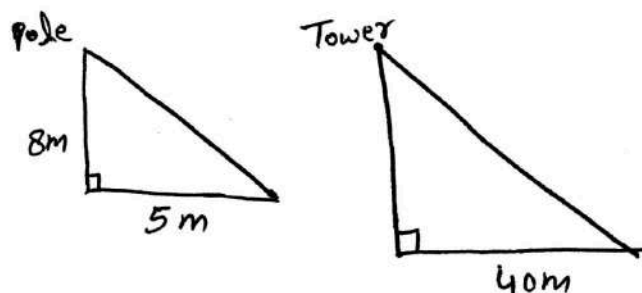


Q. 75

A vertical pole of length 8 m casts a 5 m long shadow on the ground. At the same time, a tower casts a 40 m long shadow. Find the height of the tower.

- a) 48 m ☒
- b) 52 m ☒
- c) 64 m ☒
- d) 42 m ☒

Explanation:



As both  $\Delta$ s are similar

$$\frac{8}{\text{Tower}} = \frac{5}{40} \Rightarrow \text{Tower} = 64 \text{ m}$$

Q. 76

Select the most appropriate synonym of the given word.  
Reluctant





- a) Eager ☒
- b) Willing ☒
- c) Hesitant ☒
- d) Enthusiastic ☒

Explanation:





The most appropriate synonym for "Reluctant" is **Hesitant**.









**Explanation:**





"Reluctant" refers to being unwilling or unsure about doing something. "Hesitant" captures a similar meaning—showing hesitation or doubt. On the other hand, "Eager," "Willing," and "Enthusiastic" imply readiness or eagerness, which are opposite in tone to "Reluctant."





Q. 77	<p>Parts of the following sentence have been given as options that contain an error in spelling. Select from the options below that identify the misspelt word.</p> <p>Advancements in artificial intelligence are shaping various industries.</p> <p>a) Intelligence </p> <p>b) Advancements </p> <p>c) Industries </p> <p>d) Shaping </p>
Explanation:	<p>The misspelled word in the sentence is "<b>Intelligence</b>". The correct spelling is "<b>Intelligence</b>" with two "l"s.</p> <p>Here's a brief explanation:</p> <ul style="list-style-type: none"> <li>• <b>Intelligence</b> is the correct spelling, referring to the ability to acquire and apply knowledge and skills.</li> <li>• <b>Advancements</b>, <b>Industries</b>, and <b>Shaping</b> are all spelled correctly in the given sentence.</li> </ul>









  





Q. 78	<p>Select the option that correctly expresses the given sentence in passive voice.</p> <p>The manager should have informed the team about the changes earlier.</p> <p>a) The team should be informed about the changes by the manager earlier. </p> <p>b) The team should have been informed about the changes by the manager earlier. </p> <p>c) The team was informed about the changes by the manager earlier. </p> <p>d) The team had been informed about the changes by the manager earlier. </p>
Explanation:	<p>The correct option is "<b>The team should have been informed about the changes by the manager earlier.</b>"</p> <p><b>Explanation:</b> To express a sentence in the passive voice:</p> <ol style="list-style-type: none"> <li>1. The object of the active sentence ("the team") becomes the subject in the passive sentence.</li> <li>2. The verb changes appropriately to maintain the tense and meaning. In this case, "should have informed" changes to "should have been informed."</li> <li>3. The subject of the active sentence ("the manager") appears after "by."</li> </ol>

Q. 79	<p>Select the most appropriate <b>ANTONYM</b> of the given word.</p> <p><b>Obfuscate</b></p> <p>a) Confuse </p> <p>b) Mystify </p> <p>c) Clarify </p> <p>d) Conceal </p>
Explanation:	<p>The most appropriate antonym of "<b>Obfuscate</b>" is "<b>Clarify</b>."</p> <p><b>Explanation:</b> "<b>Obfuscate</b>" means to make something unclear or difficult to understand, often by complicating or concealing the truth. The opposite of this would be "<b>Clarify</b>" which means to make something clear and easy to understand.</p> <p><b>Why other options are incorrect:</b></p> <ul style="list-style-type: none"> <li>• "<b>Confuse</b>" and "<b>Mystify</b>" are synonyms of "Obfuscate," as they also imply causing confusion or obscurity.</li> <li>• "<b>Conceal</b>" means to hide or keep something secret, which aligns more with the idea of obfuscation rather than opposing it.</li> </ul> <p>Thus, "Clarify" directly counters the meaning of "Obfuscate."</p>
Q. 80	<p>Select the most appropriate meaning of the phrase in bold.</p> <p><b>"By refusing to compromise, the negotiators were digging their own grave in the peace talks."</b></p> <p>a) Creating their own downfall </p> <p>b) Strengthening their position </p> <p>c) Preparing for success </p> <p>d) Avoiding conflict </p>
Explanation:	<p>The correct answer is "<b>Creating their own downfall</b>."</p> <p><b>Explanation:</b> The phrase "digging their own grave" is an idiomatic expression that means engaging in actions that are self-destructive or lead to one's failure. In this context, by refusing to compromise, the negotiators are harming their own chances of success in the peace talks, ultimately leading to their downfall.</p>

<b>Q. 81</b>	<p>Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.</p> <p>A. The state is known for good governance, peace, law and order and stability.</p> <p>B. It also has benefitted greatly from the work that has been done to increase social, physical and digital infrastructure.</p> <p>C. In the coming years, the state will create a big pool of talented and skilled youth, which will create a good social and economic environment not only in the state but in entire India.</p> <p>D. Uttar Pradesh has become a hope for the world and is driving the country's overall growth.</p> <p>a) ACBD </p> <p>b) ABDC </p> <p>c) DBCA </p> <p>d) DABC </p>
<b>Explanation:</b>	<p>The correct order is <b>DABC</b>.</p> <p><b>Explanation:</b></p> <ol style="list-style-type: none"><li>1. <b>D:</b> The paragraph begins by introducing Uttar Pradesh as a key driver of India's growth, setting the context for the state's significance.</li><li>2. <b>A:</b> It follows with a description of its attributes, emphasizing governance, peace, and stability.</li><li>3. <b>B:</b> The next logical step is to elaborate on the infrastructure developments that have contributed to the state's progress.</li><li>4. <b>C:</b> Finally, it concludes by envisioning a future where these efforts lead to a skilled youth pool and a positive socio-economic impact across India.</li></ol>

<b>Q. 82</b>	<p>Select the option that correctly expresses the given sentence in passive voice.</p> <p>The teacher explains the lesson every day.</p> <p>a) The lesson is explained by the teacher every day. </p> <p>b) The lesson was explained by the teacher every day. </p> <p>c) The lesson has been explained by the teacher every day. </p> <p>d) The lesson is being explained by the teacher every day. </p>
<b>Explanation:</b>	<p>The correct option is "The lesson is explained by the teacher every day."</p> <p><b>Explanation:</b></p> <p>The original sentence, "The teacher explains the lesson every day," is in the active voice and is in the <b>simple present tense</b>. To convert it into passive voice:</p> <ol style="list-style-type: none"><li>1. The object of the active sentence ("the lesson") becomes the subject of the passive sentence.</li><li>2. The verb changes to the passive form of the simple present tense: "is explained."</li><li>3. The subject of the active sentence ("the teacher") is introduced after "by."</li></ol>

<p><b>Q. 83</b></p>	<p>Select the option that can be used as a one-word substitute for the given group of words.</p> <p>The study of the influence of stars and planets on human affairs</p> <p>a) Astronomy </p> <p>b) Cosmology </p> <p>c) Astrology </p> <p>d) Numerology </p>
<p><b>Explanation:</b></p>	<p>The correct answer is <b>Astrology</b>.</p> <p><b>Explanation:</b></p> <ul style="list-style-type: none"> <li>• <b>Astrology</b> refers to the study of how the positions and movements of stars and planets influence human affairs and natural phenomena. It focuses on celestial patterns and their supposed effects on personality, behavior, and events.</li> <li>• <b>Astronomy</b>, on the other hand, is the scientific study of celestial objects, space, and the universe, without any connection to human affairs.</li> <li>• <b>Cosmology</b> is the scientific study of the origin, evolution, and structure of the universe as a whole.</li> <li>• <b>Numerology</b> involves studying numbers and their supposed mystical influence on human life, unrelated to stars and planets.</li> </ul>
<p><b>Q. 84</b></p>	<p>Select the most appropriate option that can substitute the underlined words in the given sentence.</p> <p>The lawyer's argument was <u>extremely logical and impossible to disprove</u>.</p> <p>a) Flawed </p> <p>b) Emotional </p> <p>c) Irrefutable </p> <p>d) Speculative </p>
<p><b>Explanation:</b></p>	<p>The correct answer is <b>"Irrefutable."</b></p> <p><b>Explanation:</b> The underlined phrase "extremely logical and impossible to disprove" describes something that is solidly grounded in logic and cannot be proven false. The word <b>"Irrefutable"</b> perfectly substitutes this, as it means something that is undeniable or cannot be disproven.</p>

<b>Q. 85</b>	<p>Parts of the following sentence have been given as options. Select the option that contains an error.</p> <p>The cat chased / the mouse quick / across the room / before it escaped.</p> <p>a) The cat chased </p> <p>b) the mouse quick </p> <p>c) across the room </p> <p>d) before it escaped </p>
<b>Explanation:</b>	<p>The segment containing an error is <b>"the mouse quick."</b></p> <p><b>Explanation:</b> In this context, "quick" is incorrectly used as an adjective when an adverb is required to describe how the mouse was chased. The correct adverb form is <b>"quickly."</b></p> <p>Correct sentence: <b>"The cat chased the mouse quickly across the room before it escaped."</b></p>

Q. 86

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. Today, sunglasses serve as protective eyewear, effectively preventing bright sunlight from causing discomfort or damage to our eyes.

B. But sunglasses were originally made out of smoky quartz in 12th-century China.

C. Of course, they're also a fashion accessory.

D. They were used by Chinese judges to mask their emotions when they were questioning witnesses.

a) ABCD 

b) ACDB 

c) ACBD 

d) ABDC 





**Explanation:**

The correct order is **ACBD**.





**Explanation:**





1. **A:** Starts with the modern purpose of sunglasses, introducing the topic of their utility today.
2. **C:** Adds a contemporary detail about sunglasses being a fashion accessory, which builds on their relevance today.
3. **B:** Transitions to the origin of sunglasses, mentioning their creation out of smoky quartz in 12th-century China.
4. **D:** Concludes with a unique historical use by Chinese judges, offering an intriguing historical fact.







Q. 87	<p>Choose the option which is antonym of the word 'Vindictive' in the sentence given below: The leader's vindictive actions against his rivals shocked the community.</p> <p>a) Spiteful </p> <p>b) Forgiving </p> <p>c) Retaliatory </p> <p>d) Malicious </p>
Explanation:	<p>The correct answer is "<b>Forgiving</b>."</p> <p><b>Explanation:</b> The word "<b>Vindictive</b>" means having or showing a strong or unreasoning desire for revenge. Its antonym would be a word that conveys the opposite trait, such as being compassionate or not holding grudges. "<b>Forgiving</b>" perfectly fits this description, as it refers to the act of pardoning others without harbouring resentment.</p>





  





Q. 88	<p>What does the idiom 'Rule the roost' mean?</p> <p>a) To make the final decision </p> <p>b) To act in a commanding or dominant way </p> <p>c) To oversee an organization from a distance </p> <p>d) To give orders without listening to others </p>
Explanation:	<p>The correct answer is "<b>To act in a commanding or dominant way</b>."</p> <p><b>Explanation:</b> The idiom "Rule the roost" refers to someone being in charge or exercising authority in a setting, often in a dominant manner. The expression originates from the idea of a rooster ruling over the hens in a coop, symbolizing control and command.</p>





<p><b>Q. 89</b></p>	<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>She said to him, "Will you join us for dinner tonight?"</p> <p>a) She asked him if he will join them for dinner tonight. </p> <p>b) She asked him if he would join them for dinner that night. </p> <p>c) She asked him if he joins them for dinner tonight. </p> <p>d) She asked him that he would join them for dinner that night. </p>
<p><b>Explanation:</b></p>	<p>The correct answer is "She asked him if he would join them for dinner tonight."</p> <p><b>Explanation:</b> When converting from direct speech to indirect speech, keep these rules in mind:</p> <ul style="list-style-type: none"> <li>• The reporting verb ("said to") changes to "asked" because it is a question.</li> <li>• The question form ("Will you") is converted into a statement form ("if he would") in indirect speech.</li> <li>• The modal verb "will" changes to "would" in reported speech.</li> <li>• The pronouns are adjusted: "you" becomes "he," and "us" becomes "them" to maintain the correct perspective.</li> <li>• Tonight → change to That night</li> </ul>





Q. 90	<p>Select the most appropriate synonym of the given word. <b>Conundrum</b></p> <p>a) Solution </p> <p>b) Puzzle </p> <p>c) Answer </p> <p>d) Clarity </p>
Explanation:	<p>The correct answer is <b>"Puzzle."</b></p> <p><b>Explanation:</b> The word <b>"Conundrum"</b> refers to a difficult problem, question, or situation that is tricky to solve or understand. A synonym should convey the same sense of complexity and challenge, which is why <b>"Puzzle"</b> is the most appropriate choice.</p>





  

Q. 91	<p>Parts of a paragraph are given below in jumbled order. Arrange the parts in the correct order to form a meaningful and coherent paragraph.</p> <p>A. A 24-year-old woman was allegedly caught smoking in the toilet of a moving flight.</p> <p>B. And she was arrested on her arrival and later released on bail.</p> <p>C. Airport security officials complained the same to the police.</p> <p>D. A case under Indian Penal Code 336 was filed as hers was a rash and negligent behaviour on the flight.</p> <p>a) DCBA </p> <p>b) ACDB </p> <p>c) ABCD </p> <p>d) BACD </p>
Explanation:	<p>The correct order is <b>ACDB</b>.</p> <p><b>Explanation:</b></p> <ol style="list-style-type: none"> <li><b>A:</b> The paragraph begins by introducing the main incident—a woman caught smoking in the toilet of a moving flight.</li> <li><b>C:</b> Follows logically with the airport security officials reporting the matter to the police.</li> <li><b>D:</b> Expands on the consequences by mentioning the legal action—a case filed under Indian Penal Code 336 for rash and negligent behaviour.</li> <li><b>B:</b> Concludes with the outcome—the woman was arrested upon arrival and later released on bail.</li> </ol>

<b>Q. 92</b>	<p>The following sentence has been split into segments. Identify the segment that contains a grammatical error.</p> <p>The team has decided / to meet tomorrow / and discussing / the new project plan.</p> <p>a) The team has decided </p> <p>b) to meet tomorrow </p> <p>c) and discussing </p> <p>d) the new project plan </p>
<b>Explanation:</b>	<p>The segment containing a grammatical error is <b>"and discussing."</b></p> <p><b>Explanation:</b></p> <ul style="list-style-type: none"><li>• The sentence aims to describe actions planned by the team: deciding to meet and discussing the project plan.</li><li>• The verb <b>"discussing"</b> is incorrectly formed in this context. To maintain grammatical consistency, it should be changed to <b>"and discuss"</b> in order to parallel the infinitive phrase <b>"to meet."</b></li></ul> <p>Correct version: <b>"The team has decided to meet tomorrow and discuss the new project plan."</b></p>

Q. 93	<p>Select the most appropriate option that can substitute the underlined words in the given sentence.</p> <p>The old house had a <u>dark and gloomy</u> atmosphere that unsettled visitors.</p> <p>a) Cheerful </p> <p>b) Grin </p> <p>c) Bright </p> <p>d) Dreary </p>
Explanation:	<p>The correct answer is "<b>Dreary</b>."</p> <p><b>Explanation:</b> The phrase "<b>dark and gloomy atmosphere</b>" describes a place that feels dull, lifeless, and depressing. The word "<b>Dreary</b>" is an accurate substitute, as it conveys a sense of dullness, bleakness, and a lack of cheer.</p> <p><b>Why the other options are incorrect:</b></p> <ul style="list-style-type: none"><li>• "<b>Cheerful</b>": This implies happiness and a positive mood, which is the opposite of "dark and gloomy."</li><li>• "<b>Grin</b>": Refers to a facial expression, and does not describe an atmosphere or environment.</li><li>• "<b>Bright</b>": Suggests light, positivity, and vibrancy, which are contrary to the unsettling and gloomy atmosphere described.</li></ul> <p>Thus, "<b>Dreary</b>" is the most appropriate word to convey the intended meaning of the sentence.</p>

<b>Q. 94</b>	<p>Select the correct spelling to fill in the blank. The presentation was filled with _____, leading to a negative impression on the audience.</p> <p>a) Ambiguety </p> <p>b) Ambiguity </p> <p>c) Ambiggity </p> <p>d) Ambiguaty </p>
<b>Explanation:</b>	<p>The correct answer is "<b>Ambiguity</b>."</p> <p><b>Explanation:</b></p> <p>The word "<b>Ambiguity</b>" refers to the quality of being unclear, having multiple interpretations, or lacking precision. It fits perfectly in the context of the sentence, as it describes how a presentation could cause a negative impression due to unclear or confusing content. The spelling "<b>Ambiguity</b>" is correct.</p>

Q. 95	<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>"Don't forget to lock the door," Mom said to me.</p> <p>a) Mom told me not to forget to lock the door. </p> <p>b) Mom told me to not forget locking the door. </p> <p>c) Mom asked me don't forget to lock the door. </p> <p>d) Mom told me that I didn't forget to lock the door. </p>
Explanation:	<p>The correct answer is <b>"Mom told me not to forget to lock the door."</b></p> <p><b>Explanation:</b> When converting direct speech to indirect speech:</p> <ul style="list-style-type: none"><li>• The imperative sentence "Don't forget to lock the door" uses a command structure. In indirect speech, "told" is used to report commands or instructions.</li><li>• The negative form "Don't forget" is transformed to "not to forget" in indirect speech.</li><li>• The sentence structure remains clear and concise without altering the meaning.</li></ul>

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.

The world's oceans, often seen as vast and indestructible, are facing a growing crisis due to pollution. Human activities have (1) \_\_\_\_\_ the delicate balance of marine ecosystems, with waste such as plastic, oil, and chemicals entering the water at alarming rates. Plastic debris, in particular, poses a severe threat, as it does not decompose easily and often (2) \_\_\_\_\_ marine animals like turtles and seabirds, who mistake it for food. Industrial runoff and untreated sewage also (3) \_\_\_\_\_ to the problem, releasing toxic substances that harm aquatic life and disrupt food chains. Scientists warn that if this trend continues, the oceans could (4) \_\_\_\_\_ irreversible damage, affecting not just marine biodiversity but also human livelihoods dependent on fishing and tourism. Efforts to combat ocean pollution are underway, but raising awareness and enforcing stricter regulations remain (5) \_\_\_\_\_ to reversing the damage and preserving these vital ecosystems.

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

- a) Restored 
- b) Ignored 
- c) Strengthened 
- d) Disrupted 

**Explanation:**

The correct answer is "**Disrupted**."

**Explanation:** The passage describes how human activities have negatively impacted marine ecosystems. The phrase "delicate balance of marine ecosystems" implies harmony, which has been disturbed by waste and pollution. The word "**Disrupted**" is the most appropriate choice as it means breaking or interfering with a system's normal functioning.




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.

The world's oceans, often seen as vast and indestructible, are facing a growing crisis due to pollution. Human activities have (1) \_\_\_\_ the delicate balance of marine ecosystems, with waste such as plastic, oil, and chemicals entering the water at alarming rates. Plastic debris, in particular, poses a severe threat, as it does not decompose easily and often (2) \_\_\_\_ marine animals like turtles and seabirds, who mistake it for food. Industrial runoff and untreated sewage also (3) \_\_\_\_ to the problem, releasing toxic substances that harm aquatic life and disrupt food chains. Scientists warn that if this trend continues, the oceans could (4) \_\_\_\_ irreversible damage, affecting not just marine biodiversity but also human livelihoods dependent on fishing and tourism. Efforts to combat ocean pollution are underway, but raising awareness and enforcing stricter regulations remain (5) \_\_\_\_ to reversing the damage and preserving these vital ecosystems.

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

a) Endangers 

b) Nourishes 

c) Protects 

d) Attracts 

Explanation:

The correct answer is **"Endangers."**

**Explanation:** In the given context, the sentence describes how plastic debris harms marine animals such as turtles and seabirds. Since it states that these animals mistake plastic for food, it implies that their survival is at risk due to this harmful behaviour. The word **"Endangers"** fits perfectly, as it means putting animals in danger or threatening their well-being.

**Why the other options are incorrect:**

- **"Nourishes"**: Incorrect because plastic is harmful, not something that provides nutrients or sustenance.
- **"Protects"**: Incorrect because the context is about harming marine animals, not safeguarding them.
- **"Attracts"**: While it could seem plausible because animals are attracted to plastic thinking it's food, it doesn't convey the primary message of harm and risk.





Thus, **"Endangers"** is the most appropriate choice to highlight the threat posed to marine animals by plastic debris.

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.

The world's oceans, often seen as vast and indestructible, are facing a growing crisis due to pollution. Human activities have (1) \_\_\_\_\_ the delicate balance of marine ecosystems, with waste such as plastic, oil, and chemicals entering the water at alarming rates. Plastic debris, in particular, poses a severe threat, as it does not decompose easily and often (2) \_\_\_\_\_ marine animals like turtles and seabirds, who mistake it for food. Industrial runoff and untreated sewage also (3) \_\_\_\_\_ to the problem, releasing toxic substances that harm aquatic life and disrupt food chains. Scientists warn that if this trend continues, the oceans could (4) \_\_\_\_\_ irreversible damage, affecting not just marine biodiversity but also human livelihoods dependent on fishing and tourism. Efforts to combat ocean pollution are underway, but raising awareness and enforcing stricter regulations remain (5) \_\_\_\_\_ to reversing the damage and preserving these vital ecosystems.

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

- a) Belong 
- b) Reduce 
- c) Contribute 
- d) Respond 

Explanation:

The correct answer is "**Contribute**."

**Explanation:** In the context of the passage, industrial runoff and untreated sewage are described as worsening the problem of ocean pollution. The word "**Contribute**" appropriately conveys the idea that these factors are actively adding to or exacerbating the issue.

**Why the other options are incorrect:**

- "**Belong**": Implies possession or association, which does not fit the context of substances worsening pollution.
- "**Reduce**": Suggests a decrease or mitigation, which contradicts the harmful effects mentioned in the passage.
- "**Respond**": Refers to an action or reaction, but it is unrelated to the notion of adding to the problem.


Thus, "**Contribute**" is the best choice to highlight how industrial runoff and sewage play a role in increasing ocean pollution.

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.

The world's oceans, often seen as vast and indestructible, are facing a growing crisis due to pollution. Human activities have (1) \_\_\_\_\_ the delicate balance of marine ecosystems, with waste such as plastic, oil, and chemicals entering the water at alarming rates. Plastic debris, in particular, poses a severe threat, as it does not decompose easily and often (2) \_\_\_\_\_ marine animals like turtles and seabirds, who mistake it for food. Industrial runoff and untreated sewage also (3) \_\_\_\_\_ to the problem, releasing toxic substances that harm aquatic life and disrupt food chains. Scientists warn that if this trend continues, the oceans could (4) \_\_\_\_\_ irreversible damage, affecting not just marine biodiversity but also human livelihoods dependent on fishing and tourism. Efforts to combat ocean pollution are underway, but raising awareness and enforcing stricter regulations remain (5) \_\_\_\_\_ to reversing the damage and preserving these vital ecosystems.

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

a) Avoid 

b) Sustain 

c) Repair 

d) Prevent 

**Explanation:**

The correct answer is "**Sustain**."





**Explanation:** The context of blank no. 4 in this passage highlights a scientific warning regarding potential damage to oceans caused by continued pollution. When referring to the possibility of future harm or irreversible effects, "**sustain**" is the word that signal proportional.

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.

The world's oceans, often seen as vast and indestructible, are facing a growing crisis due to pollution. Human activities have (1) \_\_\_\_\_ the delicate balance of marine ecosystems, with waste such as plastic, oil, and chemicals entering the water at alarming rates. Plastic debris, in particular, poses a severe threat, as it does not decompose easily and often (2) \_\_\_\_\_ marine animals like turtles and seabirds, who mistake it for food. Industrial runoff and untreated sewage also (3) \_\_\_\_\_ to the problem, releasing toxic substances that harm aquatic life and disrupt food chains. Scientists warn that if this trend continues, the oceans could (4) \_\_\_\_\_ irreversible damage, affecting not just marine biodiversity but also human livelihoods dependent on fishing and tourism. Efforts to combat ocean pollution are underway, but raising awareness and enforcing stricter regulations remain (5) \_\_\_\_\_ to reversing the damage and preserving these vital ecosystems.

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

- a) Irrelevant 
- b) Optional 
- c) Essential 
- d) Harmful 

**Explanation:**

The correct answer is "**Essential**."

**Explanation:** The passage emphasizes the urgency of addressing ocean pollution and mentions efforts like raising awareness and enforcing stricter regulations. These actions are described as necessary to reverse the damage and protect marine ecosystems. The word "**Essential**" is the most fitting choice as it conveys the idea that these measures are absolutely necessary and indispensable.