

RBE SSC CGL 2025 Live Mock May 10,2025

Q. 1	<p>5 is related to 110 following a certain logic. Following the same logic, 7 is related to 322. To which of the following is 488 related to, 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) 10 X</p> <p>b) 8 ✓</p> <p>c) 9 X</p> <p>d) 6 X</p>
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The correct answer is: b

$$\text{I. } 5 - 110 \\ \Rightarrow (5)^3 - 3 \times 5 \\ \Rightarrow 125 - 15 = 110$$

$$\text{II. } 7 - 322 \\ \Rightarrow (7)^3 - 3 \times 7 \\ \Rightarrow 343 - 21 = 322$$

$$\text{III. } \underline{\text{option (b)}} \\ 8 - 488 \\ \Rightarrow (8)^3 - 3 \times 8 \\ \Rightarrow 512 - 24 = 488$$

Explanation:

Q. 2

Select the number from among the given options that can replace the question mark (?) in the following series.
732, 489, 408, 381, 372, ?

- a) 355 X
- b) 369 ✓
- c) 367 X
- d) 365 X

The correct answer is: b

Explanation:

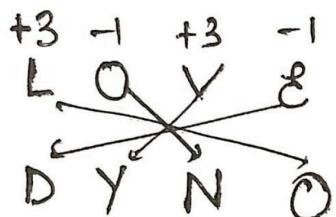
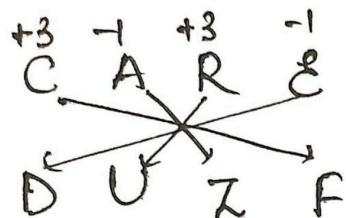
$$\begin{array}{ccccccccc} 732 & , & 489 & , & 408 & , & 381 & , & 372 & , & 369 \\ \downarrow & & \downarrow \\ -243 & & -81 & & -27 & & -9 & & -3 & & \\ \downarrow & & \\ \div 3 & & \\ \downarrow & & \\ ? = 369 \text{ (Ans)} & & & & & & & & & & \end{array}$$

Q. 3

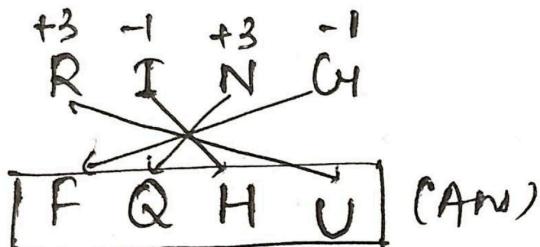
'CARE' is related to 'DUZF' in a certain way based on the English alphabetical order. In the same way, 'LOVE' is related to 'DYNO'. To which of the following is 'RING' related, following the same logic?

- a) ERHT X
- b) FRIU X
- c) EQHT X
- d) FQHU ✓

The correct answer is: d



Explanation:



Q. 4

In a certain code language, 'books are interesting' is coded as 'zk mn px' and 'interesting and fun' is coded as 'jx mn rt'. What is the code for 'interesting' in that language?

- a) zk 
- b) px 
- c) mn 
- d) jx 

Explanation:

The correct answer is: c

In the sentence 'books are interesting' coded as 'zk mn px' and 'interesting and fun' coded as 'jx mn rt', the word 'interesting' appears in both sentences. Comparing their corresponding codes, we can see that 'interesting' has the same code in both. The common code is 'mn'.

So the correct answer is: **mn**

Q. 5

36 is related to 50 following a certain logic. Following the same logic, 16 is related to 26. To which of the following is 64 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.)

- a) 72 X
- b) 86 X
- c) 82 ✓
- d) 79 X

The correct answer is: c

$$\begin{aligned}
 & a) 36 - 50 \\
 & \Rightarrow (\sqrt{36} + 1)^2 + 1 = (6+1)^2 + 1 \\
 & \Rightarrow (7)^2 + 1 = 50 \\
 & b) 16 - 26 \\
 & \Rightarrow (\sqrt{16} + 1)^2 + 1 = (4+1)^2 + 1 \\
 & \Rightarrow (5)^2 + 1 = 26 \\
 & c) 64 - 82 \text{ (option c)} \\
 & \Rightarrow (\sqrt{64} + 1)^2 + 1 = (8+1)^2 + 1 \\
 & \Rightarrow (9)^2 + 1 = 82
 \end{aligned}$$

Explanation:

Q. 6

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

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

14 : 118

23 : 190

a) 16 : 144 Xb) 26 : 224 Xc) 29 : 248 Xd) 31 : 254 ✓

The correct answer is: d

a) 14 : 118

$$\Rightarrow 14 \times 8 + 6 = 112 + 6$$

$$\Rightarrow 118$$

Explanation:

b) 23 : 190

$$\Rightarrow 23 \times 8 + 6 = 184 + 6$$

$$\Rightarrow 190$$

c) 31 : 254

$$\Rightarrow 31 \times 8 + 6 = 248 + 6 = \textcircled{254}$$

Q. 7

What will come in place of the question mark (?) in the following equation if ‘+’ and ‘×’ are interchanged and ‘–’ and ‘÷’ are interchanged?

$$78 - 2 \times 53 + 18 \div 27 = ?$$

a) 966 ✓b) 854 Xc) 956 Xd) 916 X

The correct answer is: a

$$78 - 2 \times 53 + 18 \div 27 = ?$$

If ‘+’ and ‘×’ are interchanged and ‘–’ and ‘÷’ are interchanged, then

Explanation:

$$\Rightarrow 78 \div 2 + 53 \times 18 - 27$$

$$\Rightarrow 39 + 954 - 27$$

$$\Rightarrow 993 - 27$$

$$\Rightarrow 966$$

Q. 8

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

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

Norway : Oslo

- a) **Sweden : Helsinki**
- b) **Denmark : Budapest**
- c) **Finland : Copenhagen**
- d) **Iceland : Reykjavik**

Explanation:

The correct answer is: d

1. **Sweden : Helsinki** - Helsinki is the capital of Finland, not Sweden. The capital of Sweden is Stockholm.
2. **Denmark : Budapest** - Budapest is the capital of Hungary, not Denmark. The capital of Denmark is Copenhagen.
3. **Finland : Copenhagen** - Copenhagen is the capital of Denmark, not Finland. The capital of Finland is Helsinki.
4. **Iceland : Reykjavik** - Reykjavik is the capital of Iceland.

The correct word-pair that matches the relationship "country : capital city" is: **Iceland : Reykjavik**

Q. 9

Select the option that represents the letters that when sequentially placed from left to right in the blanks below will complete the letter series.

VWXV_WWXX_VV_WW_XXV

- a) **VVWX**
- b) **WXWX**
- c) **WVVW**
- d) **VXWW**

Explanation:

The correct answer is: c

VWX/VVWWXX/VVVWWXXX/V

The correct letter combination that replaces the blanks is: VVWX

Q. 10

In a certain code, 'cats are playful' is coded as 'xy ab uv', 'playful are cute' is coded as 'uv cd ab', and 'cats are cute' is coded as 'ab cd xy'. What is the code for 'cute'?

- a) xy
- b) cd
- c) ef
- d) uv

The correct answer is: b

Explanation:

In the sentences:

1. "cats are playful" → "xy ab uv"
2. "playful are cute" → "uv cd ab"
3. "cats are cute" → "ab cd xy"

We see that "**cute**" is always coded as "**cd**".

So, the code for "cute" is **cd**.

Q. 11

Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the one that is different.

Note : The odd one out is not based on the number of consonants/vowels or their position in the letter cluster

- a) QJV ✓
- b) HAN ✗
- c) CVI ✗
- d) MFS ✗

The correct answer is: a

Q J V (odd)
 $\begin{array}{c} \curvearrowright \\ -7 \end{array}$ $\begin{array}{c} \curvearrowright \\ +12 \end{array}$

H A N
 $\begin{array}{c} \curvearrowright \\ -7 \end{array}$ $\begin{array}{c} \curvearrowright \\ +13 \end{array}$

C V I
 $\begin{array}{c} \curvearrowright \\ -7 \end{array}$ $\begin{array}{c} \curvearrowright \\ +13 \end{array}$

M F S
 $\begin{array}{c} \curvearrowright \\ -7 \end{array}$ $\begin{array}{c} \curvearrowright \\ +13 \end{array}$

Explanation:

Q. 12

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

Statements:

All archaeologists are scientists.

All scientists are engineers.

Some engineers are unemployed.

Conclusions:

I. All archaeologists are unemployed.

II. Some scientists are unemployed.

a) Neither conclusion I nor II follows. ✓

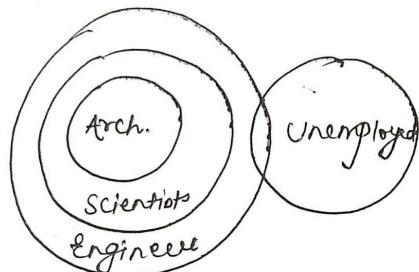
b) Both conclusions I and II follow. ✗

c) Only conclusion I follows. ✗

d) Only conclusion II follows. ✗

Explanation:

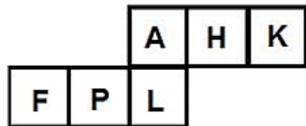
The correct answer is: a



Neither Conclusion I nor II follows.

Q. 13

A cube is made by folding the given sheet. In the cube so formed, which letter will be on the face opposing to the one showing 'P'?



- a) K ✗
- b) L ✗
- c) A ✗
- d) H ✓

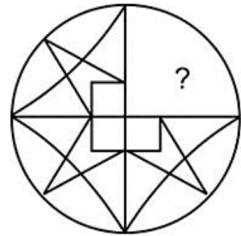
Explanation:

The correct answer is: d

Opposites of the given dice are F-L, A-K and P-H.

Q. 14

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



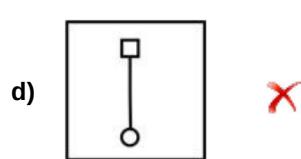
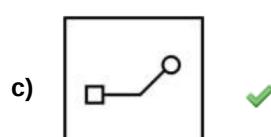
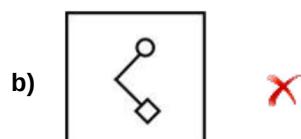
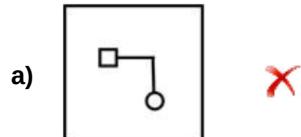
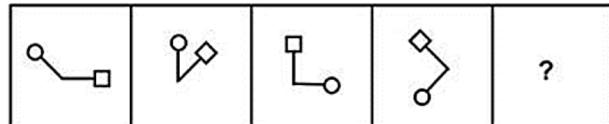
The correct answer is: c

Explanation:



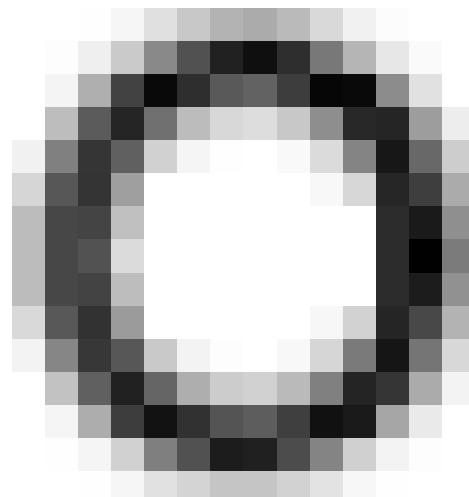
Q. 15

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



Explanation:

The correct answer is: c

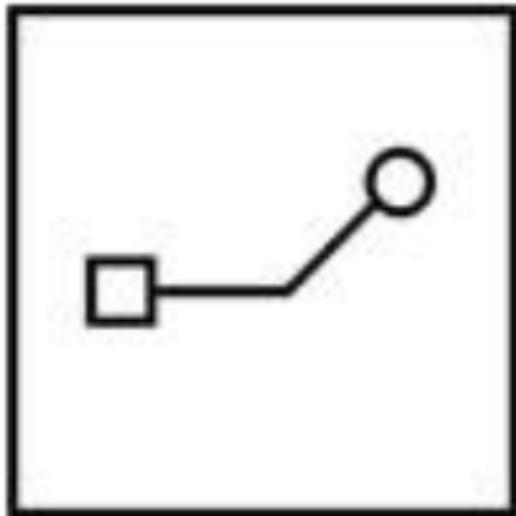


The square element is moving 45

in anti-

clockwise direction.

Circle element is moving in clockwise direction and the angle of rotation in arithmetic progression of 45° , 90° , 135° and 180° .



Q. 16

Each vowel in the word ‘SOLUTION’ is changed to the following letter in the English alphabetical order and each consonant is changed to the preceding letter in the English alphabetical order. How many letters are there in the English alphabetical order between the letter which is the third from the left end and the second from the right end in the group of letters thus formed?

- a) Four ✓
- b) One ✗
- c) Two ✗
- d) Three ✗

The correct answer is: a

Explanation:

S O L U T I O N
 R P K V S J P M
 Third from Second from
 the left end the right end.
 letters b/w K and P are
 L, M, N, O
 There are 4 letters b/w
 K and P.

Q. 17

In a certain code language,
 'A ! B' means 'A is the father of B',
 'A & B' means 'A is the brother of B',
 'A * B' means 'A is the wife of B' and
 'A # B' means 'A is the daughter of B'.

Which of the following means that T is the son's daughter of N?

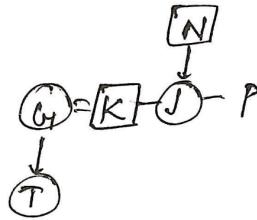
- a) T # G ! K & J * N # P X
- b) T # G * K & J # N ! P ✓
- c) T # G * K ! J # N ! P X
- d) T # G # K ! J * N ! P X

The correct answer is: b

option (2),

$T \# G * K \& J \# N ! P$

Explanation:



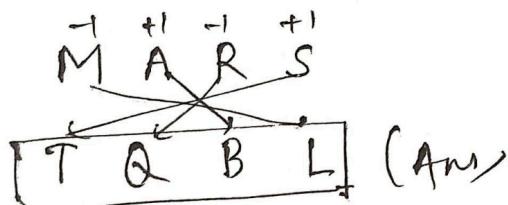
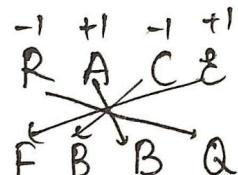
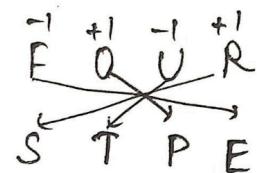
'T' is the son's daughter of 'N'.

Q. 18

In a certain code language, 'FOUR' is written as 'STPE' and 'RACE' is written as 'FBBQ'. How will 'MARS' be written in that language?

- a) TLQB X
- b) TBQL X
- c) TQBL ✓
- d) TQLB X

The correct answer is: c



Explanation:

Q. 19

Select the correct combination of mathematical signs to sequentially place from left to right in the blanks below to balance the given equation.

$$25 \underline{\quad} 18 \underline{\quad} 6 \underline{\quad} 32 \underline{\quad} 7 = 61$$

- a) $-$, $+$, \div , $+$ X
- b) $-$, \div , $+$, $+$ ✓
- c) $+$, \div , $-$, $-$ X
- d) \div , $+$, $-$, $+$ X

The correct answer is: b

$$\Rightarrow 25 - 18 \div 6 + 32 + 7$$

$$\Rightarrow 25 - 3 + 32 + 7$$

$$\Rightarrow 22 + 39 = 61$$

Explanation:

Q. 20

Which of the following terms will replace the question mark (?) in the given series?
DEQL, GDTK, ?, MBZI

- a) WJCJ X
- b) JCWJ ✓
- c) JWCJ X
- d) FDBJ X

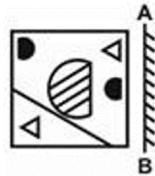
The correct answer is: b

Explanation:

$\begin{array}{cccc} D & E & Q & L \\ \downarrow +3 & \downarrow -1 & \downarrow +3 & \downarrow -1 \\ G & D & T & K \\ \downarrow +3 & \downarrow -1 & \downarrow +3 & \downarrow -1 \\ \boxed{J & C & W & J} & \text{(Any)} \\ \downarrow +3 & \downarrow -1 & \downarrow +3 & \downarrow -1 \\ M & B & Z & I \end{array}$

Q. 21

Select the correct mirror image of the given figure when the mirror is placed at AB as shown.



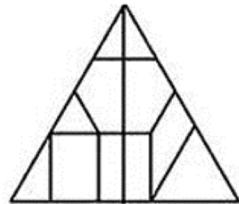
- a)  ✓
- b)  ✗
- c)  ✗
- d)  ✗

The correct answer is: a

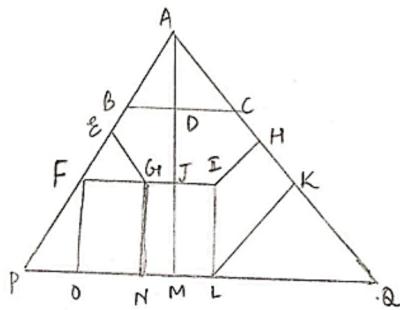
Explanation:



Q. 22

How many triangles are there in the given figure?a) 15 Xb) 10 ✓c) 12 Xd) 8 X

The correct answer is: b

**Explanation:**

There are 10 triangles in the figure :

$\Delta ABD, \Delta ACD, \Delta ABC, \Delta AFG, \Delta FPO, \Delta KLP, \Delta APM, \Delta AQM, \Delta APQ, \Delta AFJ.$

Q. 23

The second number in the given number-pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) is/are followed in all the number-pairs, except one. Find that odd number-pair.
 (NOTE: The relation should be found without breaking down the numbers into its constituent digits)

a) 2209 : 2304 ✗

b) 2601 : 2804 ✓

c) 3249 : 3364 ✗

d) 1369 : 1444 ✗

The correct answer is: b

$$\text{a) } 2209 : 2304 \\ (47)^2 \quad (48)^2$$

$$\text{b) } 2601 : 2704 \\ (51)^2 \quad (52)^2$$

$(2704 \neq 2804)$
 $\therefore (\text{b})$ is odd one out.

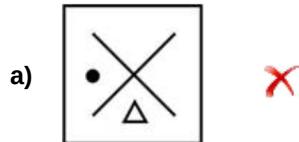
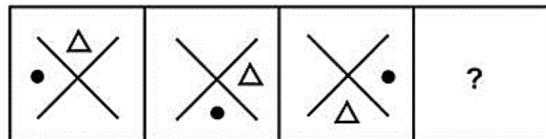
$$\text{c) } 3249 : 3364 \\ (57)^2 \quad (58)^2$$

$$\text{d) } 1369 : 1444 \\ (37)^2 : (38)^2$$

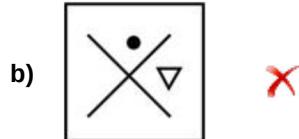
Explanation:

Q. 24

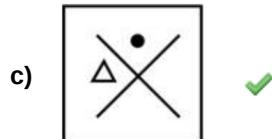
Select the figure from among the given options that can replace the question mark (?) in the following series.



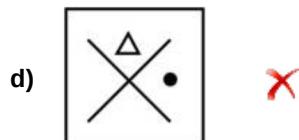
X



X



✓



X

The correct answer is: c

Triangle moves in clockwise direction.

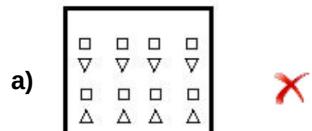
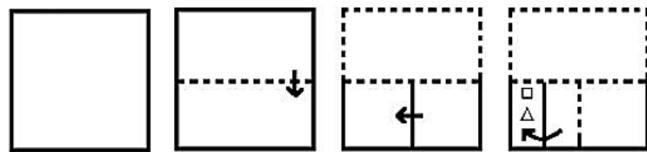
Dot moves in anticlockwise direction.

Explanation:

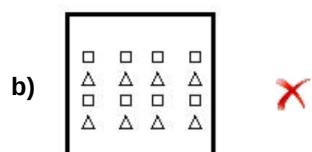


Q. 25

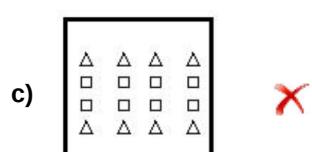
A paper is folded and cut as shown below. How will it appear when unfolded?



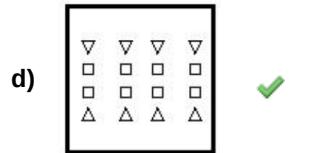
X



X



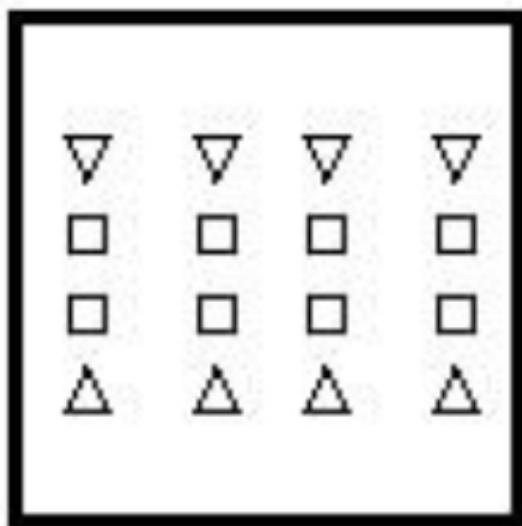
X



✓

The correct answer is: d

Explanation:



Q. 26

Who was the last Mauryan king, killed by his Commander-in-Chief, leading to the establishment of the Shunga dynasty?

- a) Dashratha
- b) Samprati
- c) Bindusara
- d) Brihadratha

Explanation:

The correct answer is **Brihadratha**.

Brihadratha Maurya was the last ruler of the Mauryan dynasty. He was assassinated in 185 BCE by his Commander-in-Chief, **Pushyamitra Shunga**, during a military parade. Pushyamitra Shunga then established the **Shunga dynasty**, marking the end of Mauryan rule. This event signified a major shift in Indian history, as the Mauryan Empire, once vast and powerful under rulers like Ashoka, had significantly declined by Brihadratha's reign.

Q. 27

A person having stunted growth and discoloured hair is most probably suffering from _____.

- a) Protein Deficiency
- b) Lipid Deficiency
- c) Glucose Deficiency
- d) Vitamin A Deficiency

Explanation:

The correct answer is **Protein Deficiency**.

Stunted growth and discoloured hair are classic symptoms of **protein deficiency**, often associated with a condition called **Kwashiorkor**. This condition occurs when the body lacks sufficient protein, which is essential for growth, repair, and maintaining healthy tissues. It is commonly seen in children in regions with inadequate access to protein-rich foods. Addressing this deficiency involves incorporating protein sources like eggs, meat, fish, legumes, and dairy into the diet.

Q. 28

Who discovered a principle that states that the buoyant force on an object is equal to the weight of the fluid displaced by the object?

- a) Isaac Newton
- b) Niels Bohr
- c) Archimedes
- d) Galileo Galilei

Explanation:

The correct answer is **Archimedes**.

The principle, known as **Archimedes' Principle**, was discovered by the ancient Greek mathematician and physicist **Archimedes of Syracuse**. It states that any object, fully or partially submerged in a fluid, experiences an upward buoyant force equal to the weight of the fluid displaced by the object. This principle is fundamental in fluid mechanics and explains why objects float or sink in water. Archimedes reportedly discovered this principle while taking a bath, leading to his famous exclamation, "Eureka!".

Q. 29

Who was one of the British officers whose forces defeated Nana Sahib's rebel force during the First War of Independence in 1857?

- a) John Nicholson
- b) General Hugh Rose
- c) Major General Havelock
- d) Henry Lawrence

Explanation:

The correct answer is **Major General Havelock**.

During the First War of Independence in 1857, **Major General Henry Havelock** played a significant role in defeating **Nana Sahib's rebel forces**. He led the British troops to recapture **Kanpur** (Cawnpore) on **17th July 1857**, which was a key moment in suppressing the rebellion. Havelock's leadership and military strategies were instrumental in regaining control over the region during this tumultuous period in Indian history.

Q. 30

Why is it safer for our hands to use a wooden spoon while cooking in a hot pan instead of using a metallic spoon?

- a) Wood is a good conductor of heat and helps in cooking. X
- b) Wood adds nice flavours to the food being cooked. X
- c) Wood is an insulator and does not heat up. ✓
- d) Wood helps the food cook faster. X

Explanation:

The correct answer is "**Wood is an insulator and does not heat up.**"

Wooden spoons are safer to use while cooking because **wood is a poor conductor of heat**, or an **insulator**. This means it does not transfer heat from the pan to your hand, reducing the risk of burns. On the other hand, metallic spoons are good conductors of heat and can quickly become too hot to handle when used in a hot pan. Wooden spoons are practical, comfortable, and protect your hands while cooking.

Q. 31

Who is the author of the Humayunama?

- a) Gulbadan Begum ✓
- b) Amir Khusrau X
- c) Abul Fazl X
- d) Badauni X

Explanation:

The correct answer is **Gulbadan Begum**.

Gulbadan Begum, a Mughal princess and the daughter of Emperor Babur, authored the *Humayunama*. This historical account provides insights into the life and reign of her half-brother, Emperor Humayun. She wrote it at the request of her nephew, Emperor Akbar, offering a unique perspective on the Mughal court and its dynamics. Her work is a valuable source of information about the Mughal era.

Q. 32

The Green Revolution led to an increase in the agricultural output primarily due to the use of HYV seeds. Here, HYV refers to:

- a) High Yielding Variance X
- b) Heat Yielding Variant X
- c) High Yielding Variety ✓
- d) High Yield Variant X

Explanation:

The correct answer is **High Yielding Variety**.

During the **Green Revolution**, the introduction of **High Yielding Variety (HYV) seeds** played a pivotal role in boosting agricultural output, especially for crops like wheat and rice. These seeds were engineered to produce higher yields under suitable conditions, including adequate irrigation and the use of fertilizers. The adoption of HYV seeds helped transform agricultural practices and significantly improved food security in countries like India during the mid-20th century.

Q. 33

_____ is used by doctors to set fractured bones.

- a) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ X
- b) $\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$ ✓
- c) $\text{ZnSO}_4 \cdot 10\text{H}_2\text{O}$ X
- d) $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ X

Explanation:

The correct answer is **$\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$** .

Doctors use **Calcium Sulfate Hemihydrate ($\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$)**, commonly known as **Plaster of Paris (POP)**, to set fractured bones. When mixed with water, it forms a paste that hardens quickly as it absorbs moisture and converts to **Calcium Sulfate Dihydrate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$)**. This hardened material provides support and immobilization to fractured bones, facilitating their healing process. It's an essential tool in orthopedic care.

Q. 34

Bushu, Yemshe and Tokhu Emong are some of the cultural festivals celebrated by the tribal people of which state?

a) Arunachal Pradesh



b) Jharkhand



c) Nagaland



d) Sikkim



Explanation:

The correct answer is **Nagaland**.

Bushu, Yemshe, and Tokhu Emong are vibrant cultural festivals celebrated by the tribal communities of **Nagaland**. These festivals are deeply rooted in the traditions and agricultural practices of the Naga tribes. For instance, **Tokhu Emong** is a harvest festival celebrated by the Lotha Nagas, marking the end of the harvest season with feasting, dancing, and community bonding. These celebrations highlight the rich cultural heritage and unity of the Naga people.

Q. 35

With which of the following sports do you associate the term '16-yard hit'?

a) Field hockey



b) Cricket



c) Lawn tennis



d) Golf



Explanation:

The correct answer is **Field hockey**.

In **field hockey**, a **16-yard hit** is awarded to the defending team when the attacking team commits certain fouls inside the shooting circle or when the ball crosses the backline after being last touched by an attacker without a goal being scored. The hit is taken from a position approximately 16 yards (or 14.63 meters) away from the backline. It's an important rule for restarting play and ensuring fairness in the game.

Q. 36

The property by virtue of which carbon can form a C-C covalent bond is called _____.

- a) Allotropy X
- b) Covalency X
- c) Tetravalency X
- d) Catenation ✓

Explanation:

The correct answer is **Catenation**.

Catenation refers to the unique property of carbon that enables it to form **covalent bonds** with other carbon atoms, creating long chains, rings, or branched structures. This property is due to carbon's ability to form strong single, double, or triple bonds with itself. Catenation is a key reason for the vast diversity of organic compounds, as it allows the formation of complex molecules like hydrocarbons, polymers, and biomolecules.

Q. 37

On boiling an egg, why does the outer part become opaque and white?

- a) The heat causes a reaction of the egg with water and makes it opaque. X
- b) The heat causes a change in the crystal structure of egg yolk. X
- c) The heat causes a change in the structure of egg protein. X
- d) The heat causes denaturation, hardening the albumin and colouring it opaque white ✓

Explanation:

The correct answer is "**The heat causes denaturation, hardening the albumin and colouring it opaque white.**"

Explanation:

When an egg is boiled, the heat causes **denaturation** of the **proteins** in the egg white, also known as albumin. Denaturation is a process where the proteins lose their natural structure and unfold. As these proteins bond together during cooking, they transform from a transparent, liquid state to a firm, opaque, white structure. This change is purely physical and is not a reaction with water or related to the yolk's crystal structure.

Q. 38

Match the points under Column A with those under Column B.**Column A (Subphylum)**

i. Hexapoda

ii. Crustacea

iii. Myriapoda

iv. Chelicerata

Column B (Animal)

a. Daphnia

b. Mosquito

c. Limulus

d. Julius

a) i-b, ii-c, iii-a, iv-d

b) i-a, ii-b, iii-c, iv-d

c) i-d, ii-c, iii-b, iv-a

d) i-b, ii-a, iii-d, iv-c

Explanation:The correct answer is **i-b, ii-a, iii-d, iv-c**.

Here is the correct matching:

- **i. Hexapoda → b. Mosquito:** Hexapoda includes insects like mosquitoes that have three pairs of legs (six legs in total).
- **ii. Crustacea → a. Daphnia:** Crustacea includes aquatic organisms like Daphnia (commonly called water fleas).
- **iii. Myriapoda → d. Julius:** Myriapoda consists of millipedes and centipedes; Julius is a genus of millipedes.
- **iv. Chelicerata → c. Limulus:** Chelicerata includes species like Limulus (horseshoe crab), which have chelicerae (mouthparts).

Q. 39

In which five-year plan was the 'food, work, and productivity' slogan used?

a) Sixth

b) Fifth

c) Fourth

d) Seventh

Explanation:The correct answer is **Seventh**.

The slogan "**Food, Work, and Productivity**" was introduced during the **Seventh Five-Year Plan (1985-1990)**. This plan emphasized increasing agricultural production, generating employment opportunities, and enhancing economic productivity. It marked a significant step toward modernizing the Indian economy and integrating science and technology into development planning.

Q. 40

At what latitude does the easterly jet stream blow over peninsular India during the summer months?

- a) 24°N
- b) 30°N
- c) 14°N
- d) 28°N

Explanation:

The correct answer is **14°N**.

During the summer months, the **easterly jet stream**, also known as the **tropical easterly jet**, blows over peninsular India around **14°N latitude**. This jet stream is closely linked to the Indian monsoon system, contributing to the withdrawal of westerly winds and influencing monsoon rainfall patterns in the region. It's a critical atmospheric feature in shaping India's climatic conditions during this season.

Q. 41

In 1917, which Irish woman along with Annie Besant and Sarojini Naidu founded the Women's Indian Association (WIA) in Adyar, Madras, to bring awareness among women?

- a) Tierney Cousins
- b) Eilish Cousins
- c) Myrna Cousins
- d) Margaret Cousins

Explanation:

The correct answer is **Margaret Cousins**.

Margaret Cousins, an Irish suffragist and educationist, co-founded the **Women's Indian Association (WIA)** in **1917** along with **Annie Besant** and **Sarojini Naidu**. The WIA was established in **Adyar, Madras**, with the aim of promoting women's rights, education, and social reforms in India. It played a significant role in advocating for women's suffrage and addressing issues like child marriage and illiteracy. Margaret Cousins' contributions to women's empowerment remain a remarkable legacy.

Q. 42

The Salal Hydroelectric Power Station is located in which Union Territory of India?

- a) Ladakh
- b) Lakshadweep
- c) Chandigarh
- d) Jammu and Kashmir

The correct answer is **Jammu and Kashmir**.

The **Salal Hydroelectric Power Station** is situated on the **Chenab River** in the **Reasi district** of Jammu and Kashmir. It is one of the major hydropower projects in the region, contributing significantly to the electricity supply in northern India. The project was commissioned in **1987** and has an installed capacity of **690 MW**.

Hydroelectric Power Stations by State:

1. **Jammu and Kashmir:**
 - Salal Hydroelectric Power Station
 - Baglihar Hydroelectric Power Project
2. **Himachal Pradesh:**
 - Nathpa Jhakri Hydroelectric Power Station
 - Bhakra Nangal Dam
3. **Uttarakhand:**
 - Tehri Dam
 - Koteshwar Hydroelectric Project
4. **Punjab:**
 - Ranjit Sagar Dam
 - Shahpur Kandi Dam
5. **Karnataka:**
 - Sharavathi Hydroelectric Project
 - Sivasamudram Hydroelectric Plant
6. **Maharashtra:**
 - Koyna Hydroelectric Project
 - Bhira Hydroelectric Power Station
7. **Odisha:**
 - Hirakud Dam
 - Balimela Hydroelectric Project
8. **Kerala:**
 - Idukki Hydroelectric Project
 - Sabarigiri Hydroelectric Project
9. **Tamil Nadu:**
 - Mettur Dam
 - Kundah Hydroelectric Project
10. **Andhra Pradesh:**
 - Nagarjuna Sagar Dam
 - Srisailam Hydroelectric Project

Explanation:

Q. 43	<p>Which of the following articles of the Indian constitution mentions that no person accused of any offence shall be compelled to be a witness against himself?</p> <p>a) Article 14 </p> <p>b) Article 20 </p> <p>c) Article 16 </p> <p>d) Article 18 </p>
Explanation:	<p>The correct answer is Article 20.</p> <p>Article 20(3) of the Indian Constitution explicitly states that "No person accused of any offence shall be compelled to be a witness against himself." This provision is a fundamental safeguard against self-incrimination, protecting individuals from being forced to provide evidence that could be used against them in a criminal case. It is a cornerstone of fair trial rights and ensures justice and personal liberty.</p> <p>Explanation:</p> <ol style="list-style-type: none"> 1. Article 14: <ul style="list-style-type: none"> ◦ Article 14 guarantees Equality before the Law and Equal Protection of the Laws. It ensures that every person, regardless of their status, is treated equally in the eyes of the law. This article is a cornerstone for enforcing legal fairness and preventing discrimination. 2. Article 16: <ul style="list-style-type: none"> ◦ Article 16 deals with Equality of Opportunity in Public Employment. It ensures that all citizens have equal access to jobs under the State, regardless of religion, race, caste, sex, or place of birth. It fosters inclusivity and fairness in government employment practices. 3. Article 18: <ul style="list-style-type: none"> ◦ Article 18 abolishes Titles, except military or academic distinctions like "Dr." or "Prof." It prevents the State from conferring titles that lead to social inequality or privilege. For example, titles like "Sir" and "Lord" from colonial times are not recognized under this article.
Q. 44	<p>One-third of the members of the State Legislature Council retire every _____ years.</p> <p>a) Fifth </p> <p>b) Second </p> <p>c) Sixth </p> <p>d) Fourth </p>
Explanation:	<p>The correct answer is Second.</p> <p>In a State Legislative Council (Vidhan Parishad), which is the upper house in states with a bicameral legislature in India, one-third of the members retire every two years. This ensures a system of staggered elections, maintaining continuity while allowing for periodic changes in representation. The retirement mechanism is similar to that of the Rajya Sabha at the national level.</p>

Q. 45	<p>'Rann Utsav', a cultural festival, takes place in the Indian state of _____.</p> <p>a) Punjab </p> <p>b) Telangana </p> <p>c) Sikkim </p> <p>d) Gujarat </p>
Explanation:	<p>The correct answer is Gujarat.</p> <p>The Rann Utsav is a world-famous cultural festival celebrated in the Rann of Kutch in Gujarat. This vibrant festival showcases the rich heritage, arts, crafts, music, and traditions of Gujarat. Held annually from November to February, the Rann Utsav also offers visitors a chance to experience the breathtaking white salt desert under the full moon, along with activities like camel rides, cultural performances, and adventurous sports.</p>
Q. 46	<p>Chinta Krishnamurthy was the master of which of the following dance forms?</p> <p>a) Kathak </p> <p>b) Odissi </p> <p>c) Manipuri </p> <p>d) Kuchipudi </p>
Explanation:	<p>The correct answer is Kuchipudi.</p> <p>Chinta Krishnamurthy was a renowned performer and guru of Kuchipudi, a classical dance form originating from the village of Kuchipudi in Andhra Pradesh. He played a significant role in preserving and promoting this art form. Along with Banda Kanakalingeswara Rao, he established the Shri Siddhendra Kalakshetram Dance Institute, which became a hub for traditional training in Kuchipudi. His contributions to the dance form include training a generation of actor-dancers and organizing performances that showcased the rich legacy of Kuchipudi.</p>

Q. 47	<p>According to the World Health Organisation's Global Tuberculosis Report 2024, what is the percentage decline in TB incidence in India from 2015 to 2023?</p> <p>a) 12% </p> <p>b) 17% </p> <p>c) 21% </p> <p>d) 29% </p>
Explanation:	<p>The correct answer is 17%.</p> <p>According to the World Health Organisation's Global Tuberculosis Report 2024, India's TB incidence rate declined by 17.7% from 237 cases per lakh population in 2015 to 195 cases per lakh population in 2023. This reduction highlights the progress made under initiatives like the National TB Elimination Programme (NTEP). However, challenges remain in achieving the ambitious targets set for TB elimination.</p>
Q. 48	<p>Who has recently been appointed as the new Chairman of the Indian Agriculture and Food Council as of November 2024?</p> <p>a) Suresh Prabhu </p> <p>b) Anchal Tripathi </p> <p>c) Rohit Prasad </p> <p>d) Suman Nair </p>
Explanation:	<p>The correct answer is Suresh Prabhu.</p> <p>Suresh Prabhu, a former Union Minister, has been appointed as the new Chairman of the Indian Chamber of Food and Agriculture (ICFA) in November 2024. His extensive experience in agriculture policy and global engagements makes him a valuable leader for ICFA's mission to promote agro trade, technology, and investments in agriculture.</p>

Q. 49

Kaziranga National Park located in which state has become India's second butterfly diversity center?

- a) Manipur
- b) Sikkim
- c) Assam
- d) Mizoram

Explanation:

The correct answer is **Assam**.

Kaziranga National Park, located in **Assam**, has recently been recognized as India's second butterfly diversity center. It is home to an impressive **446 butterfly species**, making it a hub of biodiversity. This achievement highlights the park's ecological richness, which extends beyond its famous one-horned rhinoceroses.

Q. 50

Which Indian chess player has secured second position in the FIDE world chess ranking?

- a) Arjun Erigaisi
- b) Praggnanandhaa R
- c) Gukesh D
- d) Vidit Gujrathi

Explanation:

As of March 2025, Indian chess grandmaster Arjun Erigaisi has achieved a peak FIDE rating of 2801, placing him fourth in the world rankings. This accomplishment makes him only the second Indian player, after Viswanathan Anand, to surpass the 2800 Elo rating barrier.

Therefore, among the options provided, Arjun Erigaisi is the Indian chess player who has secured the highest position in the FIDE world chess rankings.

Q. 51

The strength of SSC Aspirants increases and decreases every alternate year. It starts with increase by 25 % and thereafter the percentage of increase/decrease is the same. Which of the following is definitely true about the strength of SSC Aspirants in 2022 as compared to that in 2018?

- a) Increase approximately by 12.11% X
- b) Decrease approximately by 12.11% ✓
- c) Increase approximately by 13.21% X
- d) Decrease approximately by 13.21% X

Explanation:

The correct answer is: b

$$100 \times \frac{5}{4} \times \frac{3}{4} \times \frac{5}{4} \times \frac{3}{4} = 87.89$$

Now,

$$100 - 87.89 = 12.11$$

Decrease of 12.11%

Q. 52

The price of a rubber is Rs 3.5. The price of 20 rubbers is equal to that of 5 pens. The price of a pen equal to that of 7 pencils and the price of 18 pencils is equal to that of 4 markers. What is the price of one marker?

- a) 9 
- b) 4 
- c) 6 
- d) 36 

Explanation:

The correct answer is: a

Cost of 1 rubber = Rs. 3.5

$$\begin{array}{r} 20 \times 3.5 \\ \hline \end{array}$$

Cost of 1 pen = = Rs. 14

5

14

Cost of 1 pencil = = Rs. 2

7

2×18

Cost of 1 marker =

= Rs. 9

4

Q. 53

A container contains 70 L of milk. From this container 7 L of milk was taken out and replaced by water. This process was repeated further two times. The amount of water in container is:

- a) 51.03 l
- b) 50.03 l
- c) 18.97 l
- d) 18.79 l

The correct answer is: c

7 l is replaced by water 3 times =
$$\frac{7}{70} = \frac{1}{10}$$

9

Explanation:

Remaining milk at each replacement =



10

Amount of milk left in container = $70 \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} = 51.03 \text{ l}$

Therefore,

The amount of water = $70 - 51.03 = 18.97 \text{ l}$

Q. 54

The number of students in a class is 51. Out of which $33\frac{1}{3}\% = \frac{1}{3}$ are boys and the rest are girls. The average score of girls in science is $66\frac{2}{3}\% = \frac{2}{3}$ more than that of boys. If the average score of all the students is 78, then the average score of girls is:

- a) 90 ✓
- b) 91 ✗
- c) 76 ✗
- d) 72 ✗

The correct answer is: a

Explanation:

$$\begin{aligned}
 \text{Total} &= 51 \\
 33\frac{1}{3}\% &= \frac{1}{3} \\
 \text{Boys} &\quad \text{Girls} \\
 \text{No.} \rightarrow & 17 \\
 \text{Average} \rightarrow & \frac{8n}{5n} \\
 & \overline{17n} \\
 & 22n \\
 \text{Now,} \\
 22n &= 51 \times 78 \\
 \therefore n &= 18 \\
 \text{Average score of girls} &= \frac{18 \times 5}{5} \\
 &= 90
 \end{aligned}$$

Q. 55

The following table represents the total number of research scholars and the respective number of female research scholars in various departments of a university. Study the table carefully and answer the question that follows.

Department	Total number of research scholars	Number of female research scholars
Physics	35	12
Chemistry	40	28
Mathematics	18	4
Statistics	12	3

What is the ratio of male research scholars in Mathematics to Statistics?

- a) 14:9 ✓
- b) 9:14 ✗
- c) 6:7 ✗
- d) 7:6 ✗

The correct answer is: a

Male research scholar in Mathematics = $18 - 4 = 14$

Explanation:

Male research scholar in Statistics = $12 - 3 = 9$

Therefore,

Ratio = 14:9

Q. 56

A shopkeeper offers two successive discounts of 25% and 33.33% on an article and is still able to earn a 25% profit. If he offers a single discount of 45%, what will his profit percentage be?

- a) 37.5% ✓
- b) 55% ✗
- c) 45% ✗
- d) 35% ✗

The correct answer is: a

$$MP = 100 \text{ unit}$$

$$SP = 100 \times \frac{3}{4} \times \frac{2}{3} \quad [\text{Successive - 25\% and 33.33\%}] \\ = 50 \text{ unit}$$

Explanation:

$$CP = \frac{50 \times 100}{125} \quad [\text{Profit - 25\%}]$$

$$= 40 \text{ unit}$$

$$\text{New SP} = 100 \times \frac{55}{100} \quad [\text{Discount - 45\%}]$$

$$= 55 \text{ unit}$$

$$\text{Profit \%} = \frac{55 - 40}{40} \times 100$$

$$= 37.5\%$$

Q. 57

A shopkeeper marks up the price of the oil by 52% and uses a faulty machine which measures 18% less. If the shopkeeper gives a discount of 25%, the profit/loss percentage is:

- a) 39.02% loss X
- b) 39.02% profit ✓
- c) 38.07% loss X
- d) 38.07% profit X

The correct answer is: b

Explanation:

$$\begin{array}{rcl}
 \text{C P} & & \text{S P} \\
 + 52\% & \longrightarrow & 100 \cancel{4} & 152 38 \\
 - 18\% & \longrightarrow & 82 & 100 \\
 - 25\% & \longrightarrow & 100 & 75 3 \\
 & & \hline
 & 82 & ? & 114
 \end{array}$$

$\text{Profit \%} = \frac{32}{82} \times 100$
 $= 39.02\%$

Q. 58

The given table shows the number of books on different subjects. What is the ratio of the number of books for subject B1 to the average number of books per subject?

Subjects	Number of books
B1	120
B2	150
B3	150
B4	120
B5	120

- a) 4 : 5 X
- b) 2 : 5 X
- c) 3 : 5 X
- d) 10 : 11 ✓

The correct answer is: d

Number of books for subject B1 = 120

Explanation:

Average no. of book per subject = $\frac{120+150+150+120+120}{5} = 132$

Ratio = 120 : 132 = 10 : 11

Q. 59

The table below shows incomes (in rupees) earned by five employees of a company during the month of March 2019 and income sources.

Source/Name of Employee	Reeta	Seeta	Geeta	Neeta	Aneeta
Overtime	2,500	2,800	2,300	2,200	2,600
Arrears	4,500	4,800	4,900	5,300	5,600
Bonus	2,300	2,100	2,500	2,700	2,800
Salary	24,000	30,000	29,000	32,000	34,000

The total amount of arrears paid by the company during the given period is what percentage of the total amount of bonus paid during the given period?

- a) 302.42%
- b) 402.42%
- c) 102.42%
- d) 202.42%

The correct answer is: d

$$\text{Total amount of arrears} = 4500 + 4800 + 4900 + 5300 + 5600 = 25100$$

$$\text{Total amount of bonus} = 2300 + 2100 + 2500 + 2700 + 2800 = 12400$$

$$\text{Percentage} = \frac{25,100}{12,400} \times 100 = 202.42\%$$

Explanation:

Q. 60

An amount of ₹12,000 was invested for 3 years, partly in Scheme A at the rate of 6% simple interest per annum and the rest in Scheme B at the rate of 5% simple interest per annum. The total interest received at the end was ₹1,980. The amount of money invested in Scheme A is?

- a) 5000 X
- b) 6000 ✓
- c) 4000 X
- d) 7000 X

The correct answer is: b

$$\begin{array}{ll}
 \text{A} & \text{B} \\
 P \rightarrow n & (12000-n) \\
 R \rightarrow 6\% & 5\% \\
 T \rightarrow 3y & 3y
 \end{array}$$

No uo 1

$$\Rightarrow \frac{n \times 6 \times 3}{100} + \frac{(12000-n) \times 5 \times 3}{100} = 1980$$

$$\Rightarrow \frac{18n + 180000 - 15n}{100} = 1980$$

$$\Rightarrow 3n + 180000 = 198000$$

$$\Rightarrow 3n = 18000$$

$$\Rightarrow n = 6000 \quad (\text{Ans})$$

Explanation:

Q. 61

The tank is filled by three pipes with different uniform flow rates. While the first two pipes are operating simultaneously, they fill the tank in the same duration that the third pipe takes to fill it alone. The second pipe can fill the tank 10 hours quicker than the first pipe, yet 8 hours slower than the third pipe. What is the time (in hours) needed for the first pipe to fill the tank?

- a) 20 X
- b) 25 X
- c) 30 ✓
- d) 40 X

The correct answer is: c

Pipe 1 Pipe 2 Pipe 3
 Time \rightarrow $(n+10)$ h n h. $(n-8)$ h

$\frac{1}{n+10} + \frac{1}{n} = \frac{1}{n-8}$
 $\Rightarrow \frac{2n+10}{n^2+10n} = \frac{1}{n-8}$
 $\Rightarrow 2n^2 - 16n - 80 = n^2 + 10n$
 $\Rightarrow n^2 - 26n - 80 = 0$
 $\Rightarrow n^2 - 20n + 4n - 80 = 0$
 $\Rightarrow (n-20)(n+4) = 0$
 $\therefore n = 20$
 Time taken by Pipe 1 = $(20+10)$
 $= 30$ h.

Explanation:

Q. 62

Atul gives Vishu a head-start of 40 seconds in a 1800 m race and beats him by 270 m. While running the same race again Atul gives a start of 378 m and beats him by 16 seconds. In how much time can Vishu complete the full race of 1800 m?

- a) 6 min 20 sec X
- b) 6 min 40 sec ✓
- c) 6 min 30 sec X
- d) 5 min 40 sec X

The correct answer is: b

Explanation:

$$\begin{aligned}
 \text{Speed of Atul} &= A \\
 \text{Speed of Vishu} &= V \\
 \text{ATQ, } \frac{1800}{A} - \frac{1530}{V} &\approx 40 \\
 \frac{1800}{A} - \frac{1422}{V} &\approx 16 \\
 \frac{108}{V} &\approx 24 \\
 \therefore V &= \frac{9}{2} \text{ m/s.} \\
 \text{Time taken by Vishu} &= \frac{1800}{\frac{9}{2}} \\
 &= 400 \text{ sec} = 6 \text{ min 40 sec.}
 \end{aligned}$$

Q. 63

$$\text{Simplify: } \frac{(9.3)^3 + (9.2)^3 + (7.1)^3 - 3 \times 9.3 \times 9.2 \times 7.1}{(9.3)^2 + (9.2)^2 + (7.1)^2 - 9.3 \times 9.2 - 9.2 \times 7.1 - 7.1 \times 9.3}$$

- a) 25.6 ✓
- b) 25.4 X
- c) 36.6 X
- d) 34.4 X

The correct answer is: a

Explanation:

$$\begin{aligned}
 &\Rightarrow \frac{(9.3)^3 + (9.2)^3 + (7.1)^3 - 3 \times 9.3 \times 9.2 \times 7.1}{(9.3)^2 + (9.2)^2 + (7.1)^2 - 9.3 \times 9.2 - 9.2 \times 7.1 - 7.1 \times 9.3} \\
 &\quad [a^3 + b^3 + c^3 - 3abc = (a+b+c)(a^2 + b^2 + c^2 - ab - bc - ca)] \\
 &\Rightarrow \frac{(9.3 + 9.2 + 7.1)[(9.3)^2 + (9.2)^2 + (7.1)^2 - 9.3 \times 9.2 - 9.2 \times 7.1 - 7.1 \times 9.3]}{(9.3)^2 + (9.2)^2 + (7.1)^2 - 9.3 \times 9.2 - 9.2 \times 7.1 - 7.1 \times 9.3} \\
 &\Rightarrow 9.3 + 9.2 + 7.1 \\
 &\Rightarrow 25.6.
 \end{aligned}$$

Q. 64

What is the remainder when the product of 335, 608, and 853 is divided by 13?

- a) 11 X
- b) 12 X
- c) 6 X
- d) 7 ✓

The correct answer is: d

Explanation:

$$\Rightarrow \frac{335 \times 608 \times 853}{13}$$

$$\Rightarrow -\frac{45}{13} = -6.$$

$$\therefore 13 - 6 = 7$$

Q. 65

If $15\cos^2\theta + 7\sin^2\theta - 13 = 0$, ($0^\circ < \theta < 90^\circ$), then what is the value of $1 + \sqrt{\frac{\sec\theta + \tan\theta}{\sec\theta - \tan\theta}}$?

a) $\sqrt{\frac{2\sqrt{3} + 1}{2\sqrt{3} - 1}}$ ✗

b) $\frac{2\sqrt{3} + 1}{2\sqrt{3} - 1}$ ✗

c) $\sqrt{3} + 1$ ✓

d) $\frac{\sqrt{3}}{2}$ ✗

The correct answer is: c

$$\Rightarrow 15\cos^2\theta + 7\sin^2\theta - 13 = 0$$

$$\text{Put } \theta = 30^\circ$$

$$\Rightarrow 15 \times \frac{3}{4} + 7 \times \frac{1}{4} - 13 = 0$$

$$\Rightarrow \frac{52}{4} - 13 = 0$$

Now,

$$\Rightarrow \sqrt{\frac{\sec\theta + \tan\theta}{\sec\theta - \tan\theta}} + 1$$

$$\Rightarrow \sqrt{\frac{\frac{2}{\sqrt{3}} + \frac{1}{\sqrt{3}}}{\frac{2}{\sqrt{3}} - \frac{1}{\sqrt{3}}}}$$

$$= \sqrt{\frac{\frac{3}{\sqrt{3}}}{\frac{1}{\sqrt{3}}}}$$

$$= \sqrt{3} + 1$$

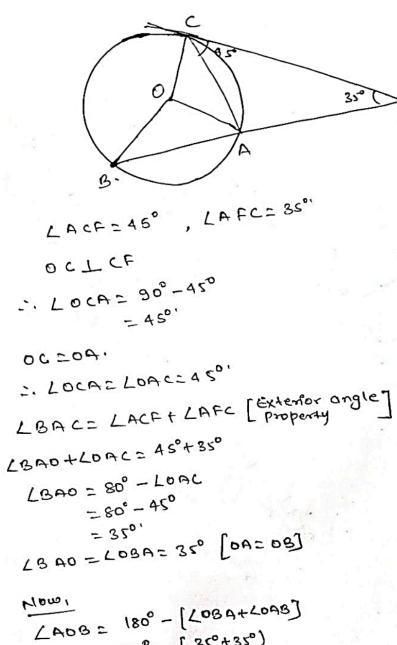
Explanation:

Q. 66

A pair of straight lines from an external point F intersects a circle at A and B (FA < FB), and touches the circle at C. O is the centre of the circle. Given that $\angle ACF = 45^\circ$ and $\angle AFC = 35^\circ$, find $\angle AOB$.

- a) 110° ✓
- b) 120° ✗
- c) 115° ✗
- d) 100° ✗

The correct answer is: a



Explanation:

Q. 67

The below table gives the marks out of 100 obtained by five students in four different subjects in an examination. Study the table and answer the question that follows.

Student/subject	Mathematics	Physics	Biology	English
Suresh	70	80	65	60
Ramesh	85	70	70	55
Ankith	90	80	60	65
Ranjith	95	70	65	60
Aryan	75	65	65	70

What are the average marks obtained by all five students in Mathematics?

- a) 80 X
- b) 83 ✓
- c) 85 X
- d) 84 X

Explanation:

The correct answer is: b

Total marks obtained in Mathematics = $70+85+90+95+75 = 415$

Average = $415/5 = 83$

Q. 68

Which of the following is the sum of the values of a and b if the equations $9x + 3y = a$, $3x + by = 18$ have infinite solutions?

- a) a=9, b=1 X
- b) a=1, b=9 X
- c) a=54, b=1 ✓
- d) a=1, b=54 X

The correct answer is: c

Explanation:

condition for infinite solution

$$a_1m + b_1y + c_1 = 0$$

$$a_2n + b_2y + c_2 = 0$$

$$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$

$$\Rightarrow \frac{9}{3} = \frac{3}{b} = \frac{a}{18}$$

$$\therefore a = 54, b = 1$$

Q. 69

If $x^2 + 1 = x$, then the value of $(x^{15} + x^9 + 1)$ is:

- a) 1 X
- b) -1 ✓
- c) 0 X
- d) -2 X

The correct answer is: b

$$\Rightarrow x^2 + 1 = x$$

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

$$\therefore x^3 = -1$$

Explanation:

$$\Rightarrow x^{15} + x^9 + 1$$

$$\Rightarrow (-1)^5 + (-1)^3 + 1$$

$$\Rightarrow -1 - 1 + 1$$

$$\Rightarrow -1$$

Q. 70

If $x = (a + b - c)$, $y = (b + c - a)$ and $z = (c + a - b)$, then $(x - a)^3 + (y - b)^3 + (z - c)^3 = ?$

a) $3(a-b)(b-c)(c-a)$ ✓

b) 0 ✗

c) $3abc$ ✗d) $3(x-y)(y-z)(z-x)$ ✗

The correct answer is: a

$$x = (a+b-c) \Rightarrow (x-a) = (b-c)$$

$$y = (b+c-a) \Rightarrow (y-b) = (c-a)$$

$$z = (c+a-b) \Rightarrow (z-c) = (a-b)$$

Explanation:

$$\Rightarrow (x-a) + (y-b) + (z-c) = b-c + c-a + a-b = 0.$$

$$\therefore (x-a)^3 + (y-b)^3 + (z-c)^3 = 3(x-a)(y-b)(z-c)$$

$$\Rightarrow (x-a)^3 + (y-b)^3 + (z-c)^3 = 3(a-b)(b-c)(c-a)$$

$$[\because a+b+c=0, \therefore a^3+b^3+c^3=3abc]$$

Q. 71

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

a) $7/2$ ✓

b) 7 ✗

c) $7/3$ ✗

d) 4 ✗

Explanation:

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

Q. 72

$$(\cot \theta + \tan \theta)(\cosec \theta - \sin \theta)(\cos \theta - \sec \theta) = \underline{\hspace{2cm}}$$

- a) -1 ✓
- b) -2 ✗
- c) 0 ✗
- d) 1 ✗

The correct answer is: a

Explanation:

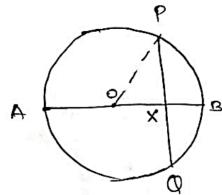
$$\begin{aligned}
 & \Rightarrow (\cot \theta + \tan \theta)(\cosec \theta - \sin \theta)(\cos \theta - \sec \theta) \\
 & \Rightarrow \left(\frac{\cos \theta}{\sin \theta} + \frac{\sin \theta}{\cos \theta} \right) \left(\frac{1 - \sin^2 \theta}{\sin \theta} \right) \left(\frac{\cos^2 \theta - 1}{\cos \theta} \right) \\
 & \Rightarrow \left(\frac{\cos^2 \theta + \sin^2 \theta}{\sin \theta \cos \theta} \right) \left(\frac{\cos^2 \theta}{\sin \theta} \right) \left(\frac{-\sin^2 \theta}{\cos \theta} \right) \\
 & \Rightarrow \frac{1}{\sin \theta \cos \theta} \times \frac{\cos^2 \theta}{\sin \theta} \times \frac{-\sin^2 \theta}{\cos \theta} \\
 & \Rightarrow -1
 \end{aligned}$$

Q. 73

In a circle, a diameter AB and a chord PQ (which is not a diameter) intersect each other at X perpendicularly. If $AX : BX = 5:3$ and the radius of the circle is 16 cm, then the length of chord PQ is:

- a) $4\sqrt{15}$ ✗
- b) $8\sqrt{15}$ ✓
- c) 15 ✗
- d) 14 ✗

The correct answer is: b



$$AX : BX$$

$$5 : 3$$

$$AB = 8 \text{ unit}$$

$$AO = 4 \text{ unit}$$

$$OB = 4 \text{ unit} \therefore OP = 4 \text{ unit}$$

$$OX = AX - AO$$

$$= 5 - 4$$

$$= 1 \text{ unit}$$

$$4 \text{ unit} \rightarrow 16 \text{ cm.}$$

$$1 \text{ unit} \rightarrow 4 \text{ cm.}$$

$$\therefore OP = 16 \text{ cm.}$$

$$OX = 4 \text{ cm.}$$

$$PX = \sqrt{16^2 - 4^2}$$

$$= \sqrt{(16+4)(16-4)}$$

$$= \sqrt{20 \times 12}$$

$$= 4\sqrt{15}$$

$$PQ = 2 \times 4\sqrt{15}$$

$$= 8\sqrt{15}$$

Explanation:

Q. 74

What is the volume (in cm^3) if a cylinder if the radius of the cylinder is 24 cm and the height is 42 cm? Take $\pi=22/7$

- a) 76032 ✓
- b) 70620 ✗
- c) 77066 ✗
- d) 70236 ✗

The correct answer is: a

Explanation:

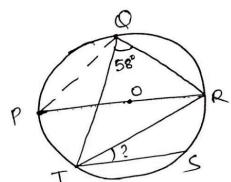
$$\text{Volume} = \frac{22}{7} \times 24 \times 24 \times 42 = 76032 \text{ cm}^3$$

Q. 75

Points P, Q, R, S and T lie in this order on a circle with centre O. If chord TS is parallel to diameter PR and $\angle RQT = 58^\circ$, then find the measure (in degrees) of $\angle RTS$.

- a) 29 ✗
- b) 34 ✗
- c) 32 ✓
- d) 58 ✗

The correct answer is: c



$$\angle RQT = 58^\circ, PR \parallel TS$$

$$\angle PRT = \angle RTS \quad [\text{PR} \parallel TS, \text{ alternate interior angle}]$$

$\because PR \rightarrow \text{Diameter}$.

$$\therefore \angle PQR = 90^\circ \quad [\text{Angle on semicircle}]$$

$$\therefore \angle PQT = 90^\circ - 58^\circ$$

$$= 32^\circ$$

Now,

$$\angle PQT = \angle PRT \quad [\text{Angle made by same arc PT}]$$

$$\therefore \angle PRT = \angle RTS = 32^\circ.$$

Q. 76	<p>Select the option that can be used as a one-word substitute for the given phrase.</p> <p>A person who is selflessly devoted to the welfare of others.</p> <p>a) Altruist ✓</p> <p>b) Inevitable ✗</p> <p>c) Irresistible ✗</p> <p>d) Incorrigible ✗</p>
Explanation:	<p>The correct answer is Altruist.</p> <ul style="list-style-type: none"> • Altruist refers to a person who is selflessly concerned for the welfare of others, which exactly matches the description in the given phrase. • Inevitable means something that is certain to happen and cannot be avoided. • Irresistible refers to something that is so attractive or compelling that it cannot be resisted. • Incorrigible describes someone who cannot be corrected or reformed, often used in a negative context. <p>Thus, Altruist is the best match for the phrase provided.</p>

Q. 77	<p>The following sentence has been divided into four segments. Identify the segment that contains an error.</p> <p>The recommendations of the committee / that the age should be / lowered immediately / was not accepted.</p> <p>a) was not accepted ✓</p> <p>b) lowered immediately ✗</p> <p>c) The recommendations of the committee ✗</p> <p>d) that the age should be ✗</p>
Explanation:	<p>The correct answer is "was not accepted".</p> <p>Explanation: The subject of the sentence is "The recommendations", which is plural. Therefore, the verb should agree with this plural subject.</p> <ul style="list-style-type: none"> • The correct verb form for a plural subject is "were" (not "was"). • So, the sentence should be: "The recommendations of the committee that the age should be lowered immediately were not accepted."

Q. 78	<p>Select the INCORRECTLY spelt word.</p> <p>a) Library </p> <p>b) Environment </p> <p>c) Recieve </p> <p>d) February </p>
Explanation:	<p>The incorrectly spelled word is "Recieve". The correct spelling is "Receive". The rule to remember is "I before E except after C," which applies here. • Library, Environment, and February are all correctly spelled.</p>
Q. 79	<p>Select the most appropriate meaning of the underlined idiom.</p> <p>After failing the exam, Ravi realized that he had <u>bitten off more than he could chew</u>.</p> <p>a) He worked harder than everyone else </p> <p>b) He underestimated the difficulty of the task </p> <p>c) He took on more responsibility than he could handle </p> <p>d) He avoided challenges </p> <p>The correct answer is: He took on more responsibility than he could handle. Explanation: The idiom "bitten off more than he could chew" means that someone took on a task or responsibility that was too difficult or overwhelming for them to manage. In this case, Ravi failed the exam because he likely overestimated his ability or took on more than he could handle.</p>

Q. 80

Identify the INCORRECTLY spelt word in the following sentence.

The company announced a new initiatve to improve employee satisfaction.

a) company 

b) announced 

c) initiatve 

d) satisfaction 

Explanation:

The incorrectly spelled word is "initiatve."

The correct spelling is "initiative."

Explanation:

- **Company, announced, and satisfaction** are all correctly spelled.
- **Initiative** is the correct spelling for a plan or strategy intended to improve a situation, while "initiatve" is a common misspelling.

Q. 81

Select the most appropriate ANTONYM of the given word.

Rigorous

a) Strict 

b) Thorough 

c) Demanding 

d) Lenient 

Explanation:

The correct answer is **Lenient**.

Explanation:

- **Rigorous** means strict, thorough, or demanding, often involving careful attention to detail and high standards.
- **Lenient** is the opposite of rigorous, meaning more relaxed or permissive, with fewer strict rules or demands.
- **Strict, Thorough, and Demanding** are all similar in meaning to "rigorous," so they are not antonyms.

Therefore, **Lenient** is the most appropriate antonym of **Rigorous**.

Q. 82

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. It sounds like something out of a sci-fi novel, but British inventors John Foden and Yannick Read have come up with a bicycle that actually flies.
B. The motor turns the fan, and with enough of a runway, it can reach up to 25 mph in the air and 4000 feet in altitude.
C. The Xplore Air Paravelo is composed of a folding bicycle and a lightweight trailer that contains a biofuel-powered fan motor.
D. While the inventors were unable to reach their funding goal to produce enough Xplore Airs for wide availability, they are offering their inventive services through 'bespoke production'.
- a) ACDB
- b) ACBD
- c) ABDC
- d) ABCD

The correct order is **ACBD**.

Explanation:

- A introduces the topic of the flying bicycle by describing the inventors and the concept.
- C provides further details about the components of the bicycle, giving context to the invention introduced in sentence A.
- B explains how the bicycle works, specifically how the fan motor operates and what the bike can achieve, building on the explanation in C.
- D discusses the current status of the project, including the inventors' funding challenges and their alternative approach to offering the invention.

Thus, the correct sequence is **ACBD**.

Q. 83

Select the most appropriate synonym of the given word.

Voracious

a) **Satisfied**

b) **Hungry**

c) **Slow**

d) **Picky**

The correct answer is **Hungry**.

Explanation:

- **Voracious** means having an insatiable appetite or a great desire for something, especially food.
- **Hungry** is the closest synonym because it refers to a strong desire for food, much like the meaning of "voracious."
- **Satisfied** means content or fulfilled, which is the opposite of voracious.
- **Slow** refers to the pace of something, and **picky** refers to being selective or choosy, neither of which align with the meaning of "voracious."

So, **Hungry** is the most appropriate synonym for **Voracious**.

Q. 84

Select the most appropriate ANTONYM of the underlined word in the given sentence.

The politician gave a cogent argument that convinced many people.

a) **Unclear**

b) **Strong**

c) **Persuasive**

d) **Articulate**

The correct answer is **Unclear**.

Explanation:

- **Cogent** refers to an argument that is clear, logical, and convincing.
- The antonym of **cogent** should describe an argument that lacks clarity or effectiveness. **Unclear** fits this definition because it refers to something that is not easy to understand or lacking in clarity.
- **Strong** and **persuasive** are both similar in meaning to **cogent** since they describe arguments that are convincing and powerful, not the opposite.
- **Articulate** means expressing ideas clearly and effectively, which aligns with **cogent**, so it is not an antonym either.

Thus, **Unclear** is the most appropriate antonym because it directly contrasts with **cogent**, which means clear and convincing.

Q. 85	<p>Select the option that correctly expresses the given sentence in passive voice.</p> <p>The gardener has planted new flowers in the garden.</p> <p>a) New flowers are planted by the gardener in the garden. X</p> <p>b) New flowers were planted by the gardener in the garden. X</p> <p>c) New flowers have been planted by the gardener in the garden. ✓</p> <p>d) New flowers were being planted by the gardener in the garden. X</p>
Explanation:	<p>The correct answer is: New flowers have been planted by the gardener in the garden.</p> <p>Explanation:</p> <p>The original sentence is in the active voice: "The gardener has planted new flowers in the garden."</p> <p>To convert it to the passive voice, we follow this structure: Subject (new flowers) + auxiliary verb (have been) + past participle (planted) + by + agent (the gardener).</p> <p>In the passive voice, the object of the active sentence (new flowers) becomes the subject, and the verb is adjusted to fit the correct tense.</p>
Q. 86	<p>Select the most appropriate synonym to replace the underlined word in the given sentence.</p> <p>The artist's <u>eclectic</u> style draws inspiration from various cultures and periods.</p> <p>a) Uniform X</p> <p>b) Diverse ✓</p> <p>c) Simple X</p> <p>d) Traditional X</p> <p>The correct answer is Diverse.</p> <p>Explanation:</p> <p>Eclectic refers to something that is made up of a variety of different elements or styles, often from different sources. In this context, it means the artist draws inspiration from a wide range of cultures and periods, which is best captured by diverse.</p> <ul style="list-style-type: none"> • Uniform refers to something that is the same or consistent, which is the opposite of eclectic. • Simple means straightforward or uncomplicated, which doesn't align with the idea of combining various influences. • Traditional refers to something that follows established customs or practices, which contrasts with the idea of drawing from multiple sources or styles. <p>Thus, Diverse is the most appropriate synonym for eclectic in this sentence.</p>

Q. 87

The following sentence has been divided into four segments. Identify the segment that contains an error.

He did not / and could not have / understood the / full facts of the case.

a) He did not ✓

b) and could not have ✗

c) understood the ✗

d) full facts of the case ✗

Explanation:

The correct sentence is:

"**He did not understand and could not have understood the full facts of the case.**"

Explanation:

- "**He did not**" is correct with "**understand**" (the base form of the verb).
- "**Could not have understood**" is correct as it expresses the inability to understand something in the past, in the context of a hypothetical situation.

Q. 88

Select the most appropriate ANTONYM of the given word.

Serene

a) Calm ✗

b) Agitated ✓

c) Peaceful ✗

d) Tranquil ✗

Explanation:

The correct answer is **Agitated**.

Explanation:

- **Serene** means calm, peaceful, and untroubled. The antonym of **serene** would be something that implies disturbance or anxiety.
- **Agitated** means disturbed, anxious, or excited, which is the opposite of **serene**.

Q. 89

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. Gender diversity enhancing policies such as the provision of supernumerary seats have led to an increase in the number of women candidates in IITs and IIMs across the country.
- B. In the 1990s, the ratio of women candidates to men at IITs was almost 10 to 1, with 10 representing the number of men; it gradually became 4 to 1 in the 2000s.
- C. In the past five years, the IITs have not only maintained 20% women candidates at campuses but also increased the number of women beyond 20% in many courses.
- D. After the introduction of supernumerary seats for women at IITs in 2008, most IIT campuses were able to meet the requirement of having 20% girls as mandatory by MHRD.
- a) CDAB X
- b) DCBA X
- c) CABD X
- d) ABDC ✓

The correct answer is **ABDC**.

Explanation: Let's break down the sentences logically to form a coherent paragraph:

- **Sentence A** talks about gender diversity enhancing policies such as supernumerary seats, which have led to an increase in women candidates in IITs and IIMs.
- **Sentence B** discusses the historical context, mentioning that in the 1990s, the ratio of women candidates to men was very low (10 to 1, with 10 being men), and by the 2000s, it had gradually improved to 4 to 1.
- **Sentence D** explains the introduction of supernumerary seats for women in 2008, which helped IITs meet the gender diversity target set by the MHRD.
- **Sentence C** highlights the recent progress over the past five years, with IITs maintaining and even exceeding the 20% women candidates in many courses.

Q. 90	<p>Select the option that correctly expresses the following sentence in passive voice.</p> <p>The teacher is explaining the lesson to the students.</p> <p>a) The lesson is explained by the teacher to the students. X</p> <p>b) The lesson was explained by the teacher to the students. X</p> <p>c) The lesson is being explained by the teacher to the students. ✓</p> <p>d) The lesson has been explained by the teacher to the students. X</p>
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Explanation:	<p>The correct answer is: The lesson is being explained by the teacher to the students.</p> <p>Explanation: The original sentence, "The teacher is explaining the lesson to the students," is in the present continuous tense. To convert it into the passive voice, we follow this structure:</p> <ul style="list-style-type: none"> • Subject (the lesson) + is being (present continuous auxiliary verb) + explained (past participle of the verb) + by + agent (the teacher). <p>So, the passive form of the given sentence is "The lesson is being explained by the teacher to the students."</p>
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Q. 91	<p>Select the most appropriate option to fill in the blank.</p> <p>The company decided to _____ its operations to reduce costs and increase efficiency.</p> <p>a) Expand X</p> <p>b) streamline ✓</p> <p>c) complicate X</p> <p>d) diversify X</p>
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Explanation:	<p>The correct answer is streamline.</p> <p>Explanation:</p> <ul style="list-style-type: none"> • Streamline means to simplify or make something more efficient, which fits perfectly with the goal of reducing costs and increasing efficiency. • Expand means to make something larger, which would likely increase costs and complexity, not reduce them. • Complicate means to make something more complex, which is the opposite of the goal of reducing costs and increasing efficiency. • Diversify means to add variety or change into different areas, which doesn't directly address the goal of improving efficiency or reducing costs in the same way streamline does. <p>So, streamline is the most appropriate word to fill in the blank.</p>
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Q. 92

Select the most appropriate option to fill in the blank.

The CEO's sudden resignation came as a surprise, and many employees were left _____.

- a) On cloud nine
- b) At a loss for words
- c) Over the moon
- d) In the doghouse

The correct answer is: **At a loss for words**.

Explanation:

- **At a loss for words** means to be so surprised or shocked that one doesn't know how to react or speak, which fits perfectly with the employees being surprised by the CEO's sudden resignation.
- **On cloud nine** means extremely happy, which doesn't fit the context of a surprising or shocking resignation.
- **Over the moon** also means extremely happy, which is not appropriate here since the employees are likely shocked, not happy.
- **In the doghouse** means being in trouble or out of favor, which doesn't apply to the context of surprise due to the resignation.

Therefore, **At a loss for words** is the most appropriate expression in this context, as it describes the reaction of employees who were shocked or surprised by the resignation.

Q. 93

The following sentences are jumbled. Arrange them in the correct order to form a meaningful paragraph.

- A. He worked hard and soon became a valuable member of the team.
- B. Raj was excited to start his new job as a software engineer.
- C. He was determined to prove himself in the new role.
- D. Over time, he learned new skills and gained more confidence.

Select the option that arranges the sentences in the correct order:

- a) BCAD
- b) ABCD
- c) BACD
- d) ACBD

The correct answer is **BACD**.

Explanation:

1. Sentence B starts the paragraph logically by introducing the subject, Raj, and his excitement to begin his new job as a software engineer.
2. Sentence A follows naturally, explaining how Raj worked hard and became a valuable team member after starting his job.
3. Sentence C then tells us that Raj was determined to prove himself in his new role, which aligns with his hard work in the previous sentence.
4. Sentence D concludes the paragraph by showing the results of his hard work and determination, as he learned new skills and gained confidence over time.

Thus, the correct order is **BACD**, which follows a clear and logical progression from Raj starting his job to becoming successful in his role.

Q. 94

Select the option that can be used as a one-word substitute for the given group of words.

The study of ancient societies through their remains

a) Archaeology ✓

b) Anthropology ✗

c) Paleontology ✗

d) Sociology ✗

The correct answer is **Archaeology**.

Explanation:

- **Archaeology** is the study of ancient societies through their remains, such as artifacts, structures, and other physical evidence from past human life. This is the direct study of past civilizations through physical remnants.
- **Anthropology** is the study of humans, their cultures, societies, and evolution, but it is broader than archaeology, which specifically focuses on material remains.
- **Paleontology** is the study of prehistoric life, particularly through fossils of plants and animals, not human societies.
- **Sociology** is the study of society, social behaviour, and relationships within human groups, but it does not focus on ancient societies or their remains.

Thus, **Archaeology** is the most appropriate one-word substitute for the study of ancient societies through their remains.

Q. 95

The following sentence has been divided into four segments. Identify the segment that contains an error.

Neither Rohan/ nor Sohan have / done his lesson.

a) No error ✗

b) Neither Rohan ✗

c) Nor Sohan have ✓

d) Done his lesson ✗

The correct answer is "Nor Sohan have".

Explanation: The error lies in the segment "**Nor Sohan have**".

- When using "**Neither...nor**", the verb should agree with the **subject closest to it** (in this case, "Sohan"). The subject "Sohan" is singular, so the verb should be "**has**", not "**have**".
- The correct structure is: "**Neither Rohan nor Sohan has done his lesson.**"

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 overuse of smartphones among Gen Z has become a growing concern, especially regarding its impact on sleep cycles. Many young people spend hours (1) _____ their phones late at night, which disrupts their natural sleep patterns. The blue light emitted from screens (2) _____ with the production of melatonin, a hormone essential for sleep. As a result, they often struggle to fall asleep or wake up feeling tired.

Experts suggest that (3) _____ screen time before bed can significantly improve sleep quality. However, most Gen Z individuals find it difficult to break this habit. They are so (4) _____ to scrolling through social media or watching videos that they often ignore the negative consequences. Over time, this behaviour can lead (5) _____ chronic sleep deprivation, affecting both physical and mental health.

Select the most appropriate option to fill in blank number 1.

- a) at
- b) in
- c) on
- d) with

The correct answer is **on**.

Explanation:

- The phrase "**spend hours on something**" is commonly used to indicate the activity someone is engaged in, especially when referring to using technology or devices like smartphones.
- "**At**" is used to refer to a specific point or location in time or space, and it doesn't fit the context here.
- "**In**" typically refers to being inside something or enclosed, which does not apply to this context.
- "**With**" would not be grammatically correct in this sentence when referring to spending time on an activity.

Thus, "**spend hours on their phones**" is the most appropriate choice.

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 overuse of smartphones among Gen Z has become a growing concern, especially regarding its impact on sleep cycles. Many young people spend hours (1) _____ their phones late at night, which disrupts their natural sleep patterns. The blue light emitted from screens (2) _____ with the production of melatonin, a hormone essential for sleep. As a result, they often struggle to fall asleep or wake up feeling tired.

Experts suggest that (3) _____ screen time before bed can significantly improve sleep quality. However, most Gen Z individuals find it difficult to break this habit. They are so (4) _____ to scrolling through social media or watching videos that they often ignore the negative consequences. Over time, this behaviour can lead (5) _____ chronic sleep deprivation, affecting both physical and mental health.

Select the most appropriate option to fill in blank number 2.

- a) Interfere X
- b) Interfering X
- c) Interferes ✓
- d) Interfered X

Explanation:

The correct answer is **Interferes**.

Explanation: In the sentence, the subject "The blue light emitted from screens" is singular, so the verb must agree with it in the present tense. The correct form is "**interferes**", which is the third-person singular present tense of the verb "interfere."

Here's how the sentence looks:

- "The blue light emitted from screens **interferes** with the production of melatonin."

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 overuse of smartphones among Gen Z has become a growing concern, especially regarding its impact on sleep cycles. Many young people spend hours (1) _____ their phones late at night, which disrupts their natural sleep patterns. The blue light emitted from screens (2) _____ with the production of melatonin, a hormone essential for sleep. As a result, they often struggle to fall asleep or wake up feeling tired.

Experts suggest that (3) _____ screen time before bed can significantly improve sleep quality. However, most Gen Z individuals find it difficult to break this habit. They are so (4) _____ to scrolling through social media or watching videos that they often ignore the negative consequences. Over time, this behaviour can lead (5) _____ chronic sleep deprivation, affecting both physical and mental health.

Select the most appropriate option to fill in blank number 3.

- a) Bolstering
- b) Enhancing
- c) Increasing
- d) Reducing

The correct answer is **Reducing**.

Explanation: The passage discusses the overuse of smartphones and its negative impact on sleep. Experts suggest that the way to improve sleep quality is to decrease the screen time before bed. The word **reducing** directly addresses this idea of lowering the amount of screen time before sleeping. Here's how it fits in the sentence:

"Experts suggest that **reducing** screen time before bed can significantly improve sleep quality."

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 overuse of smartphones among Gen Z has become a growing concern, especially regarding its impact on sleep cycles. Many young people spend hours (1) _____ their phones late at night, which disrupts their natural sleep patterns. The blue light emitted from screens (2) _____ with the production of melatonin, a hormone essential for sleep. As a result, they often struggle to fall asleep or wake up feeling tired.

Experts suggest that (3) _____ screen time before bed can significantly improve sleep quality. However, most Gen Z individuals find it difficult to break this habit. They are so (4) _____ to scrolling through social media or watching videos that they often ignore the negative consequences. Over time, this behaviour can lead (5) _____ chronic sleep deprivation, affecting both physical and mental health.

Select the most appropriate option to fill in blank number 4.

- a) Disinclined
- b) Accustomed
- c) Elevated
- d) Subjugated

The correct answer is **Accustomed**.

Explanation:

In this context, the sentence refers to how individuals are so used to scrolling through social media or watching videos that they can't break the habit. The word "**accustomed**" means being familiar with or used to something, which fits the context of a habitual action.

Here's how it fits in the sentence:

"They are so **accustomed** to scrolling through social media or watching videos that they often ignore the negative consequences."

Explanation:

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 overuse of smartphones among Gen Z has become a growing concern, especially regarding its impact on sleep cycles. Many young people spend hours (1) _____ their phones late at night, which disrupts their natural sleep patterns. The blue light emitted from screens (2) _____ with the production of melatonin, a hormone essential for sleep. As a result, they often struggle to fall asleep or wake up feeling tired.

Experts suggest that (3) _____ screen time before bed can significantly improve sleep quality. However, most Gen Z individuals find it difficult to break this habit. They are so (4) _____ to scrolling through social media or watching videos that they often ignore the negative consequences. Over time, this behaviour can lead (5) _____ chronic sleep deprivation, affecting both physical and mental health.

Select the most appropriate option to fill in blank number 5.

- a) For
- b) With
- c) By
- d) To

The correct answer is **To**.

Explanation:

In this context, "**lead to**" is the correct phrasal verb. The expression "**lead to**" means to cause something to happen, which is what the sentence is trying to convey. The behaviour of overusing smartphones leads (causes) chronic sleep deprivation.

Here's how the sentence looks:

"Over time, this behaviour can lead **to** chronic sleep deprivation, affecting both physical and mental health."