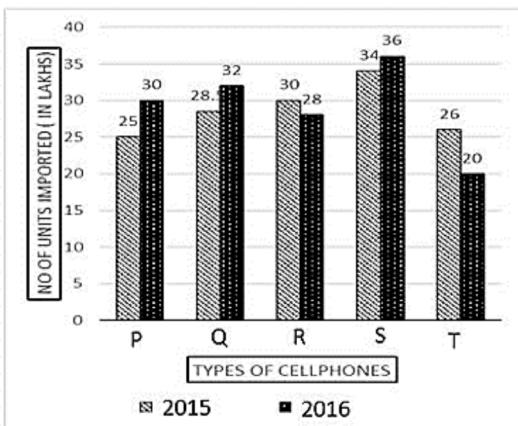


RBE NTPC 2025 Live Mock May 22,2025

Q. 1	<p>Read the given statement and assumptions carefully and decide which of the assumptions is/are logically implicit from the statement.</p> <p>Statement: Romila got elected as the president of the student's committee of her school, so she must be senior.</p> <p>Assumptions:</p> <ul style="list-style-type: none">I. Only members of the student's committee can be seniors.II. Only seniors can be the president of the student's committee.III. Only girls can be the members of the student's committee. <p>a) Both assumptions II and III are implicit X</p> <p>b) Only assumption II is implicit ✓</p> <p>c) Both assumptions I and II are implicit X</p> <p>d) Only assumption I is implicit X</p>
Explanation:	<p>The correct answer is: Only assumption II is implicit.</p> <p>Explanation:</p> <ul style="list-style-type: none">• Assumption I: Only members of the student's committee can be seniors. The statement does not imply that all committee members must be seniors. It only suggests that Romila, as the president, must be senior. Therefore, this assumption is not implicit.• Assumption II: Only seniors can be the president of the student's committee. The statement directly suggests that Romila must be senior because she was elected as the president. This implies that only seniors can hold the position of president. Hence, this assumption is implicit.• Assumption III: Only girls can be the members of the student's committee. The statement does not mention anything about gender restrictions for committee membership. Romila being elected does not imply that only girls can be members. Therefore, this assumption is not implicit. <p>Thus, the correct answer is: "Only assumption II is implicit."</p>

Q. 2

The bar graph given below shows the total number of different types of cell phones P, Q, R, S and T (in lakh numbers) imported by a company in 2015 and 2016. Study the graph carefully and answer the following question.



Which of the following types of cell phones from 2015 to 2016 has the minimum percentage change (increase or decrease) in the number of imported cell phones?

- a) S ✓
- b) Q ✗
- c) P ✗
- d) R ✗

Explanation:

$$\begin{aligned} \textbf{P} \\ 2015 = 25 \\ 2016 = 30 \\ \text{Change} = \frac{30-25}{25} \times 100 \\ = \frac{5}{25} \times 100 = 20\% \end{aligned}$$

$$\begin{aligned} \textbf{Q} \\ 2015 = 28 \\ 2016 = 32 \\ \text{Change} = \frac{32-28}{28} \times 100 \\ = \frac{4}{28} \times 100 = 14.2857\% \end{aligned}$$

$$\begin{aligned} \textbf{R} \\ 2015 = 30 \\ 2016 = 28 \\ \text{Change} = \frac{28-30}{30} \times 100 \\ = \frac{-2}{30} \times 100 = -6.67\% \end{aligned}$$

$$\begin{aligned} \textbf{S} \\ 2015 = 34 \\ 2016 = 36 \\ \text{Change} = \frac{36-34}{34} \times 100 \\ = \frac{2}{34} \times 100 = 5.88\% \end{aligned}$$

$$\begin{aligned} \textbf{T} \\ 2015 = 26 \\ 2016 = 20 \\ \text{Change} = \frac{20-26}{26} \times 100 \\ = \frac{-6}{26} \times 100 = -23.1\% \end{aligned}$$

Q. 3

Under which Article of the Constitution of India is untouchability a punishable offence in accordance with law?

- a) Article 14 
- b) Article 17 
- c) Article 16 
- d) Article 15 

The correct answer is: b

Explanation:

- Article 17 of the Indian Constitution explicitly prohibits untouchability and declares it a **punishable offense**.
- It states: "Untouchability is abolished and its practice in any form is forbidden. The enforcement of any disability arising out of untouchability shall be an offense punishable in accordance with law."
- This provision ensures **social justice and equality**, safeguarding the dignity of individuals, especially marginalized communities.

Classification of Fundamental Rights:

1. **Right to Equality (Articles 14–18)**
 - Article 14: Equality before law and equal protection of laws.
 - Article 15: Prohibition of discrimination based on religion, race, caste, sex, or place of birth.
 - Article 16: Equality of opportunity in public employment.
 - Article 17: **Abolition of untouchability** (Punishable offense).
 - Article 18: Abolition of titles (except military and academic distinctions).
2. **Right to Freedom (Articles 19–22)**
 - Article 19: Protection of **six freedoms**—speech, expression, movement, residence, profession, assembly, and association.
 - Article 20: Protection against **self-incrimination, double jeopardy, and ex post facto laws**.
 - Article 21: Protection of **life and personal liberty** (expanded to include the right to privacy, dignity, and clean environment).
 - Article 21A: Right to **free and compulsory education** for children (6–14 years).
 - Article 22: Protection against **arbitrary arrest and detention**.
3. **Right against Exploitation (Articles 23–24)**
 - Article 23: Prohibition of **human trafficking and forced labor**.
 - Article 24: Prohibition of **child labor in hazardous jobs**.
4. **Right to Freedom of Religion (Articles 25–28)**
 - Article 25: Freedom of **religion, conscience, and practice**.
 - Article 26: Freedom to **manage religious affairs**.
 - Article 27: No **compulsory taxation** for religious promotion.
 - Article 28: Freedom from **religious education** in state-funded institutions.
5. **Cultural and Educational Rights (Articles 29–30)**
 - Article 29: Protection of **cultural identity and language** of minorities.
 - Article 30: Right of minorities to establish and administer educational institutions.
6. **Right to Constitutional Remedies (Articles 32–35)**
 - Article 32: Right to **constitutional remedies**, empowering citizens to move the **Supreme Court** for rights enforcement.
 - Article 33: Restrictions on fundamental rights in **armed forces**.
 - Article 34: Restriction on rights during **martial law**.
 - Article 35: Authority of **Parliament to enforce fundamental rights**.

Explanation:

Q. 4

- The value of the largest four-digit perfect square number divided by the smallest four-digit square number will be:
- a) more than 10 X
 - b) equal to 10 X
 - c) less than 10 ✓
 - d) equal to 9 X

The correct answer is: c

Largest four-digit perfect square = 9801

Smallest four-digit perfect square = 1024

Now,

Explanation:

$$\frac{9801}{1024} \approx 9.57 \text{ (less than 10)}$$

Q. 5

Which of the following is an example of internet service provider?

- a) Airtel ✓
- b) Google X
- c) Outlook X
- d) Mozilla X

The correct answer is: a

Explanation:

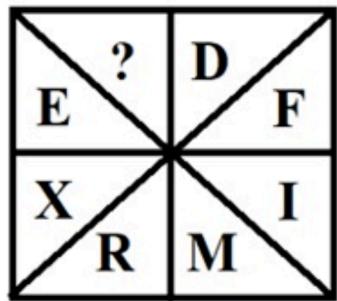
Explanation:

An **Internet Service Provider (ISP)** is a company that provides users with access to the internet. ISPs offer various types of connections, including broadband, fiber-optic, DSL, and mobile data services.

Airtel is a telecommunications company that provides internet services, including broadband, fiber, and mobile data in India.

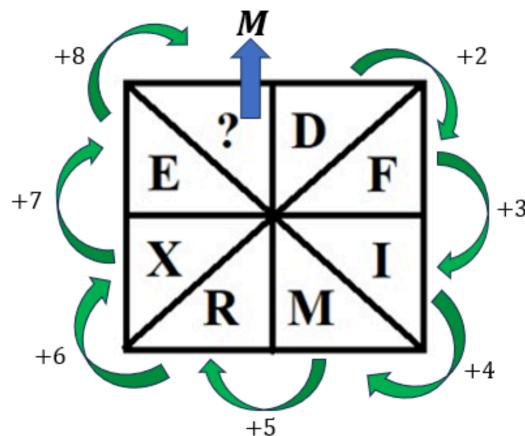
Q. 6

Select the letter that can replace the question mark (?) in the figure below.



- a) X ✗
- b) W ✗
- c) M ✓
- d) P ✗

Explanation:



Q. 7

If the product of two co-primes is 104, then their LCM:

- a) is 104 ✓
- b) is equal to their HCF ✗
- c) can't be determined ✗
- d) is 1 ✗

The correct answer is: a

Co-prime numbers: Numbers which has no common factors except 1, is called co-prime numbers.

HCF of two co-prime numbers will be 1.

LCM of two co-prime numbers will be the product of them.

LCM = Least Common Multiple

HCF = Highest Common Factor



LCM of any two co-prime numbers is



Explanation:

nothing but the product of the two numbers itself.



LCM of two no. is 104



Q. 8

The Paramhans Mandali was established to work for the abolition of caste in ____.

a) 1820



b) 1830



c) 1850



d) 1849



Explanation:

The correct answer is: d

The **Paramhans Mandali** was established in **1849** in Maharashtra with the aim of working towards **social equality and the abolition of caste discrimination**. It was one of the earliest reform movements dedicated to breaking rigid caste barriers in Indian society.

Key Facts:

- The organization was founded by **Dadoba Pandurang and his associates**, who were deeply influenced by social reform ideals.
- Its members **opposed caste-based restrictions**, promoted **inter-caste dining**, and encouraged **widow remarriage**.
- The Mandali operated as a **secret society** because challenging the caste system was considered radical at the time.

This movement contributed significantly to the larger **social reform initiatives** that emerged in the 19th century, ultimately influencing leaders like **Jyotirao Phule** and later **Dr. B.R. Ambedkar** in their fight for caste equality.

Q. 9

In a certain code language, ‘she is fine’ is written as ‘li qi si’ and ‘is Sam healthy’ is written as ‘oi ti li’. Find the code for ‘is’.

a) qi



b) oi



c) li



d) si



Explanation:

She **is** fine = **li** **qi** **si**

is Sam healthy = **oi** **ti** **li**

Q. 10	<p>Which of the following is a well-known protocol for data communication over the internet?</p> <p>a) HTTP </p> <p>b) SNMP </p> <p>c) SMTP </p> <p>d) TCP/IP </p>
<p>The correct answer is: d</p> <p>Explanation:</p> <p>TCP/IP (Transmission Control Protocol / Internet Protocol) is the fundamental suite of protocols that enable data communication over the Internet. It defines how data packets are sent, received, and routed between computers, ensuring reliable and efficient communication.</p> <p>Other options explained:</p> <p>1. HTTP (HyperText Transfer Protocol)</p> <ul style="list-style-type: none">Used for web communication.Defines how web browsers and servers interact to request and deliver web pages.It works over TCP/IP, ensuring reliable data exchange.Example: When you type a website URL in your browser, it uses HTTP (or HTTPS, its secure version) to fetch the page. <p>2. SNMP (Simple Network Management Protocol)</p> <ul style="list-style-type: none">Used for network monitoring and management.Helps administrators oversee network devices like routers and switches.Gathers data about device health and traffic usage.Example: Internet Service Providers (ISPs) use SNMP to check network stability. <p>3. SMTP (Simple Mail Transfer Protocol)</p> <ul style="list-style-type: none">Used for sending emails.Defines how mail servers transmit messages between senders and recipients.It operates over TCP/IP, ensuring emails are correctly relayed.Example: When you send an email via Outlook or Gmail, SMTP helps transfer it to the recipient's server.	

- Q. 11** If $a : b = 3 : 7$, then $(4a + 5b) : (9a + 2b) = ?$
- a) 31 : 37 X
 - b) 37 : 31 X
 - c) 47 : 41 ✓
 - d) 41 : 47 X

The correct answer is: c

$$a:b = 3:7$$

Now,

Explanation:

$$\begin{aligned}
 (4a + 5b):(9a + 2b) \\
 &= (4 \times 3 + 5 \times 7):(9 \\
 &\quad \times 3 + 2 \times 7) = 47:41
 \end{aligned}$$

- Q. 12** An express train travelled at an average speed of 100km/h, stopping for 3 min after every 75 km. How much time it took the express train to travel 600 km?
- a) 381 min ✓
 - b) 384 min X
 - c) 370 min X
 - d) 308 min X

The correct answer is: a

$$\text{Speed of express train} = 100 \text{ km/h}$$

$$\text{Distance} = 600 \text{ km}$$

Halt after every 75 km means last halt will be at 525 km

So no. of halt = $\frac{525}{75} = 7 \text{ halts}$

Time taken to cover 600 km = $\frac{600}{100} = 6 \text{ hr}$

Halted for $7 \times 3 = 21 \text{ min}$

Time taken by express train = $6\text{hr}+21\text{min} = 381 \text{ min}$

Q. 13	<p>Who among the following laid the foundations of the Indian National Movement by founding the Indian Association at Calcutta in 1876?</p> <p>a) Aurobindo Ghose </p> <p>b) Dadabhai Naoroji </p> <p>c) Surendranath Banerjee </p> <p>d) Womesh Chandra Banerjee </p>
Explanation:	<p>The correct answer is: c</p> <p>The Indian Association was founded in 1876 by Surendranath Banerjee in Calcutta (now Kolkata). It was one of the earliest political organizations in India, formed with the aim of fostering political consciousness among Indians and uniting them against British colonial rule. The association primarily focused on issues such as:</p> <ul style="list-style-type: none">• Opposition to the discriminatory policies of the British: Surendranath Banerjee himself had faced racial discrimination when he was removed from the Indian Civil Service on dubious grounds.• Promotion of Indian rights and political reforms: The association worked to advance the cause of self-government and Indian participation in administration.• Mobilizing educated Indians: It encouraged national awareness among the educated elite, who later played crucial roles in India's struggle for independence. <p>The Indian Association laid the groundwork for political activism and later inspired the formation of the Indian National Congress in 1885, which became the main platform for India's freedom movement.</p>

Q. 14

If SHAME is coded as 20-9-2-14-6, then what is the code for FORT?

- a) 6-15-18-20
- b) 7-15-19-20
- c) 8-17-20-22
- d) 7-16-19-21

S H A M E
 ↓ ↓ ↓ ↓ ↓
20 9 2 14 6

Explanation:

Similarly,

F O R T
 ↓ ↓ ↓ ↓ ↓
7 16 19 21

Q. 15

Arrange the following words in the order in which they appear in an English dictionary.

1. Prophet
 2. Prong
 3. Propensity
 4. Propose
- a) 2, 1, 3, 4
 - b) 4, 3, 2, 1
 - c) 2, 3, 1, 4
 - d) 1, 2, 3, 4

Explanation:

2. Prong
3. Propensity
1. Prophet
4. Propose

Q. 16	<p>When a river originates from a hill and flows in all directions, the drainage pattern is known as ____.</p> <p>a) dendritic </p> <p>b) centripetal </p> <p>c) trellis </p> <p>d) radial </p>
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The correct answer is: d

Explanation:

A **radial drainage pattern** occurs when a river originates from a central high point, such as a hill or mountain, and flows outward in all directions, resembling the spokes of a wheel. This pattern is typically observed in regions with isolated hills or domes.

Drainage patterns are influenced by the geology, structure, and slope of the land. Here are some major types:

1. Dendritic Drainage Pattern

- Resembles the **branches of a tree**.
- Develops in regions with **uniform rock resistance**, meaning the terrain does not have significant variations in hardness.
- **Example:** The Ganga River system follows a dendritic pattern.

2. Trellis Drainage Pattern

- Explanation:**
- Characterized by **parallel rivers with perpendicular tributaries**.
 - Forms in areas with **alternating hard and soft rock layers**, often seen in **folded terrains**.
 - **Example:** The Godavari River basin exhibits a trellis pattern.

3. Centripetal Drainage Pattern

- Rivers flow toward a **central depression or basin**, instead of outward.
- Found in regions with **low-lying areas, basins, or sinkholes**.
- **Example:** The Loktak Lake region in Manipur follows a centripetal pattern.

4. Radial Drainage Pattern

- Rivers flow outward from a **central elevated point**, like a hill or mountain.
- Commonly observed **around volcanic domes** or isolated mountains.
- **Example:** Rivers originating from the Amarkantak Plateau follow a radial pattern.

Each of these drainage patterns helps shape the geography and hydrology of an area.

Q. 17**If 60% of a number is added to 36, gives the number itself then the number is:**

- a) 75 X
- b) 100 X
- c) 90 ✓
- d) 80 X

The correct answer is: c

Let the no. be x

ATQ,

$$\frac{60}{100} \times x + 36 = x$$

$$x - \frac{3}{5}x = 36$$

Explanation:

$$\frac{2}{5}x = 36$$

$$\therefore x = 90$$

Q. 18	<p>For the first time the objective of self-reliance was incorporated in the _____ Five - year plan.</p> <p>a) Third ✓</p> <p>b) Second ✗</p> <p>c) Fifth ✗</p> <p>d) First ✗</p>
Explanation:	<p>The correct answer is: a</p> <p>Explanation:</p> <p>The Third Five-Year Plan (1961–1966) was the first to explicitly emphasize the goal of self-reliance, particularly in sectors like industry and agriculture. By this time, India had faced multiple economic challenges, including foreign exchange crises, which highlighted the need to reduce dependence on imports and strengthen domestic production.</p>

Q. 19

40% of a number is 46 less than 4/5 of that number. Find the number.

- a) 85 X
- b) 110 X
- c) 115 ✓
- d) 105 X

The correct answer is: c

Let the no. be x

ATQ,

$$\frac{40}{100}x = \frac{4}{5}x - 46$$

$$\frac{2}{5}x = \frac{4}{5}x - 46$$

$$\frac{4}{5}x - \frac{2}{5}x = 46$$

$$\frac{2}{5}x = 46$$

$$\therefore x = 115$$

Explanation:

Q. 20

From a group of five boys, P, Q, R, S, T and three girls X, Y, Z, a team of five have to be selected on the basis of the following criteria.

S and T cannot be together.

R and S have to be together.

S and Z cannot be together.

Q cannot be put with P.

If S is one of the members, which one of the following teams will be formed?

a) **RQSYX** ✓

b) **PSXQY** ✗

c) **TXRYS** ✗

d) **SRYZQ** ✗

Explanation:

RQSYX = All condition follows.

PSXQY = Q cannot be put with P.

TXRYS = S and T cannot be together.

SRYZQ = S and Z cannot be together.

Q. 21**In 1918, Mahatma Gandhi successfully led a strike of_____.**

- a) Army Soldiers X
- b) Dalits X
- c) Mill workers ✓
- d) Traders X

The correct answer is: c

Explanation:

In 1918, Mahatma Gandhi successfully led a strike of **textile mill workers** in Ahmedabad. The strike was against the unfair wages paid to workers, particularly in the wake of rising costs of living due to World War I.

Key Details:

- The mill owners refused to increase wages, despite worsening economic conditions.
- Gandhi advocated **peaceful resistance** and encouraged workers to remain united.
- He undertook a **hunger strike** to support their demands, drawing public and political attention to their plight.
- Eventually, the mill owners **agreed to a 35% wage hike**, marking a significant victory for workers' rights.

This strike became a foundational moment in Gandhi's leadership of India's labour movements, reinforcing his principles of **Satyagraha (truth and nonviolent resistance)**.

Q. 22

If $a/b = 0.25$, then the value of $\left(\frac{2a-b}{2a+b}\right) + \frac{2}{9}$ is:

- a) $\frac{5}{9}$ X
- b) $-\frac{1}{9}$ ✓
- c) $\frac{4}{9}$ X
- d) $-\frac{2}{9}$ X

The correct answer is: b

$$\frac{a}{b} = 0.25 = \frac{1}{4}$$

Explanation:

Now,

$$\left(\frac{2a-b}{2a+b}\right) + \frac{2}{9} = \left(\frac{2 \times 1 - 4}{2 \times 1 + 4}\right) + \frac{2}{9}$$

$$-\frac{2}{6} + \frac{2}{9} = -\frac{2}{18} = -\frac{1}{9}$$

Q. 23

Who among the following wrote the biography of Jahangir known as Iqbalnama-i-Jahangiri?

a) Matamid Khan ✓

b) Inayat Khan ✗

c) Abdul Rahim Khan ✗

d) Abul Fazl ✗

The correct answer is: a

Explanation:

Mutamad Khan was a historian and court official during the Mughal era who wrote the biography of Emperor Jahangir, known as **Iqbalnama-i-Jahangiri**. This work provides valuable insights into Jahangir's reign, administrative policies, and personal characteristics.

Explanation:

Key Facts:

- Iqbalnama-i-Jahangiri documents **political events, royal decrees, and significant developments** under Jahangir.
- It serves as an important historical source for understanding **the Mughal Empire's governance and court culture**.
- Mutamad Khan played a role in chronicling Jahangir's rule from the perspective of an **insider at the Mughal court**.

Q. 24

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statement:

I. All hens are pens.

II. No pen is a ship.

Conclusion:

I. No hen is a ship.

II. All pens are hens.

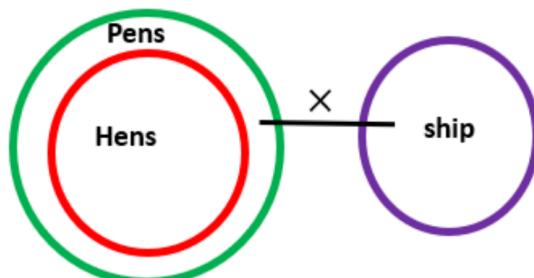
a) Only conclusion II follows. X

b) Neither conclusion I nor II follows. X

c) Only conclusion I follows. ✓

d) Either conclusion I or II follows. X

Explanation:



Q. 25

The LCM of two prime numbers, a and b ($a>b>1$), is 697. The value of $a - 2b$ is:

a) 6 X

b) 5 X

c) 7 ✓

d) 8 X

Explanation:

The correct answer is: c

Prime factors of $697 = 41 \times 17$

Since $a > b$

So, $a = 41$ and $b = 17$

Now,

$$a - 2b = 41 - 2 \times 17 = 7$$

Q. 26	<p>"One Life is Not Enough" is written by which of the following authors?</p> <p>a) K. Natwar Singh </p> <p>b) Jhumpa Lahiri </p> <p>c) Faraz Ahmad </p> <p>d) Khushwant Singh </p>
Explanation:	<p>The correct answer is: a</p> <p>Explanation:</p> <p>"One Life is Not Enough" is an autobiography written by Kunwar Natwar Singh, a former Indian diplomat and politician. In this book, he narrates his experiences in Indian foreign policy, diplomatic service, and political affairs, offering insights into his career and interactions with global leaders.</p> <p>About the Author:</p> <ul style="list-style-type: none">• K. Natwar Singh served as India's Minister of External Affairs and held several key diplomatic roles.• His autobiography provides a first-hand account of Indian diplomacy, governance, and international relations.• The book covers his engagements with world leaders, his experiences within the Congress party, and his perspectives on global politics.

Q. 27

A tank, 4 m long, 2m wide and 1.5 m deep, is dug in a field 22 m long and 14 m wide. If the earth dug out is evenly spread out over the remaining field, then the level of the field will rise by:

- a) 3.5 cm X
- b) 4 cm ✓
- c) 5 cm X
- d) 4.75 cm X

The correct answer is: b



Explanation:

$$\text{Volume of earth dug out} = 4 \times 2 \times 1.5 = 12 \text{ } m^3$$

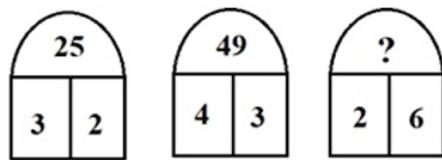
$$\text{Area over which earth is spread} = [22 \times 14 - 4 \times 2] = 300 \text{ } m^2$$

$$\text{Increase in level} = \frac{\text{volume}}{\text{area}} = \frac{12}{300} \times 100 = 4 \text{ cm}$$

Q. 28	<p>Which ocean is the largest in the world, covering more than one-third of the Earth's surface?</p> <p>a) Atlantic Ocean </p> <p>b) Indian Ocean </p> <p>c) Arctic Ocean </p> <p>d) Pacific Ocean </p>
Explanation:	<p>The correct answer is: d</p> <p>Explanation:</p> <p>The Pacific Ocean is the largest ocean in the world, covering more than one-third of Earth's surface. It stretches from the Arctic Ocean in the north to the Southern Ocean in the south, and from Asia and Australia in the west to the Americas in the east.</p> <p>Chronological ranking of the oceans from largest to smallest based on their surface area:</p> <ol style="list-style-type: none">1. Pacific Ocean – Largest<ul style="list-style-type: none">Area: ~165 million sq. kmLocation: Between Asia, Australia, and the AmericasFeatures: Deepest ocean, home to the Mariana Trench, the deepest point on Earth.2. Atlantic Ocean<ul style="list-style-type: none">Area: ~106 million sq. kmLocation: Between North & South America, Europe, and AfricaFeatures: Contains the Mid-Atlantic Ridge, an underwater mountain range.3. Indian Ocean<ul style="list-style-type: none">Area: ~71 million sq. kmLocation: Between Africa, Asia, Australia, and the Indian subcontinentFeatures: Warmest ocean, major monsoon currents influence climate patterns.4. Southern Ocean<ul style="list-style-type: none">Area: ~21 million sq. kmLocation: Surrounding AntarcticaFeatures: Rich in marine biodiversity, helps regulate global climate.5. Arctic Ocean – Smallest<ul style="list-style-type: none">Area: ~14 million sq. kmLocation: Around the North PoleFeatures: Covered by ice most of the year, crucial for Earth's climate stability. <p>The Pacific Ocean remains the largest and deepest, while the Arctic Ocean is the smallest and coldest.</p>

Q. 29

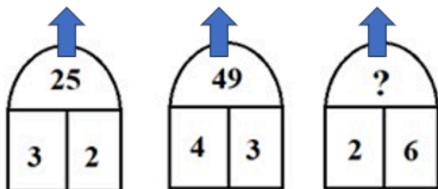
Select the number that can replace the question mark (?) in the third figure.



- a) 16 X
- b) 64 ✓
- c) 81 X
- d) 36 X

$$(3 + 2)^2 = 25 \quad (4 + 3)^2 = 49 \quad (2 + 6)^2 = 64$$

Explanation:



Q. 30

Puhar or Kaveripattinam, was the port of which of the following dynasty?

- a) Cheras X
- b) Pandyas X
- c) Cholas ✓
- d) Vakatakas X

The correct answer is: c

Explanation:

Puhar, also known as **Kaveripattinam**, was an important port city of the **Chola dynasty**. It served as a major center for trade and maritime activities during the Sangam period.

Key Facts:

Explanation:

- **Located at the mouth of the Kaveri River**, Puhar was strategically positioned for both inland and overseas trade.
- It was a flourishing hub of **commerce and culture**, attracting merchants from regions like Southeast Asia and the Roman Empire.
- The **Silappadikaram**, an ancient Tamil epic, describes Puhar as a vibrant city with grand marketplaces and thriving business activities.
- The port played a key role in **Chola naval expeditions**, helping them extend their influence to Sri Lanka and Southeast Asia.

Q. 31

Which African river, known for its extensive drainage basin, flows through multiple countries but is unique for having no outlet to the sea, terminating instead in a vast inland delta?

- a) Congo River X
- b) Niger River X
- c) Okavango River ✓
- d) Zambezi River X

The correct answer is: c

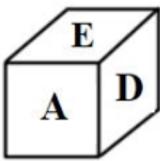
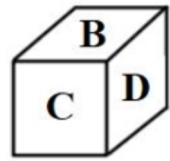
Explanation:

The **Okavango River** is unique among African rivers because it does **not drain into an ocean or sea**. Instead, it terminates in the vast **Okavango Delta**, a large inland wetland in **Botswana**, creating one of the most biodiverse ecosystems in Africa.

Key Facts:

Explanation:

- **Origin:** The river starts in **Angola** and flows through **Namibia** before reaching **Botswana**.
- **Inland Delta Formation:** Unlike most rivers that flow to the sea, the **Okavango River spreads out** into the desert, forming the **Okavango Delta**, which is a haven for wildlife.
- **Seasonal Flooding:** The river carries seasonal floodwaters from Angola, supporting a rich ecosystem in Botswana's Kalahari Desert.
- **Ecological Significance:** The **Okavango Delta** is one of the world's largest inland deltas and is a UNESCO World Heritage Site.

Q. 32**Two positions of a cubical block with faces A, B, C, D, E and F are shown below.****When F is at the top which face will be at the bottom?**

- a) B X
- b) C X
- c) D ✓
- d) A X

Explanation:

Logic- if two dice have the same face value in the given image than their clockwise or anticlockwise number are known as opposite numbers in dice.

The opposites of the given dice (by going clockwise direction)

C-A

B-E

D-F

Q. 33	<p>Who was NOT a part of poverty estimation during the Indian pre-Independence period?</p> <p>a) Members of Bombay Plan X</p> <p>b) Jawaharlal Nehru X</p> <p>c) Dadabhai Naoroji X</p> <p>d) VN Dandekar ✓</p>
<p>The correct answer is: d</p> <p>Explanation:</p> <p>VN Dandekar was a prominent Indian economist, but he contributed to poverty estimation in the post-Independence period, particularly in the 1970s. His studies on poverty provided statistical methods for measuring income distribution and economic deprivation.</p> <p>Other options explained:</p> <p>Explanation:</p> <ul style="list-style-type: none"> Members of Bombay Plan: The Bombay Plan (1944) was drafted by industrialists, including J.R.D. Tata and G.D. Birla, who advocated economic planning and poverty reduction. Jawaharlal Nehru: Nehru was deeply involved in economic policy discussions, and while he was not directly involved in poverty estimation studies, his influence shaped India's developmental approach. Dadabhai Naoroji: Naoroji was one of the first to quantify poverty, proposing the Drain Theory, which argued that British policies economically drained India. 	

Q. 34	<p>If the side of an equilateral triangle is 2 cm, then find the area and the altitude of the triangle.</p> <p>a) Area = $3/2 \text{ cm}^2$ and altitude = $\sqrt{3} \text{ cm}$ X</p> <p>b) Area = $\sqrt{3} \text{ cm}^2$ and altitude = $2/3 \text{ cm}$ X</p> <p>c) Area = $\sqrt{3} \text{ cm}^2$ and altitude = $\sqrt{3} \text{ cm}$ ✓</p> <p>d) Area = $2/3 \text{ cm}^2$ and altitude = $\sqrt{3} \text{ cm}$ X</p>
<p>The correct answer is: c</p> <p>Side of equilateral triangle = $a = 2 \text{ cm}$</p> <p>Area of equilateral triangle = $\frac{\sqrt{3}}{4} \times a^2 = \frac{\sqrt{3}}{4} \times 4 = \sqrt{3} \text{ cm}^2$</p> <p>Altitude of equilateral triangle = $\frac{\sqrt{3}}{2} \times a = \frac{\sqrt{3}}{2} \times 2 = \sqrt{3} \text{ cm}$</p>	

Q. 35

If $a^2 + b^2 + c^2 + 3 = 2(a + b + c)$, then the value of $(a + b + c)$ is:

- a) 2 X
- b) 5 X
- c) 3 ✓
- d) 4 X

The correct answer is: c

$$a^2 + b^2 + c^2 + 3 = 2(a + b + c)$$

$$a^2 + b^2 + c^2 - 2a - 2b - 2c + 1 + 1 \\ + 1 = 0$$

Explanation: $(a - 1)^2 + (b - 1)^2 + (c - 1)^2 = 0$

$$a = 1, b = 1, c = 1$$

Now,

$$a + b + c = 1 + 1 + 1 = 3$$

Q. 36

If $L + M$ means ‘ L is the son of M ’, $L - M$ means ‘ L is the husband of M ’, $L \times M$ means ‘ L is the brother of M ’ and $L \div M$ means ‘ L is the mother of M ’, what does $A \times C$ mean?

- a) A is the father of C. X
- b) A is the nephew of C. X
- c) A is the maternal uncle of C. ✓
- d) A is the mother of C. X



Explanation:

A is the maternal uncle of C.

Q. 37

Which of the following classical dances is associated with Thumri?

- a) Odissi X
- b) Kathakali X
- c) Kathak ✓
- d) Kuchipudi X

The correct answer is: c

Explanation:

Explanation:

Thumri is a semi-classical vocal genre in Indian music, known for its **expressive and emotive style**, often revolving around themes of **love and devotion**. It has a strong association with **Kathak**, a classical dance form known for its **graceful movements, storytelling, and intricate footwork**.

Q. 38

Sundari, Kasu and Jyothi took two tests each. The ratio of marks obtained to total marks for each of their two tests is given below:

Sundari = 24/60 and 32/40

Kasu = 35/70 and 54/60

Jyothi = 27/90 and 45/50

Who among them registered the maximum progress?

a) Only Kasu X

b) Both Sundari and Kasu X

c) Only Jyothi ✓

d) Only Sundari X

Explanation:

The correct answer is: c

$$\begin{array}{ll}
 \text{Sundari} & \begin{array}{l} \text{Test 1} \\ \frac{24}{60} = \frac{4}{10} \end{array} \quad \begin{array}{l} \text{Test 2} \\ \frac{32}{40} = \frac{8}{10} \end{array} \\
 & \text{X}_2 \qquad \qquad \qquad \text{X}_2 \\
 \text{Kasu} & \begin{array}{l} \frac{35}{70} = \frac{5}{10} \\ \text{X}_{1.5} \end{array} \quad \begin{array}{l} \frac{54}{60} = \frac{9}{10} \end{array} \\
 \text{Jyothi} & \begin{array}{l} \frac{27}{90} = \frac{3}{10} \\ \text{X}_3 \end{array} \quad \begin{array}{l} \frac{45}{50} = \frac{9}{10} \end{array} \quad = \text{Maximum Progress}
 \end{array}$$

Q. 39	<p>Alauddin Khilji constructed which of the following garrison cities in Delhi in order to defend his empire from the Mongol attack?</p> <p>a) Delhi-iKuhna <input checked="" type="checkbox"/></p> <p>b) Hauz Khas <input checked="" type="checkbox"/></p> <p>c) Siri <input checked="" type="checkbox"/></p> <p>d) Jahanpanah <input checked="" type="checkbox"/></p>
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Explanation:	<p>The correct answer is: c</p> <p>Explanation:</p> <p>Siri was the second city of Delhi, built by Alauddin Khilji (r. 1296–1316) to serve as a fortified garrison against Mongol invasions. It was strategically designed to protect the Delhi Sultanate from repeated Mongol attacks, which were a significant threat during Khilji's reign.</p> <p>Key Facts:</p> <ul style="list-style-type: none"> Alauddin Khilji constructed Siri around 1303 CE as a fortified settlement with strong defensive walls. It was built in response to frequent Mongol invasions, ensuring Delhi remained secure. Siri housed military barracks and strong fortifications, making it a crucial defence post. Some remnants of Siri Fort still exist in present-day South Delhi.
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Q. 40	<p>Select the set that can replace the question marks (?) in the following series.</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>D</td><td>20</td><td>J</td><td>14</td><td>P</td><td>?</td></tr> <tr> <td>23</td><td>G</td><td>17</td><td>M</td><td>11</td><td>?</td></tr> </table> <p>a) 8/S <input checked="" type="checkbox"/></p> <p>b) R/8 <input checked="" type="checkbox"/></p> <p>c) 9/S <input checked="" type="checkbox"/></p> <p>d) 8/T <input checked="" type="checkbox"/></p>	D	20	J	14	P	?	23	G	17	M	11	?
D	20	J	14	P	?								
23	G	17	M	11	?								
Explanation:	<p>The diagram illustrates the sequence with arrows indicating the pattern of operations between corresponding letters and numbers:</p> <ul style="list-style-type: none"> D → 20: +3 (blue arrow) 20 → J: -3 (red arrow) J → 14: +3 (blue arrow) 14 → P: -3 (red arrow) P → ?: +3 (blue arrow) ? → 8: -3 (red arrow) 23 → G: -3 (red arrow) G → 17: +3 (blue arrow) 17 → M: -3 (red arrow) M → 11: +3 (blue arrow) 11 → ?: -3 (red arrow) ? → S: +3 (blue arrow) 												

Q. 41	<p>Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS) Scheme is a scheme of which Ministry of the Government of India?</p> <p>a) Ministry of Tribal Affairs </p> <p>b) Ministry of Tourism </p> <p>c) Ministry of Minority Affairs </p> <p>d) Ministry of Culture </p>
Explanation:	<p>The correct answer is: c</p> <p>Explanation:</p> <p>The Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS) Scheme is a government initiative launched under the Ministry of Minority Affairs. It focuses on supporting traditional artisans, craftsmen, and communities from minority groups by providing skill development, financial assistance, and market linkages.</p> <p>Key Objectives:</p> <ul style="list-style-type: none">• Skill Development: Training for traditional artisans to enhance their craftsmanship.• Financial Aid: Support for entrepreneurship and modernization of traditional industries.• Market Access: Facilitating better market exposure and branding opportunities.• Holistic Development: Empowering artisans by integrating skill-based training with digital tools.

Q. 42

A, B and C completed a job costing ₹1,800. A worked for 6 days, B worked for 4 days and C worked for 9 days. If their daily wages are in the ratio of 5: 6: 4, then how much will A get paid?

- a) ₹400
- b) ₹800
- c) ₹1,000
- d) ₹600

The correct answer is: d

Ratio of days = A:B:C = 6:4:9

Ratio of daily wages = A:B:C = 5:6:4

Explanation: Ratio of total wages = A:B:C = 30: 24:36 = 5:4:6

15 units = 1800

5 units = $1800/15 \times 5 = \text{Rs. } 600$

A will be paid Rs 600

Q. 43

With which of the following sports is the term 'Chinaman' associated?

- a) Swimming
- b) Table tennis
- c) Cricket
- d) Polo

The correct answer is: c

Explanation:

In cricket, the term "**Chinaman**" refers to a left-arm wrist spinner's delivery that **spins from right to left** (off-side to leg-side for a right-handed batter). This bowling style is similar to a traditional right-arm leg-spin but is bowled by a left-arm spinner.

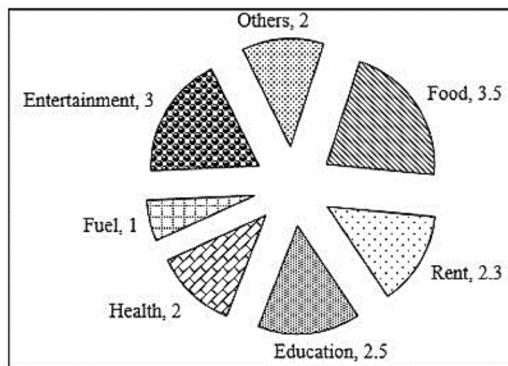
Explanation:

Origin of the Term:

- The term "**Chinaman**" is said to have originated in **1933**, when **Ellis Achong**, a West Indian cricketer of Chinese descent, bowled a left-arm wrist-spin delivery to dismiss an English batsman.
- The surprised batsman reportedly remarked, "**Fancy being done by a Chinaman**", leading to the widespread use of the term.

Q. 44

The pie chart depicted below shows the monthly budget of a middle class family. Study the chart carefully and answer the question that follows.



If the amount spent on food and education during a month was ₹18,000, then what was the total approximate amount spent in that month?

- a) ₹50300
- b) ₹29500
- c) ₹48900
- d) ₹45700

Explanation:

$$\begin{aligned}
 \text{Food + education} &= 18000 \\
 (3.5 + 2.5) &= 18000 \\
 6 &= 18000 \\
 1 &= 3000 \\
 \text{Total approximate amount spent} &= (2+3.5+2.3+2.5+2+1+3) \times 3000 = 16.3 \times 3000 = 48900
 \end{aligned}$$

Q. 45

Read the given statement and conclusions carefully and decide which of the conclusions logically follow(s) from the statement.

Statement: Of all the mobile phones manufactured in Korea, the 'Mexto' brand has the highest sale.

Conclusions:

- I. The quality of no other mobile phones in Korea is as high as that of 'Maxto'.
- II. The number of sales of all the brands of mobile phones manufactured in Korea is known.
- a) Neither conclusion I nor II follows.
- b) Either Conclusion I or II follows.
- c) Only conclusion I follows.
- d) Only Conclusion II follows.

Explanation:

As per the given information it is clearly said that only conclusion II follows.

Q. 46

A large cube is formed by melting of three smaller cubes of sides 3 cm, 4 cm, and 5 cm each. The ratio of the surface areas of the three smaller cubes together to the larger cube is:

- a) 25 : 18 ✓
- b) 18 : 25 ✗
- c) 27 : 64 ✗
- d) 9 : 4 ✗

The correct answer is: a

Side of larger cube = a

Now,

Volume of larger cube = Sum of volume of smaller cube

$$a^3 = 3^3 + 4^3 + 5^3$$

$$a^3 = 27 + 64 + 125$$

Explanation:

$$a^3 = 216, a = 6 \text{ cm}$$

Surface area of three smaller cubes together =

$$4(3^2 + 4^2 + 5^2) = 200 \text{ cm}^2$$

Surface area of larger cube = $4 \times 6^2 = 144 \text{ cm}^2$

Ratio = 200:144 = 25:18

Q. 47

Which of the following statements is correct?

- a) Two magnetic field lines may intersect.
- b) Magnetic flux is a vector quantity.
- c) The net magnetic flux through any closed surface is zero.
- d) Earth's magnetic poles coincide with the geographic poles.

The correct answer is: c

Explanation:

This statement follows directly from **Gauss's law for magnetism**, which states that the **total magnetic flux through a closed surface is always zero**. This is because **magnetic field lines form closed loops**, meaning there are no isolated magnetic charges (monopoles) in nature.

Other options explained:

- **Two magnetic field lines may intersect** – Magnetic field lines **never intersect** because each point in space has a unique direction for the magnetic field. If two lines intersected, it would imply two different directions of the field at the same location, which is physically impossible.
- **Magnetic flux is a vector quantity** – **Magnetic flux** is a **scalar quantity**, not a vector. It represents the total amount of magnetic field passing through a surface and is given by $\Phi = \mathbf{B} \cdot \mathbf{A} \cdot \cos\theta$, where \mathbf{B} is the magnetic field, \mathbf{A} is the area, and θ is the angle between them.
- **The net magnetic flux through any closed surface is zero** – This is a fundamental principle of electromagnetism stating that no net magnetic field enters or leaves a closed surface since field lines form loops. Hence, the total flux is zero.
- **Earth's magnetic poles coincide with the geographic poles** – The **Earth's magnetic poles do not perfectly align with its geographic poles**. The magnetic north pole is located at a different position from the geographic North Pole and even shifts over time due to changes in Earth's magnetic field.

Q. 48

Which of the following is one of the six official languages of the United Nations?

- a) German X
- b) Arabic ✓
- c) Japanese X
- d) Portuguese X

The correct answer is: b

Explanation:

The **United Nations (UN)** has **six official languages**, which are used in UN meetings, documents, and official communications. These languages are:

Explanation:

1. English
2. French
3. Spanish
4. Russian
5. Chinese
6. Arabic

Q. 49

Three positive numbers are in the ratio of 1: 2: 5 and their LCM is 120. The HCF of the same numbers is:

- a) 10 X
- b) 12 ✓
- c) 16 X
- d) 14 X

The correct answer is: b

Let the no. be $a, 2a, 5a$

$$\text{LCM} = 10a$$

$$\text{HCF} = a$$

Now,

$$10a = 120$$

$$a = 12$$

$$\text{Therefore, HCF} = 12$$

Q. 50

In the following table, the number of vacancies (in thousand numbers) for the post of clerk in three different states Delhi, Haryana and Punjab are shown over the years 2015 to 2018.

Years	2015	2016	2017	2018
States				
Delhi	7.2	7.8	6.2	7
Haryana	5.6	6.2	5	5.2
Punjab	6.2	6	5.8	5.6

What is the average number of vacancies for the post of clerk in the state of Delhi for all the years together?

- a) 7200
- b) 5000
- c) 7005
- d) 7050

Explanation: Average = $(7.2+7.8+6.2+7) \div 4 = 28.2/4 = 7.05 \times 1000 = 7050$

Q. 51	Famous Odia litterateur Ramakanta Rath passed away on 16 March 2025 at the age of 90. In which year was he awarded the Padma Bhushan by the Government of India? a) 2002 <input checked="" type="checkbox"/> b) 2006 <input checked="" type="checkbox"/> c) 1998 <input checked="" type="checkbox"/> d) 2009 <input checked="" type="checkbox"/>
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The correct answer is: b

Explanation:

Ramakanta Rath, a renowned Odia poet and former bureaucrat, was awarded the **Padma Bhushan** in **2006** for his outstanding contributions to Indian literature. His works, deeply rooted in modernist poetry, have significantly influenced Odia literature.

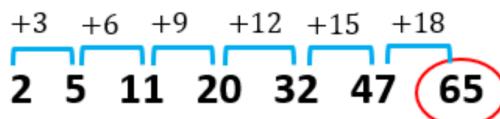
Explanation:

Key Facts:

- **Born:** December 13, 1934, in Cuttack, Odisha.
- **Notable Works:** Sri Radha, Saptama Rutu, Sachitra Andhara.
- **Awards:** Apart from the **Padma Bhushan (2006)**, he also received the **Sahitya Akademi Award (1977)** and **Saraswati Samman (1992)**.
- **Administrative Role:** Served as **Chief Secretary of Odisha** and later as **President of Sahitya Akademi (1998–2003)**.

Q. 52	Select the number that can replace the question mark (?) in the following series. 2, 5, 11, 20, 32, 47, ? a) 64 <input checked="" type="checkbox"/> b) 52 <input checked="" type="checkbox"/> c) 65 <input checked="" type="checkbox"/> d) 54 <input checked="" type="checkbox"/>
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Explanation:



Q. 53

Which regional organization faced a significant crisis in 2021 when one of its member states, Mali, was suspended due to a military coup, highlighting challenges in enforcing democratic principles?

- a) Southern African Development Community (SADC) X
- b) Economic Community of West African States (ECOWAS) ✓
- c) African Union (AU) X
- d) Intergovernmental Authority on Development (IGAD) X

The correct answer is: b

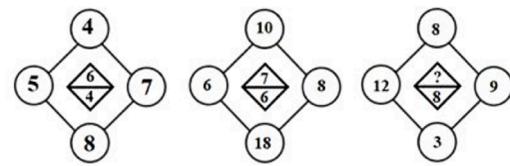
Explanation:

Explanation:

In **2021**, Mali faced a political crisis following a **military coup**, leading to its **suspension from ECOWAS**. The coup disrupted democratic governance, prompting ECOWAS to impose **sanctions** and demand a return to civilian rule. The organization played a key role in **mediating the transition process** and pressuring Mali's military leadership to restore constitutional order.

Q. 54

Understand the pattern and select the number that can replace the question mark (?) in the third figure.



- a) 12 X
- b) 6 X
- c) 10 X
- d) 4 ✓

Explanation:

$$\begin{array}{c}
 \text{Diagram 1: } 6 \times 4 = (5 + 8 + 7 + 4) \\
 24 = 24
 \end{array}
 \quad
 \begin{array}{c}
 \text{Diagram 2: } 7 \times 6 = (6 + 18 + 8 + 10) \\
 42 = 42
 \end{array}
 \quad
 \begin{array}{c}
 \text{Diagram 3: } ? \times 8 = (12 + 3 + 9 + 8) \\
 ? \times 8 = 32 \\
 ? = 4
 \end{array}$$

Q. 55

In a triangle ABC, $\tan A + \tan B + \tan C = ?$

- a) 1
- b) $\tan A \cdot \tan B + \tan B \cdot \tan C + \tan C \cdot \tan A$
- c) $\tan A \cdot \tan B \cdot \tan C$
- d) $-\tan A \cdot \tan B \cdot \tan C$

The correct answer is: c

$$A+B+C = 180$$

$$A+B = 180-C$$

$$\tan(A+B) = \tan(180-C)$$

$$\frac{\tan A + \tan B}{1 - \tan A \tan B} = -\tan C$$

Explanation:

$$\begin{aligned} \tan A + \tan B \\ = -\tan C \\ + \tan A \tan B \tan C \end{aligned}$$

$$\begin{aligned} \tan A + \tan B + \tan C \\ = \tan A \tan B \tan C \end{aligned}$$

Q. 56

Which country recently won the title of first men's and women's Kho-Kho World Cup 2025 by defeating Nepal in both the final matches?

- a) Sri Lanka
- b) Bangladesh
- c) Pakistan
- d) India

The correct answer is: d

Explanation:

Explanation:

India emerged as the **champion** in both the **men's and women's** categories at the **first-ever Kho-Kho World Cup 2025**, held at the **Indira Gandhi Indoor Stadium, New Delhi**. The Indian teams defeated **Nepal** in both finals to secure the historic victory.

Q. 57

Solve the following.

$$8 \div 8 \times \frac{8 + 8}{8 \div 8 \times 8 + 8} = ?$$

a) 1 ✓

b) 1/128 ✗

c) 128 ✗

d) 64 ✗

The correct answer is: a

$$8 \div 8 \times \frac{8 + 8}{8 \div 8 \times 8 + 8}$$

$$1 \times \frac{16}{1 \times 8 + 8} = 1 \times \frac{16}{16} = 1$$

Q. 58

ISRO will operate its Chandrayaan-5 mission in collaboration with which space agency?

a) NASA ✗

b) ESA ✗

c) JAXA ✓

d) Roscosmos ✗

The correct answer is: c

Explanation:

India's **Chandrayaan-5 mission** will be conducted in collaboration with **Japan's space agency, JAXA**. This partnership aims to enhance **scientific capabilities** and strengthen **lunar exploration efforts**.

Key Details:

- **Collaboration:** ISRO and JAXA will jointly develop mission components, including a **250 kg lunar rover**.
- **Scientific Goals:** The mission will focus on **detailed studies of the Moon's surface and composition**.
- **Advancements:** Chandrayaan-5 will build upon the success of previous missions, particularly **Chandrayaan-3**, which achieved a historic soft landing on the Moon's South Pole.

Q. 59

Select the number that can replace the question mark (?) in the following series.

2, 7, 23, 72, 220, ?

a) 665 ✓

b) 600 ✗

c) 472 ✗

d) 500 ✗

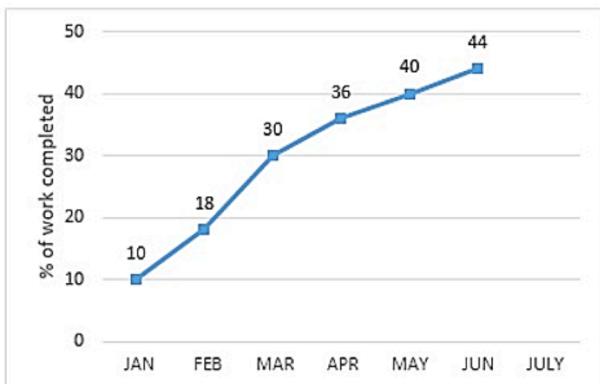
Explanation:

$$\begin{array}{cccccc} \times 3 + 1 & \times 3 + 2 & \times 3 + 3 & \times 3 + 4 & \times 3 + 5 \\ 2 & 7 & 23 & 72 & 220 & 665 \end{array}$$

<p>Q. 60</p> <p>Which of the following combinations is NOT correct regarding the cell cycle?</p> <p>a) M-Mitotic phase X</p> <p>b) G1 Phase-Growth phase X</p> <p>c) G2-DNA replication ✓</p> <p>d) S phase-DNA synthesis X</p>	<p>The correct answer is: c</p> <p>Explanation:</p> <p>The cell cycle consists of different phases that regulate cell growth and division. Each phase has a distinct function. The incorrect pairing here is G2 phase – DNA replication, because DNA replication actually occurs in the S phase, not G2.</p> <p>The cell cycle is a highly regulated process that controls the growth, replication, and division of cells. It consists of distinct phases that ensure genetic material is accurately copied and distributed to daughter cells.</p> <p>Phases of the Cell Cycle</p> <p>The cell cycle is divided into two main parts: Interphase (where the cell grows and prepares for division) and Mitotic Phase (M Phase) (where the cell divides).</p> <p>1. Interphase (Preparation for Division)</p> <p>Interphase accounts for 90% of the cell cycle and includes:</p> <p>Explanation:</p> <ul style="list-style-type: none"> • G1 Phase (Gap 1): The cell grows, produces organelles and proteins, and prepares for DNA synthesis. • S Phase (Synthesis Phase): The cell replicates its DNA, ensuring each daughter cell receives an exact genetic copy. • G2 Phase (Gap 2): The cell continues to grow and checks for errors in DNA replication before division. <p>2. Mitotic Phase (M Phase – Cell Division)</p> <p>Once the cell is ready, it enters M Phase, which involves:</p> <ul style="list-style-type: none"> • Mitosis (Prophase, Metaphase, Anaphase, and Telophase): The chromosomes are evenly distributed into two daughter cells. • Cytokinesis: The cytoplasm splits, creating two genetically identical daughter cells. <p>Regulation & Importance</p> <p>The cell cycle is controlled by checkpoints and regulatory proteins (cyclins and CDKs) to prevent errors, such as uncontrolled division seen in cancer.</p>
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Q. 61

The following graph shows the month-wise cumulative progress in the construction of a dam. If the progress in July is equal to that of the highest progress recorded in any month in the given period, how much work will be completed by the end of July?



- a) 50% X
- b) 52% X
- c) 54% X
- d) 56% ✓

Explanation:

Highest progress recorded in march month = 12%
 So work will be completed by the end of July = $44\% + 12\% = 56\%$

Q. 62

The characteristic of seed plants in which one sperm nucleus fuses with the egg nucleus to form an embryo and another fuses with polar nuclei to form an endosperm is called:

- a) cross pollination X
- b) triple fertilisation X
- c) internal fertilisation X
- d) double fertilisation ✓

The correct answer is: d

Explanation:

Double fertilization is a unique characteristic of **angiosperms (flowering plants)** where two fertilization events occur within the **ovule**. This process ensures both **embryo formation** and **nutrient storage**, essential for seed development.

Explanation:

How Double Fertilization Works:

1. **First fertilization:** One sperm nucleus fuses with the egg nucleus, forming a **diploid ($2n$) zygote**, which later develops into an **embryo**.
2. **Second fertilization:** The other sperm nucleus fuses with the two polar nuclei, forming a **triploid ($3n$) endosperm**, which provides **nutritional support** for the developing embryo.

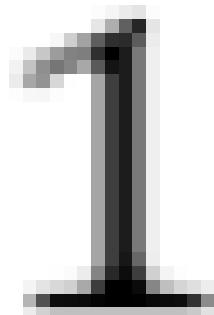
Q. 63

The compound interest on a sum of ₹7,500 for 2 years at 4% p.a. is:

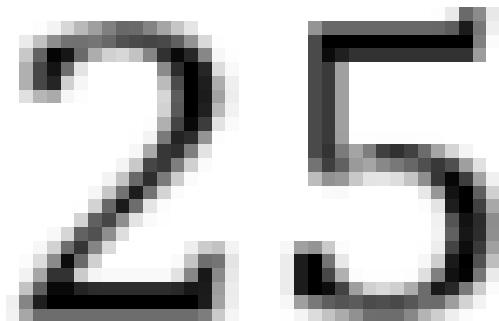
- a) ₹750 X
- b) ₹612 ✓
- c) ₹850 X
- d) ₹515 X

Explanation:

The correct answer is: b



Rate = 4 % =



Ratio of principal to amount = $(25)^2:(26)^2 = 625:676$

Now,

$625 \rightarrow 7500$

$1 \rightarrow 12$

$51 \rightarrow 612$

Therefore,
Compound interest = Rs. 612

Q. 64 Three of the following four number pairs are alike in a certain way and one is different. Pick the odd one out.

- a) 3 – 10 X
- b) 7 – 50 X
- c) 10 – 101 X
- d) 5 – 31 ✓

Explanation:
 $3-10 = (3^2+1)$
 $7-50 = (7^2+1)$
 $10-101 = (10^2+1)$
 $5-31 \neq (5^2+1)$

Q. 65**Which of the following monuments is NOT listed in UNESCO?**

- a) Elephanta Caves 
- b) Taj Mahal 
- c) Dubdi monastery 
- d) Humayun's Tomb 

Explanation:

The correct answer is: c

Explanation:

Dubdi Monastery, located in **Sikkim, India**, is **not listed as a UNESCO World Heritage Site**. While it holds historical and cultural significance as **the oldest monastery in Sikkim**, it has not been officially recognized by UNESCO.

India has **43 UNESCO World Heritage Sites** as of 2025, categorized into **Cultural, Natural, and Mixed** sites:

Cultural Sites (35)

1. Agra Fort (<https://whc.unesco.org/en/list/251>) (1983)
2. Ajanta Caves (<https://whc.unesco.org/en/list/242>) (1983)
3. Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (<https://whc.unesco.org/en/list/1502>) (2016)
4. Buddhist Monuments at Sanchi (<https://whc.unesco.org/en/list/524>) (1989)
5. Champaner-Pavagadh Archaeological Park (<https://whc.unesco.org/en/list/1101>) (2004)
6. Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (<https://whc.unesco.org/en/list/945>) (2004)
7. Churches and Convents of Goa (<https://whc.unesco.org/en/list/234>) (1986)
8. Dholavira: a Harappan City (<https://whc.unesco.org/en/list/1645>) (2021)
9. Elephanta Caves (<https://whc.unesco.org/en/list/244>) (1987)
10. Ellora Caves (<https://whc.unesco.org/en/list/243>) (1983)
11. Fatehpur Sikri (<https://whc.unesco.org/en/list/255>) (1986)
12. Great Living Chola Temples (<https://whc.unesco.org/en/list/250>) (1987, 2004)
13. Group of Monuments at Hampi (<https://whc.unesco.org/en/list/241>) (1986)
14. Group of Monuments at Mahabalipuram (<https://whc.unesco.org/en/list/249>) (1984)
15. Group of Monuments at Pattadakal (<https://whc.unesco.org/en/list/239>) (1987)
16. Hill Forts of Rajasthan (<https://whc.unesco.org/en/list/247>) (2013)
17. Historic City of Ahmadabad (<https://whc.unesco.org/en/list/1551>) (2017)
18. Humayun's Tomb, Delhi (<https://whc.unesco.org/en/list/232>) (1993)
19. Jaipur City, Rajasthan (<https://whc.unesco.org/en/list/1605>) (2019)
20. Kakatiya Rudreshwara (Ramappa) Temple, Telangana (<https://whc.unesco.org/en/list/1570>) (2021)
21. Khajuraho Group of Monuments (<https://whc.unesco.org/en/list/240>) (1986)
22. Mahabodhi Temple Complex at Bodh Gaya (<https://whc.unesco.org/en/list/1056>) (2002)
23. Mountain Railways of India (<https://whc.unesco.org/en/list/944>) (1999, 2005, 2008)
24. Qutb Minar and its Monuments, Delhi (<https://whc.unesco.org/en/list/233>) (1993)
25. Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (<https://whc.unesco.org/en/list/922>) (2014)
26. Red Fort Complex (<https://whc.unesco.org/en/list/231>) (2007)
27. Rock Shelters of Bhimbetka (<https://whc.unesco.org/en/list/925>) (2003)
28. Sacred Ensembles of the Hoysalas (2023)
29. Santiniketan (2023)
30. Sun Temple, Konârak (<https://whc.unesco.org/en/list/246>) (1984)
31. Taj Mahal (<https://whc.unesco.org/en/list/252>) (1983)
32. The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (<https://whc.unesco.org/en/list/1321>) (2016)
33. The Jantar Mantar, Jaipur (<https://whc.unesco.org/en/list/1338>) (2010)
34. Victorian Gothic and Art Deco Ensembles of Mumbai (<https://whc.unesco.org/en/list/1480>) (2018)
35. Moidams – the Mound-Burial System of the Ahom Dynasty (2024)

Natural (7)

1. Great Himalayan National Park Conservation Area (<https://whc.unesco.org/en/list/1406>) (2014)
2. Kaziranga National Park (<https://whc.unesco.org/en/list/337>) (1985)

3. Keoladeo National Park (<https://whc.unesco.org/en/list/340>) (1985)
4. Manas Wildlife Sanctuary (<https://whc.unesco.org/en/list/338>) (1985)
5. Nanda Devi and Valley of Flowers National Parks (<https://whc.unesco.org/en/list/335>) (1988, 2005)
6. Sundarbans National Park (<https://whc.unesco.org/en/list/452>) (1987)
7. Western Ghats (<https://whc.unesco.org/en/list/1342>) (2012)

Mixed (1)

1. Khangchendzonga National Park (<https://whc.unesco.org/en/list/1513>) (2016)

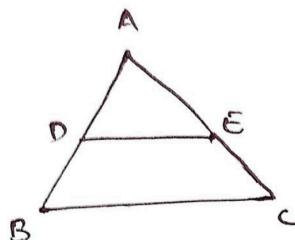
India's heritage is vast and diverse, spanning ancient architecture, biodiversity hotspots, and cultural landmarks.

Q. 66

In a triangle ABC, points D and E are on the sides AB and AC such that DE is parallel to BC and $AD/BD = 3/5$. If AC = 4 cm, then AE = ?

- a) 1.5 cm ✓
- b) 2 cm ✗
- c) 1.8 cm ✗
- d) 2.4 cm ✗

The correct answer is: a



$$DE \parallel BC$$

Explanation:

$$\therefore \frac{AD}{BD} = \frac{AE}{EC} = \frac{3}{5} \rightarrow 8$$

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

$$8 \rightarrow 4$$

$$1 \rightarrow 0.5$$

$$3 \rightarrow 1.5 \text{ cm.}$$

$$\therefore AE = 1.5 \text{ cm.}$$

Q. 67

Which of the following techniques are used for food preservation?

- a) Sun light treatment, wetting, cooking, water soaking
- b) Canning, pasteurisation, freezing, irradiation
- c) Cooking, sterilisation, drying
- d) Cooking, sterilisation, wetting, refrigeration

The correct answer is: b

Explanation:

Food preservation techniques are used to **extend shelf life, prevent spoilage, and maintain nutritional value**. The most effective methods include:

Explanation:

1. **Canning** – Sealing food in airtight containers and applying heat to **destroy microorganisms**.
2. **Pasteurization** – Mild heating to **kill bacteria** in liquids like milk and juices while preserving quality.
3. **Freezing** – Lowering the temperature to slow bacterial growth and retain food freshness.
4. **Irradiation** – Using **low-dose radiation** to kill bacteria, parasites, and other contaminants in food.

Q. 68

Study the following information and answer the question given below it.

Lee, Bruce and Chan are caring.

Min, Chan and Ho are sensitive.

Bruce, Ho and Min are honest.

Lee, Min and Ho are creative.

Which one of the following persons is neither honest nor creative?

- a) Min
- b) Chan
- c) Lee
- d) Bruce

Lee Bruce and Chan are caring

Min Chan and Ho are sensitive

Bruce Ho and Min are honest

Lee Min and Ho are creative

Explanation:

Q. 69

Amadori rearrangement was discovered while studying:

- a) Protein biosynthesis
- b) Hydrological cycle
- c) Krebs cycle
- d) Maillard reaction

The correct answer is: d**Explanation:**

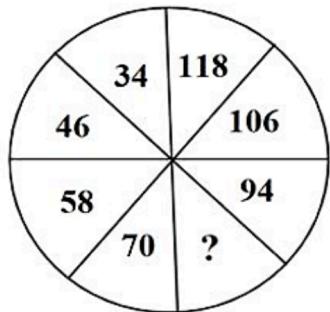
The **Amadori rearrangement** is a chemical reaction that occurs as part of the **Maillard reaction**, which is responsible for the browning and flavour development in cooked foods. This reaction involves the **conversion of an aldose sugar (e.g., glucose) into a ketoamine**, forming intermediate compounds that eventually lead to complex browning reactions.

Explanation:**Key Steps in the Amadori Rearrangement:**

1. A **reducing sugar** (such as glucose) reacts with an **amino group** from proteins or amino acids.
2. This forms a **Schiff base**, which undergoes **Amadori rearrangement** to become a stable **ketoamine**.
3. Further reactions lead to the production of **melanoidins**, responsible for the brown colour and rich flavours in foods like **bread crusts, roasted coffee, and grilled meats**.

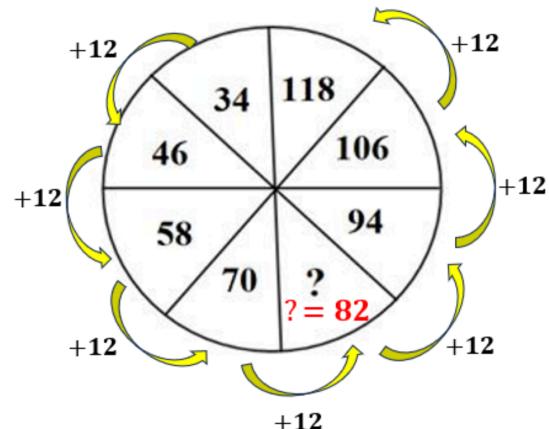
Q. 70

Understand the pattern and select the number that can replace the question mark (?) in the following figure.



- a) 82 ✓
- b) 78 ✗
- c) 80 ✗
- d) 86 ✗

Explanation:



Q. 71

If $3a + 4b = 2$ and $ab = 1/36$, then $27a^3 + 64b^3$ is:

- a) 2
- b) 8
- c) 6
- d) 4

The correct answer is: c

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

Now,

Explanation: $27a^3 + 64b^3$

$$= (3a + 4b) [(3a + 4b)^2 - 36ab]$$

$$= 2 \left(2^2 - 36 \times \frac{1}{36} \right) = 2(4 - 1) = 6$$

Q. 72

Which of the following is a valid page orientation in MS-Word 2010?

- (i) Landscape
- (ii) Portrait
- a) Only (ii)
- b) Only (i)
- c) Both(i) and (ii)
- d) Neither(i) nor (ii)

The correct answer is **Both (i) and (ii)**.

Explanation:

In **MS Word 2010**, users can set the page orientation to either **Landscape** or **Portrait** depending on their document layout needs.

Types of Page Orientation in MS Word:

Explanation:

1. **Portrait Orientation**
 - The default setting in Word, where the page is **taller than it is wide**.
 - Suitable for standard text documents, resumes, essays, and reports.
2. **Landscape Orientation**
 - The page is **wider than it is tall**.
 - Ideal for **tables, charts, presentations**, or documents requiring a broad layout.

Q. 73

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some sisters are brothers.

Very few balloons are sisters.

Conclusions:

I. Some brothers are balloons.

II. Some brothers are not balloons.

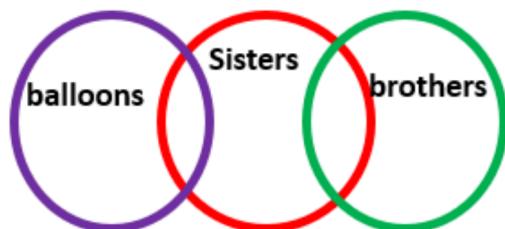
a) Only conclusion II follows. X

b) Only conclusion I follows. X

c) Either conclusion I or II follows. ✓

d) Both the conclusions I and II follows. X

Explanation:



Q. 74

The product of the LCM and the HCF of two positive numbers is 32 and the difference of the numbers is 4. The sum of the same numbers is:

- a) 14 X
- b) 10 X
- c) 12 ✓
- d) 16 X

The correct answer is: c

$$LCM \times HCF = \text{product of two no.}$$

Let the no. be x and y

So,

$$x \times y = 32$$

$$x - y = 4$$

Now,

$$\begin{aligned}(x + y)^2 &= (x - y)^2 + 4xy \\&= 4^2 + 4 \times 32 = 144\end{aligned}$$

$$(x + y) = 12$$

Q. 75

India has aimed to register how many GI products by 2030?

- a) 5000
- b) 7500
- c) 10000
- d) 12500

The correct answer is: c

Explanation:

India has set an ambitious target to register **10,000 Geographical Indication (GI) products** by **2030**. This initiative, led by the **Ministry of Commerce & Industry**, aims to promote **regional heritage, traditional craftsmanship, and agricultural products**.

Explanation:

Key Details:

- As of 2025, India has **605 registered GI products**.
- The government plans to **expand GI registrations** across all states and districts.
- GI tags provide **legal protection**, prevent unauthorized use, and boost **exports**.
- The initiative aligns with the '**Vikas bhi aur Virasat bhi**' vision, emphasizing both development and heritage.

Q. 76

8 men working 9 hours a day can complete a task in 20 days. How long will 7 men working 10 hours a day take to complete the same task?

- a) **103/5 days**
- b) **21/2 days**
- c) **21 days**
- d) **144/7 days**

The correct answer is: d

Formula used,

$$M_1 \times H_1 \times D_1 = M_2 \times H_2 \times D_2$$

$$8 \times 9 \times 20 = 7 \times 10 \times D_2$$

$$D_2 = \frac{144}{7} \text{ days}$$

Explanation:

Q. 77

If ‘Urdu’, ‘Sanskrit’, ‘History’, ‘Physics’ and ‘Economics’ are known as ‘Physics’, ‘History’, ‘Urdu’, ‘Economics’ and ‘Sanskrit’, respectively, then in which subject did we study about Newton?

- a) Urdu
- b) Physics
- c) History
- d) Economics

Explanation:

We study about Newton in physics and **physics** is known as Economics.

Q. 78

According to Census 2011 of India, which group of states has the highest female literacy rate?

- a) Punjab and Haryana
- b) Tamil Nadu and Maharashtra
- c) Kerala and Mizoram
- d) Gujarat and Rajasthan

The correct answer is: c

Explanation:

According to **Census 2011**, Kerala and **Mizoram** recorded the **highest female literacy rates** among Indian states.

Explanation:**Key Facts:**

- **Kerala:** Female literacy rate of **91.07%**, the highest in India.
- **Mizoram:** Female literacy rate of **89.27%**, ranking among the top states.
- Both states have **strong educational policies**, high school enrollment rates, and social initiatives promoting literacy.

Q. 79

A dealer offers a discount of 10% on the marked price of an article and still makes a profit of 20%. If the marked price is ₹1,200, then the cost price is:

- a) ₹900 ✓
- b) ₹850 ✗
- c) ₹950 ✗
- d) ₹800 ✗

The correct answer is: a

$$\text{Ratio of } \frac{MP}{CP} = \frac{100+\text{profit}}{100-\text{discount}} = \frac{100+20}{100-10} = \frac{120}{90} = \frac{4}{3}$$

4 → 1200

Explanation:

1 → 300

3 → 900

Therefore,

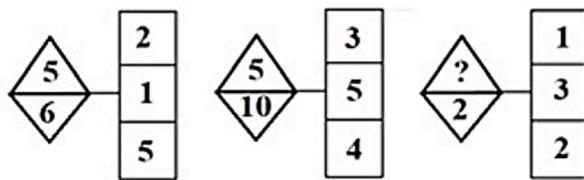
Cost price = Rs 900

Q. 80	<p>Which one of the following is a possible consequence of a persistent revenue deficit for the government?</p> <p>a) Low level of public debt X</p> <p>b) increased expenditure on defense programs X</p> <p>c) limited capacity to fund social welfare programs ✓</p> <p>d) increased investment in infrastructure projects X</p>
Explanation:	<p>The correct answer is: c</p> <p>Explanation:</p> <p>A persistent revenue deficit occurs when a government's current expenses exceed its current revenues, excluding capital receipts. This situation can lead to financial strain, forcing the government to:</p> <ol style="list-style-type: none"> 1. Reduce spending on welfare programs, as funds get redirected toward managing the deficit. 2. Increase borrowing, which raises overall debt and interest payments. 3. Limit development projects, including education, healthcare, and social security initiatives.

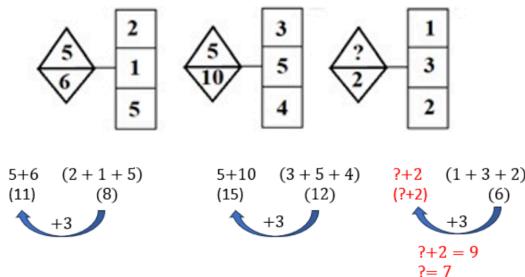
Q. 81	<p>If 9 students are standing on a circular path, then the probability that 2 of them are always standing together is:</p> <p>a) $2/7$ X</p> <p>b) $1/3$ X</p> <p>c) $1/4$ ✓</p> <p>d) $7/8$ X</p>
Explanation:	<p>The correct answer is: c</p> <p>Total outcomes = $(9 - 1)! = 8!$</p> <p>Favorable outcomes: Take the 2 particular people as 1 unit. Arrange 7 remaining + 1 unit in $(8 - 1)! = 7!$ ways</p> <p>The 2 particular people can arrange themselves in $2!$ ways</p> <p>Total Favorable Outcomes = $7! \times 2!$</p> <p>Required probability = $\frac{(7! \times 2!)}{8!} = \frac{7! \times 2!}{8 \times 7!} = \frac{2}{8} = \frac{1}{4}$</p>

Q. 82

Understand the pattern and select the number that can replace the question mark (?) in the third figure.



- a) 6 X
- b) 7 ✓
- c) 5 X
- d) 4 X

Explanation:

Q. 83	<p>From which of the following Constitutions has India adopted the idea of 'Residual Powers' in its constitution?</p> <p>a) South African Constitution X</p> <p>b) French Constitution X</p> <p>c) Canadian Constitution ✓</p> <p>d) Italian Constitution X</p>
Explanation:	<p>The correct answer is: c</p> <p>Explanation:</p> <p>India's concept of Residual Powers—powers that are not explicitly listed in the Constitution but remain with the central authority—has been adopted from Canada. In India's constitutional framework, residual powers belong to the Union government, as outlined in Article 248 and Entry 97 of the Union List.</p> <p>Borrowed Features of the Indian Constitution and Their Source Countries:</p> <ul style="list-style-type: none"> • Fundamental Rights – USA • Judicial Review – USA • Impeachment of the President – USA • Parliamentary System of Government – UK • Rule of Law – UK • Single Citizenship – UK • Cabinet System – UK • Directive Principles of State Policy (DPSP) – Ireland • Method of Election of President – Ireland • Nomination of Rajya Sabha Members – Ireland • Federal System with Strong Centre – Canada • Residuary Powers with Centre – Canada • Advisory Jurisdiction of Supreme Court – Canada • Fundamental Duties – USSR (Russia) • Social, Economic, and Political Justice – USSR (Russia) • Emergency Provisions – Germany (Weimar Constitution) • Procedure for Constitutional Amendments – South Africa • Election of Rajya Sabha Members – South Africa • Concurrent List – Australia • Freedom of Trade and Commerce – Australia • Joint Sitting of Parliament – Australia • Republic and Ideals of Liberty, Equality, Fraternity – France • Procedure Established by Law – Japan

Q. 84

Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- a) GQU X
- b) REI X
- c) SLO ✓
- d) DOS X

G Q U



R E I



Explanation:

S L O



D O S



Q. 85

When 25^{25} is divided by 26, then the remainder is:

- a) 25 ✓
- b) 2 ✗
- c) 24 ✗
- d) 1 ✗

The correct answer is: a

25 25

Using negative remainders concept,

26

be written as

Explanation:

$$\frac{(-1)^{25}}{26}$$

1

=

— —

26

$$= 26 - 1 = 25$$

Remainder = 25

Q. 86

Two sides of a triangle are of lengths 4 cm and 10 cm. If the length of the third side is a cm, then:

- a) $6 < a < 14$ ✓
- b) $a < 6$ ✗
- c) $6 < a < 12$ ✗
- d) $a > 5$ ✗

Explanation:

The correct answer is: a

$$|4-10| < a < |4+10|$$

$$6 < a < 14$$

Q. 87

Which of the following groups is a rich source of fibre?

- a) Pears, banana, and avocado ✓
- b) Cheese, milk, and potato ✗
- c) White bread, white pasta, and white rice ✗
- d) Pancakes, bagels, and butter ✗

Explanation:

The correct answer is **Pears, banana, and avocado**.

Explanation:

Dietary **fibre** is essential for **digestive health**, helping regulate blood sugar levels, reduce cholesterol, and support gut bacteria. **Fruits, vegetables, whole grains, and legumes** are excellent sources of fibre. Among the given options, **pears, bananas, and avocados** are rich in fibre.

Q. 88

- If the difference between the compound interest and the simple interest on a certain sum of money at 8% p.a. for 2 years is ₹240, then the sum of money is:
- ₹37,000 ✗
 - ₹38,500 ✗
 - ₹37,500 ✓
 - ₹38,000 ✗

The correct answer is: c

$$\text{Rate} = 8\% = \frac{2}{25}$$

Let principal be ₹625

$$\begin{array}{c}
 625 \\
 / \quad \backslash \\
 50 \quad 50 \\
 \diagdown \quad \diagup \\
 25 \quad 25 \\
 \textcircled{1} \quad (CI - SI) = 240 \\
 \textcircled{2} \quad 1 \rightarrow 60 \\
 625 \rightarrow 60 \times 625 = 37500 \\
 \therefore \text{Sum} = ₹37,500
 \end{array}$$

Explanation:

Q. 89

A fuse protects an electric circuit from:

- carrying current ✗
- converting one form of energy into other ✗
- inducing current ✗
- overloading ✓

The correct answer is: d

Explanation:

A **fuse** is a **protective device** used in electrical circuits to prevent damage caused by **overloading or short circuits**. It consists of a thin wire that melts when excessive current flows through it, thereby **breaking the circuit** and stopping the flow of electricity.

Explanation:

How a Fuse Works:

- If the current exceeds the fuse's **rated capacity**, the **fuse wire heats up and melts**.
- This prevents electrical components from **overheating**, reducing the risk of fire or damage.
- After melting, the fuse needs to be **replaced** before restoring the circuit.

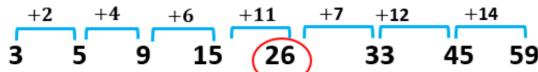
Q. 90

Identify the number that DOES NOT belong to the following series.

3, 5, 9, 15, 26, 33, 45, 59

- a) 45
- b) 59
- c) 26
- d) 15

Explanation:



There should be 23 not 26 because it is in increasing order = +2

Q. 91

A and B are brothers. P and Q are a married couple. Q is the sister of A. How is B related to P?

- a) Wife's father
- b) Father
- c) Maternal uncle
- d) Wife's brother

Explanation:

$$B_m - A_m - Q_f = P_m$$

B is the wife's brother of P.

Q. 92	<p>In which of the following Union Territories is the Rangdum Monastery located?</p> <p>a) Daman & Diu </p> <p>b) Chandigarh </p> <p>c) Puducherry </p> <p>d) Ladakh </p>
Explanation:	<p>The correct answer is: d</p> <p>Explanation:</p> <p>Rangdum Monastery is a Tibetan Buddhist monastery located in the Suru Valley, Ladakh, India. It belongs to the Gelugpa sect and is situated at an altitude of 4,031 meters (13,225 feet). The monastery is positioned on a steep hill, offering breathtaking views of the surrounding Himalayan landscape.</p>

Q. 93

The mean of three numbers is 32. The range of this data set is 28 while the difference between the two smallest numbers is 8. The greatest of the three numbers is:

- a) 51 X
- b) 50 X
- c) 48 ✓
- d) 52 X

The correct answer is: c

Let the nos. be a, b, and c ($a < b < c$)

ATQ,

$$a + b + c = 32 \times 3 = 96 \rightarrow (i)$$

$$c - a = 28, c = a + 28$$

$$b - a = 8, b = a + 8$$

Put the value of b and c in (i)

Explanation:

$$a + b + c = 96$$

$$a + a + 28 + a + 8 = 96$$

$$\therefore a = 20$$

$$b = 28, c = 48$$

Greatest no. = 48

Q. 94

In February 2025, which state government has approved the formation of 'Inland Waterways Authority' to promote water transport and water tourism in the state?

a) Bihar

b) Uttar Pradesh

c) Madhya Pradesh

d) Assam

The correct answer is: b

Explanation:

In February 2025, the **Uttar Pradesh government** approved the formation of the **Inland Waterways Authority** to promote **water transport and tourism** in the state. The decision was made during a **Cabinet meeting chaired by Chief Minister Yogi Adityanath**, aiming to enhance **economic activities and connectivity** through waterways.

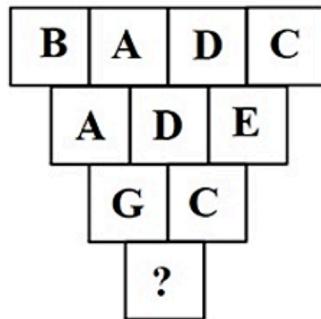
Explanation:

Key Details:

- The authority will oversee **11 national waterways** in Uttar Pradesh, including the **Ganga and Yamuna rivers**.
- It aims to **reduce transportation costs** and **boost commercial activities**.
- The **Uttar Pradesh Waterways Authority Rules, 2025** were introduced to regulate operations.
- The authority will be led by the **Transport Minister or an expert in inland waterways**.

Q. 95

Select the letter that can replace the question mark (?) in the figure below.



- a) I X
- b) F X
- c) J ✓
- d) H X

Explanation:

$$\begin{array}{c}
 \boxed{\text{B}} \boxed{\text{A}} \boxed{\text{D}} \boxed{\text{C}} \rightarrow (\text{B}+\text{A}+\text{D}+\text{C})=10 \\
 (2+1+4+3) \\
 \\
 \boxed{\text{A}} \boxed{\text{D}} \boxed{\text{E}} \rightarrow (\text{A}+\text{D}+\text{E})=10 \\
 (1+4+5) \\
 \\
 \boxed{\text{G}} \boxed{\text{C}} \rightarrow (\text{G}+\text{C})=10 \\
 (7+3) \\
 \\
 \boxed{?} \rightarrow (?)=10 \\
 (?)=\text{J}
 \end{array}$$

Q. 96**If the sum of two numbers is r and their quotient is s/t, then the numbers are:**

- a) $\frac{sr}{s+t}$ and $\frac{tr}{s+t}$ ✓
- b) $\frac{rs}{t}$ and $\frac{ts}{r}$ ✗
- c) $\frac{r-s}{t}$ and $\frac{r-t}{s}$ ✗
- d) $\frac{r}{s}$ and $\frac{r}{t}$ ✗

The correct answer is: a

Let the nos. be a and b

ATQ,

$$a + b = r, b = r - a$$

$$\frac{a}{b} = \frac{s}{t}, b = \frac{at}{s}$$

Now,

$$a + b = r$$

$$\frac{at}{s}$$

Explanation:

$$a + \frac{at}{s} = r$$

$$sr$$

$$a = \frac{sr}{s+t}$$

Put the value of a in above $b=r-a$, we get

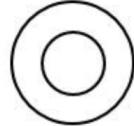
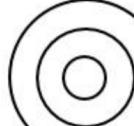
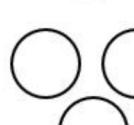
$$b = \frac{tr}{s+t}$$

Q. 97	<p>Who among the following was a ruler of the Rashtrakuta dynasty?</p> <p>a) Dhruva ✓</p> <p>b) Samudragupta ✗</p> <p>c) Kanishka ✗</p> <p>d) Ashoka ✗</p>
Explanation:	<p>The correct answer is: a</p> <p>Explanation:</p> <ul style="list-style-type: none">• Dhruva (ruled c. 780–793 CE) was a powerful Rashtrakuta king who expanded his kingdom and successfully campaigned against North Indian rulers. He played a significant role in strengthening the dynasty's hold over the subcontinent.• Samudragupta (ruled c. 335–375 CE) was a ruler of the Gupta Empire, known for his military prowess and patronage of arts.• Kanishka (ruled c. late 1st–2nd century CE) was a Kushan emperor, famous for his contributions to Buddhism and trade.• Ashoka (ruled c. 268–232 BCE) was a Maurya emperor, best known for his transformation after the Kalinga War and promotion of Buddhism across Asia. <p>Dhruva's reign helped the Rashtrakutas grow into one of the most formidable powers in medieval Indian history. His military expeditions against the Pallavas, Gurjara-Pratiharas, and other northern kingdoms demonstrated his strategic brilliance.</p>

Q. 98

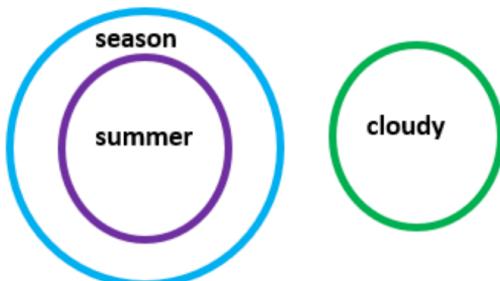
Which of the following Venn diagrams best depicts the relationship between the classes:

Summer, Season, Cloudy

- a)  ✗
- b)  ✓
- c)  ✗
- d)  ✗

Summer is one of the four seasons of the year.

Explanation:



Q. 99	<p>In which of the following towns will you find the 'Kachari Ruins'?</p> <p>a) Shimla X</p> <p>b) Dimapur ✓</p> <p>c) Gangtok X</p> <p>d) Bilaspur X</p>
Explanation:	<p>The correct answer is: b</p> <p>The Kachari Ruins date back to the 10th–12th century CE and consist of monolithic pillars, remnants of temples, and terracotta sculptures. The ruins reflect a unique blend of indigenous Naga culture and Hindu influences.</p> <p>The Kachari Ruins remain an intriguing symbol of the ancient Kachari civilization, which once ruled parts of Northeast India. Their distinct mushroom-shaped domes and pillars are believed to have ritualistic or ceremonial significance.</p>
Q. 100	<p>A dealer marks his goods 20% above the cost price. He then allows a discount on it and makes a profit of 8%. Find the rate of discount offered by the dealer.</p> <p>a) 10% ✓</p> <p>b) 6% X</p> <p>c) 4% X</p> <p>d) 12% X</p>
Explanation:	<p>The correct answer is: a</p> <p>Let the cost price be 100 unit</p> <p>Therefore, Selling price = 108 unit</p> <p>Marked price = 120 unit</p> <p>Discount = $120 - 108 = 12$</p> <p>Discount % = $\frac{12}{120} \times 100 = 10\%$</p>