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RRB NTPC CBT I Memory Based Paper 18 March 2026 S1

Q.1 In an election with three candidates, M, N and R, candidate M secured 42% of the total votes, while candidate R obtained 34%. If the total number of votes polled was 37,700 and all were valid, how many votes did candidate N receive?

A. 9048
B. 9164
C. 9100
D. 9000

Answer: A

Sol: **Given:**
Total votes = 37,700
M's share = 42%
R's share = 34%
Formula Used:
Total % = 100%
N's votes = Total votes × N's %
Solution:
Percentage of votes for N = 100% - (42% + 34%) = 100% - 76% = 24%
Number of votes for N = 37700 $\times \frac{24}{100}$ = 377 × 24 = **9048**
So the correct answer is (a)**9048**

Q.2 If '+' means '−', '−' means '×', '×' means '÷' and '÷' means +', then what will come in place of the question mark (?) in the following equation?
88 − 9 ÷ 195 + 988 × 19 = ?

A. 955
B. 930
C. 915
D. 935

Answer: D

Sol: **Given**: 88 − 9 ÷ 195 + 988 × 19 = ?

Given Sign+ - × ÷

New Sign - × ÷ +

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

New equation: 88 × 9 + 195 - 988 ÷ 19 = ?
88 × 9 + 195 - 52 = ?
792 + 195 - 52 = ?
987 - 52 = ?
? = **935**
Thus, correct option is (d).

Q.3 A, B, C, D, E and F are sitting around a circular table, facing the centre. E sits second to the left of A. D is an immediate neighbour of C. C sits to the immediate right of B. F sits second to the left of B. What is the position of E with respect to D?

A. Second to the right
B. Second to the left
C. Immediate right
D. Third to the left

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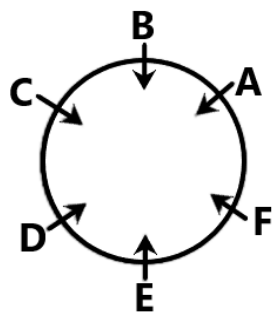
Answer: C

Sol: **Given**:
A, B, C, D, E and F are sitting around a circular table, facing the centre.
E sits second to the left of A.
D is an immediate neighbour of C.
C sits to the immediate right of B.
F sits second to the left of B.
From the given information seating arrangement will be.



So, **Immediate right** is the position of E with respect to D.
Thus, correct option is (c).

Q.4 **Which of the following constitutional mechanisms ensures political representation for Scheduled Castes and Scheduled Tribes in the Indian Parliament?**

A. Article 338 and 339
B. Article 341 and 342
C. Article 15 and 16
D. Article 330 and 332

Answer: D

Sol: The correct answer is **(D) Article 330 and 332**

Explanation:
• Article 330 provides for the reservation of seats for SCs and STs in the Lok Sabha.
• Article 332 provides for the reservation of seats for SCs and STs in the Legislative Assemblies (Vidhan Sabhas) of the states.

Information Booster:
• Originally, this reservation was for 10 years, but it has been extended periodically through constitutional amendments (currently by the 104th Amendment Act).

Additional Knowledge:
• Article 338 (Option A): Deals with the National Commission for SCs.
• Article 341/342 (Option B): Empower the President to specify which castes/tribes are SCs or STs.

Q.5 **What is the theme of World Mental Health Day 2025?**

A. Mental Health for All — Global Priority
B. Make Mental Health a Universal Human Right
C. Access to Services – Mental Health in Catastrophes and Emergencies
D. Mental Health and Wellbeing for a Sustainable Future

Answer: C

Sol: The correct answer is (c) Access to Services – Mental Health in Catastrophes and Emergencies.
Explanation:
• World Mental Health Day is observed on **10 October every year** to promote awareness and advocacy for mental wellbeing.
• The **2025 theme** focuses on ensuring mental health care access during **emergencies like wars, pandemics, and natural disasters**, where psychological support is often inadequate.
• The theme highlights mental health as a **fundamental human right**, aligning with global sustainable development goals.
Information Booster:
• **First observed:** 10 October 1992, by the *World Federation for Mental Health (WFMH)*.
• **2025 theme goal:** Promote accessible mental health services during catastrophes.
• **WHO statistics:** 1 in 8 people globally suffer from mental disorders.
• The day emphasizes integrating **mental health in disaster management frameworks**.
• Supported globally by the **World Health Organization (WHO)** and **WFMH**.
Additional Knowledge:

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- **First theme (1994):** "Improving the Quality of Mental Health Services Throughout the World."
- Founder: **Eugene Brody**, former Secretary General, WFMH.
- Mental disorders include **depression, anxiety, PTSD, and bipolar disorder**.
- **Global initiatives:** Mental Health Gap Action Programme (mhGAP) by WHO.
- The 2025 campaign encourages setting up **emergency mental health units** and **community support systems**.

Q.6 **Where is the NTPC Green Hydrogen Hub being set up?**

A. Hyderabad
B. Anantapur
C. Pudimadaka
D. Vijayawada

Answer: C

Sol: Sol. The NTPC Green Hydrogen Hub is being established in Pudimadaka, Anakapalle district, near Visakhapatnam, Andhra Pradesh.
Correct Answer: Pudimadaka,
Key Points:
· PM Modi laid the foundation stone on January 8, 2025, in Visakhapatnam, Andhra Pradesh.
· **Investment and Project:** ₹1.85 lakh crore investment. Green Hydrogen Hub to have 20 GW renewable energy capacity.
· **Hydrogen Production**: Hub to produce 1,500 tonnes per day (TPD) of green hydrogen and 7,500 TPD of hydrogen derivatives (e.g., green methanol, green urea, sustainable aviation fuel).
· **Location:** Pudimadaka, Anakapalle district, near Visakhapatnam, Andhra Pradesh.
· **Collaboration:** Joint project between NTPC Green Energy Limited (NGEL) and New & Renewable Energy Development Corporation of Andhra Pradesh (NREDCAP).
· **Significance for India:** Part of India's National Green Hydrogen Mission to make India a global leader in green hydrogen production.

Q.7 **Article 5 to 11 of the Indian constitution deal with**

A. Fundamental rights

B. Fundamental duties
C. Union executive
D. Citizenship

Answer: D

Sol: **The correct answer is: (d) Citizenship**

Explanation:
- Articles **5 to 11** of the Indian Constitution describe the provisions related to **citizenship**.
- They define who was considered a citizen of India at the time of the Constitution's commencement.
- Article **11** empowers **Parliament** to make laws regarding citizenship.

Information Booster:
- Citizenship Act of **1955** was passed under Article 11.
- India provides citizenship by **birth, descent, registration, naturalization, and incorporation of territory**.
- These articles are placed under **Part II** of the Constitution.
- Citizenship defines the **legal membership of a person in a nation**.

Additional Knowledge:
- **(a) Fundamental rights:** Covered in **Part III**, Articles **12–35**.
- **(b) Fundamental duties:** Added by **42nd Amendment (1976)** under **Article 51A**.
- **(c) Union executive:** Covered in **Part V**, Articles **52–78**.

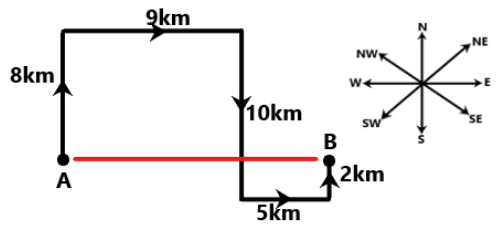
Q.8 **Suraj starts from Point A and travels 8 km to the north. He then takes a right turn and travels 9 km, takes another right turn and travels 10 km, then takes a left turn and travels 5 km. Finally, he takes a left turn and travels 2 km to reach Point B. How far (shortest distance) and in which direction must he travel to return to Point A? (All turns are 90° turns only unless specified.)**

A. 11 km towards the west
B. 6 km towards the south

C. 14 km towards the west
D. 1 km towards the east

Answer: C

Sol: **Given**:
Suraj starts from Point A and travels 8 km to the north.
He then takes a right turn and travels 9 km, takes another right turn and travels 10 km, then takes a left turn and travels 5 km.
Finally, he takes a left turn and travels 2 km to reach Point B.
From the given statements path diagram will be.



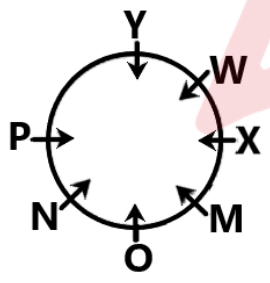
9 + 5 = 14 km
So, he far **14 km** and in **west** direction must he travel to return to Point A.
Thus, correct option is (c).

Q.9 **M, N, O, P, W, X and Y are sitting around a circular table facing the centre of the table. Only one person sits between P and O when counted from the right of P. Only one person sits between O and X when counted from the right of O. Only one person sits between P and W when counted from the right of W. Only two people sit between N and X when counted from the left of X. Only one person sits between M and W when counted from the left of W. Who sits third to the right of Y?**

A. W
B. O
C. P
D. M

Answer: B

Sol: **Given:**
M, N, O, P, W, X and Y are sitting around a circular table facing the centre of the table.
Only one person sits between P and O when counted from the right of P.
Only one person sits between O and X when counted from the right of O.
Only one person sits between P and W when counted from the right of W.
Only two people sit between N and X when counted from the left of X.
Only one person sits between M and W when counted from the left of W.
From the given information seating arrangement will be.



So, **O** sits third to the right of Y.
Thus, correct option is (b).

Q.10 **Anil and Sunil started a business investing equal amounts. Anil left after 9 months. They earned an annual profit of ₹28,000. What is Sunil's share of annual profit?**

A. ₹16000
B. ₹15000
C. ₹13000
D. ₹12000

Answer: A

Sol: **Given:**
Anil and Sunil stated a business with equal share

Total annual profit = ₹28000

Anil left after 9 months

Formula Used:

Ratio and Proportions

Solution:

Let the amount of investment of both Anil and Sunil be x

Then Anil profit share = 9x

And Sunil profit share = 12x

Ratio of share = $\frac{9x}{12x}$ = 3:4

Sum of ratio = 3+4 =7

Sunil's share = $\frac{4}{7} \times 28000$= ₹16,000

Q.11 **What is the default file extension for Microsoft Excel documents?**

A. .docx
B. .xlsx
C. .pptx
D. .txt

Answer: B

Sol: The default file extension for **Microsoft Excel** documents is **.xlsx**.
Important Key Points:
1. **.xlsx** is the extension for files created in Microsoft Excel 2007 and later versions.
2. The file extension helps identify the file type and associated program.
Knowledge Booster:
· **.docx** is the extension for Word documents.
· **.pptx** is used for PowerPoint presentations.
· **.txt** refers to plain text files.

Q.12 **Refer to the number series given below and answer the question that follows. Counting to be done from left to right only.**
(NOTE: All numbers are single-digit numbers only.)
(Left) 2 3 6 7 3 1 4 2 3 1 3 1 4 8 8 1 7 4 8 8 9 2 7 2 8 1 3 (Right)
How many such odd numbers are there each of which is immediately preceded by an odd number and also immediately followed by an odd number?

A. 3
B. 5
C. 4
D. 2

Answer: A

Sol: **Given**: (Left) 2 3 6 7 3 1 4 2 3 1 3 1 4 8 8 1 7 4 8 8 9 2 7 2 8 1 3 (Right)
Logic: Odd number | Odd number | Odd number
(Left) 2 3 6 7 3 1 4 2 3 1 3 1 4 8 8 1 7 4 8 8 9 2 7 2 8 1 3 (Right)

(Left) 2 3 6 7 3 1 4 2 3 1 3 1 4 8 8 1 7 4 8 8 9 2 7 2 8 1 3 (Right)

So, **3** such odd numbers are there each of which is immediately preceded by an odd number and also immediately followed by an odd number.
Thus, correct option is (a).

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Q.13 **In a certain code language, 'he eat lunch' is coded as 'rk yf gl' and 'eat proper food' is coded as 'av gl tn'. How is 'eat' coded in the given language?**

A. gl
B. tn
C. rk
D. yf

Answer: A

Sol: **Given**: In a certain code language, 'he eat lunch' is coded as 'rk yf gl' and 'eat proper food' is coded as 'av gl tn'.

he eat lunch = rk yf gl

eat proper food = av gl tn

So, the code of **eat** is **gl**.
Thus, correct option is (a).

Q.14 **Each of the digits in the number 59643127 is arranged in ascending order from left to right. What will be the sum of the digits that are second from the left and third from the right in the new number thus formed?**

A. 8
B. 11
C. 13
D. 12

Answer: A

Sol: **Given**: 59643127
Arrange digits in ascending order:
Digits: 5, 9, 6, 4, 3, 1, 2, 7
Ascending order: 1 2 3 4 5 6 7 9
Second from the left → 2
Third from the right → 6
Sum: 2 + 6 = **8**
So, **8** will be the sum of the digits that are second from the left and third from the right in the new number thus formed.
Thus, correct option is (a).

Q.15 **The nature of the image formed behind the mirror, in case of a convex mirror is _____.**

A. virtual and inverted
B. real and inverted
C. virtual and erect
D. real and erect

Answer: C

Sol: **The correct answer is:** (C) **virtual and erect**
In the case of a **convex mirror**, the image formed is always:

- **Virtual** (the image cannot be projected on a screen since the light rays appear to diverge from a common point behind the mirror),
- **Erect** (the image is upright, maintaining the same orientation as the object),
- **Reduced in size** (the image is always smaller than the object).

Convex mirrors always form such images regardless of the position of the object.

Information Booster

1. **Option A: Virtual and inverted**
   - This is incorrect because convex mirrors always produce **virtual and erect** images, not inverted ones.
2. **Option B: Real and inverted**

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- This is incorrect because convex mirrors never form real images. Real images are typically formed by concave mirrors or convex lenses.

3. **Option D: Real and erect**

- This is incorrect because **real images** are typically formed by concave mirrors (when the object is placed beyond the focus), not convex mirrors.

Key Points

- **Convex Mirror**: Always forms a **virtual**, **erect**, and **reduced** image, regardless of the position of the object.
- **Concave Mirror**: Can form both real and virtual images depending on the position of the object.

Q.16 **The active Participant in the Bundela Rebellion of 1842 Hirdeshah was Zamindar of which of the following places?**

A. Chawarpatha
B. Deori
C. Suatal
D. Hirapur

Answer: D

Sol: The correct answer is (d) Hirapur
Explanation:
Hirdeshah, also known as Raja Hirde Shah Lodi, was the Zamindar of Hirapur and a prominent leader in the Bundela Rebellion of 1842.
He played a crucial role in mobilizing other chiefs and tribal leaders, including the Gonds, to join the uprising against British tyranny.
Hirdeshah's kingdom of Hirapur was strategically important in the Sagar-Narmada territory, which was the epicenter of the rebellion.
He and other leaders led attacks on British outposts, making it difficult for the British to suppress the rebellion for over a year.
Information Booster:
The Bundela Rebellion of 1842 was an uprising in the Sagar-Narmada territory against British revenue policies and exorbitant taxes.
Key leaders of the revolt, besides Hirdeshah, included Madhukar Shah of Narhat and Jawahar Singh Bundela of Chandrapur.
The rebellion lasted for about a year and ended after the capture of its leaders, including Hirdeshah, in 1843.

Q.17 **The LCM of two prime numbers K and P (where K > P) is 667. Find the value of 3P + K.**

A. 108
B. 128
C. 98
D. 88

Answer: C

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Sol: Given:

LCM of two prime numbers K and P is 667

K > P

Formula Used:

For two prime numbers, their LCM is simply the product of the two numbers:

LCM(K , P) = K × P

Solution:

K × P = 667

667 = 23 × 29

Thus, K = 29 and P = 23 (since K > P).

3P + K = 3 × 23 + 29 = 69 + 29 = 98

The value of 3P + K is **98**.

Q.18 **Which of the given options best describes the truthfulness of the following statements?**
i) In Windows 10, the Recycle Bin is located on the Desktop.
ii) In Windows 10, you can create shortcuts by right-clicking on a file or program.

A. i-True, ii-True
B. i-False, ii-True
C. i-False, ii-False
D. i-True, ii-False

Answer: A

Sol:

1. **Statement i**: In Windows 10, the Recycle Bin is located on the Desktop. This statement is **True**. In **Windows 10**, the **Recycle Bin** icon is by default located on the **Desktop**. It is where deleted files are temporarily stored before being permanently removed from the system.
2. **Statement ii**: In Windows 10, you can create shortcuts by right-clicking on a file or program. This statement is **True**. In **Windows 10**, to create a shortcut for a file or program, you can **right-click** on the file or program and select **"Create shortcut"** from the context menu. This allows users to create easy access links to files or programs on the desktop or other locations.

Important Key Points:

· **Recycle Bin on Desktop**: It serves as a temporary storage for deleted files and can be restored or permanently deleted.
· **Creating Shortcuts**: A common method in Windows 10 for quick access to files and programs by right-clicking and selecting **Create shortcut**.

Q.19 **If the mode of the following data is 140, then what is the value of x?**

Class	125-130	130-135	135-140	140-145	145-150
Frequency	30	30	33	x	31

A. 34
B. 33
C. 47
D. 46

Answer: B

Sol: Given:

Classes (width (h=5)): 125–130, 130–135, 135–140, 140–145, 145–150
Frequencies: 30, 30, 33, x, 31
Mode = 140

modal class is (140 -145).
For modal class: preceding freq $f_0 = 33$, modal freq f_1 = x, succeeding freq f_2 =31, lower limit l = 140.

Formula Used:
Mode (grouped data):
$$\text{Mode} = l + \frac{(f_1 - f_0)}{2f_1 - f_0 - f_2} \cdot h$$

Solution:
Given Mode=140 and l = 140:
140=$140 + \frac{(x-33)}{2x-33-31} \times 5$
$\frac{(x-33)}{2x-64} \times 5 = 0$
x-33=0
x = 33

Q.20 **In a certain code language,**
P + Q means 'P is the father of Q',
P & Q means 'P is the wife of Q',
P @ Q means 'P is the sister of Q' and
P # Q means 'P is the wife of Q'.
Based on the above, how is Y related to Z if 'Y @ G & E + V @ Z'?

A. Brother's wife
B. Mother's sister
C. Father's mother
D. Mother's mother

Answer: B

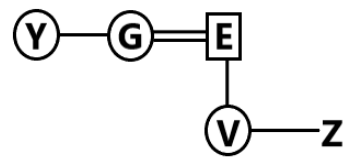
Sol: **Given**: In a certain code language,
P + Q means 'P is the father of Q',
If 'Y @ G & E + V @ Z'?

Symbols + & @ #

RelationFatherWifeSisterWife

Symbol in Diagram	Meaning
- / O	Female
+/ □	Male
═	Married Couple
—	Siblings
|	Difference Of Generation

From the given information blood relation diagram will be.



So, Y is the **Mother's sister of** Z.
Thus, correct option is (b).

Q.21 **Rishika starts from point A and drives 49 km towards north. She then takes a left turn, drives 51 km, turns left and drives 54 km. She then takes a left turn and drives 64 km. She takes a final left turn, drives 5 km and stops at point P. How far (shortest distance) and towards which direction should she drive in order to reach point A again? (Note: All turns are 90° turns only unless specified.)**

A. 11 km to the east
B. 12 km to the west
C. 10 km to the west

D. 13 km to the west

Answer: D

Sol: **Given**:

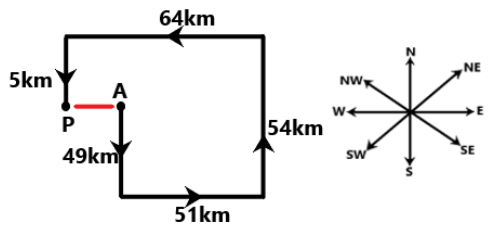
Rishika starts from point A and drives 49 km towards north.

She then takes a left turn, drives 51 km, turns left and drives 54 km.

She then takes a left turn and drives 64 km.

She takes a final left turn, drives 5 km and stops at point P.

From the given statements path diagram will be.



64 - 51 = 13 km

So, he far **13 km** and towards **west** direction should she drive in order to reach point A again.

Thus, correct option is (d).

Q.22 If acot θ = b, then what will be the value of $\frac{b\cos\theta - a\sin\theta}{b\cos\theta + a\sin\theta}$?

A. 0

B. $b^2 + a^2$

C. $\frac{b^2 - a^2}{b^2 + a^2}$

D. $\frac{b^2 + a^2}{b^2 - a^2}$

Answer: C

Sol: **Given:**

acot θ = b

cot θ = $\frac{b}{a}$

Solution:

$$\frac{b\cos\theta - a\sin\theta}{b\cos\theta + a\sin\theta}$$

$$= \frac{\frac{b\cos\theta}{\sin\theta} - a}{\frac{b\cos\theta}{\sin\theta} + a}$$

$$= \frac{b\cot\theta - a}{b\cot\theta + a}$$

$$= \frac{b \times \frac{b}{a} - a}{b \times \frac{b}{a} + a}$$

$$= \frac{\frac{b^2 - a^2}{a}}{\frac{b^2 + a^2}{a}} = \frac{b^2 - a^2}{b^2 + a^2}$$

Q.23 HP 16 is related to JT 19 in a certain way. In the same way, CK 22 is related to EO 25. To which of the given options is MU 27 related, following the same logic?

A. QV 29

B. OY 30

C. QZ 29

D. OV 30

Answer: B

Sol: **Given**: HP 16 is related to JT 19 and CK 22 is related to EO 25 with same logic.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Logic: 1st letter + 2, 2nd letter + 4 and number + 3 place.
For, HP 16 - JT 19
H + 2 = J, P + 4 = T, 16 + 3 = 19
For, CK 22 - EO 25
C + 2 = E, K + 4 = O, 22 + 3 = 25
Similarly,
MU 27 - ?
M + 2 = O, U + 4 = Y, 27 + 3 = 30
So, MU 27 is related to **OY 30**.
Thus, correct option is (b).

Q.24 2 – [3 – {6 – (5 – 4 – 3 + 10)}] = ?

A. 4
B. 2
C. 1
D. –3

Answer: D

Sol: **Solution:**
2 – [3 – {6 – (5 – 4 – 3 + 10)}]
=> 2 – [3 – {6 – (15 – 4 – 3)}]
=> 2 – [3 – {6 – (15 – 7)}]
=> 2 – [3 – {6 – 8}]
=> 2 – [3 + 2]
=> 2 – 5
=> – 3

Q.25 A tent is cylindrical upto a height of 6 m and conical above it. The diameter of the base is 90 m and the height of the conical part is 28 m. What is the area (in m^2) of canvas used in making it?

A. 2905π
B. 2895π
C. 2940π
D. 2925π

Answer: D

Sol: **Given:**

Radius r = 45 m (diameter = 90 m)

Height of cylindrical part h = 6 m

Height of conical part = 28 m

Formula Used:

Curved surface area of cylinder = 2πrh

Curved surface area of cone = πrl

Solution:

Slant height of cone l = $\sqrt{45^2 + 28^2} = \sqrt{2025 + 784} = \sqrt{2809} =$ 53 m

Curved surface area of cylinder = 2π × 45 × 6 = 540π

Curved surface area of cone = π × 45 × 53 = 2385π

Total canvas area = 540π + 2385π = 2925π

Q.26 **Which of the following novels won the 2025 Pulitzer Prize for Fiction?**

A. Every Living Thing
B. Native Nations
C. James
D. Feeding Ghosts

Answer: C

Sol: The correct answer is **(C) James**

Explanation:
• The 2025 Pulitzer Prize for Fiction was awarded to the novel 'James' by Percival Everett. The book received widespread critical acclaim for its innovative and subversive reimagining of Mark Twain's classic 'Adventures of Huckleberry Finn'.
• In 'James', Everett tells the story from the perspective of Jim, the enslaved man who accompanies Huck on his journey down the Mississippi River. The novel is noted for its brilliant use of language, exploring the internal life and agency of a character who was historically sidelined or caricatured.
• The Pulitzer committee praised the novel for its profound exploration of race, identity, and the power of storytelling. By giving Jim a sophisticated and articulate voice, Everett challenges the foundations of American literature and provides a harrowing yet darkly humorous look at the realities of slavery.
• Percival Everett is a prolific and highly respected American author known for his versatility and intellectual depth. Winning the Pulitzer solidified his status as one of the most important contemporary voices in literature. The prize, established by Joseph Pulitzer, remains one of the most prestigious honors in the field of letters and journalism.

Information Booster:
• The Pulitzer Prize for Fiction is one of the seven American Pulitzer Prizes annually awarded for Letters, Drama, and Music.
• Previous winners include iconic works like 'To Kill a Mockingbird' by Harper Lee and 'The Old Man and the Sea' by Ernest Hemingway.

Additional Knowledge:
• **Every Living Thing (Option A):** This is a title associated with James Herriot or other authors but was not the 2025 Fiction winner.
• **Native Nations (Option B):** Likely refers to a historical or non-fiction work regarding indigenous people, not the Pulitzer Fiction winner.
• **Feeding Ghosts (Option D):** A acclaimed graphic memoir/novel by Tessa Hulls (2024), but it did not win the 2025 Pulitzer Prize for Fiction.

Q.27 **Who was the architect of the ancient city "Rajgriha"?**

A. Jivaka
B. Mahagovinda
C. Udayin
D. Shilvant

Answer: B

Sol: The correct answer is (b). Mahagovinda was a renowned architect and contemporary of King Bimbisara of Magadha. He is credited with the design and planning of the royal city of Rajgriha (modern-day Rajgir), which served as the first capital of the Magadhan Empire.

Information Booster

- Rajgriha was strategically located, surrounded by seven hills (Giri-vraja), making it naturally fortified.
- Mahagovinda is mentioned in Buddhist texts like the 'Digha Nikaya' as a master builder of cities.
- Bimbisara utilized Mahagovinda's expertise to build a new city outside the old mountain fortifications.
- The city was famous for its cyclopean walls, which are among the few pre-Mauryan structures surviving today.
- It was a major center for both Buddhism and Jainism; the First Buddhist Council was held here at the Saptaparni Cave.
- The design of Rajgriha reflected the growing urban complexity and centralized power of the Haryanka dynasty.
- Mahagovinda is also associated with the planning of other major cities of that era in the Buddhist tradition.
- Rajgriha remained the capital until Udayin shifted it to Pataliputra.

Additional Knowledge

- Jivaka: The most famous physician (Rajvaidya) of Magadha, a contemporary of the Buddha and King Bimbisara.
- Udayin: The son of Ajatashatru who founded the city of Pataliputra at the confluence of the Ganga and Son rivers.
- Shilvant: A less-known figure, sometimes associated with craft or labor, but not the primary architect of Rajgriha.

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Q.28 **Which Article of the Indian Constitution empowers Parliament to make provisions with respect to elections to the Legislature of a State?**

A. Article 327
B. Article 324
C. Article 356
D. Article 280

Answer: A

Sol: The correct answer is **(A) Article 327**

Explanation:
• **Article 327** of the Indian Constitution gives Parliament the power to make laws concerning all matters relating to elections to either House of Parliament or to the Houses of the Legislatures of the States. This includes the preparation of electoral rolls and the delimitation of constituencies.
• This ensures that while states have their own legislatures, the core framework of the electoral process remains uniform and controlled by national law (like the Representation of the People Acts).

Information Booster:
• **Article 328:** Gives the Legislature of a State power to make provisions with respect to elections to such Legislature, but only in matters not covered by laws made by Parliament under Article 327.
• **Part XV:** Articles 324 to 329 deal with elections in India.
• **Delimitation:** Refers to the act of redrawing boundaries of Lok Sabha and State Assembly seats to reflect changes in population.

Additional Knowledge:
• **Article 324 (Option B):** Deals with the superintendence, direction, and control of elections being vested in an **Election Commission**.
• **Article 356 (Option C):** Deals with the imposition of **President's Rule** in a state if the constitutional machinery fails.
• **Article 280 (Option D):** Deals with the establishment of the **Finance Commission** every five years.

Q.29 **Who succeeded Bindusara as the ruler of the Maurya Empire around 268 BC?**

A. Dasaratha
B. Ashoka
C. Brihadratha
D. Samprati

Answer: B

Sol: The correct answer is **(B) Ashoka**

Explanation:
• Ashoka the Great succeeded his father Bindusara to the throne of the Mauryan Empire around 268 BCE (or 273 BCE depending on whether one includes the succession war period).
• Bindusara was the son of Chandragupta Maurya, the founder of the empire.
• Ashoka's reign marked the zenith of Mauryan power, covering almost the entire Indian subcontinent except for the extreme south.
• He is most famous for his conversion to Buddhism and the promotion of 'Dhamma' (righteousness) after the Kalinga War.

Information Booster:
• **Titles:** Ashoka is often referred to in his inscriptions as 'Devanampiya' (Beloved of the Gods) and 'Piyadasi' (One who looks with affection).
• **Edicts:** He was the first Indian king to communicate directly with his people through stone inscriptions placed at public locations.
• **Lion Capital:** The Lion Capital of Ashoka at Sarnath is the national emblem of modern India.

Additional Knowledge:
• **Dasaratha (Option A):** A grandson of Ashoka who succeeded him in the eastern part of the empire and issued inscriptions in the Barabar caves.
• **Brihadratha (Option C):** The last Mauryan king, who was assassinated by his general Pushyamitra Shunga in 185 BCE.
• **Samprati (Option D):** Another grandson of Ashoka, known for his patronage of Jainism.

Q.30 **Seven boxes, B, D, E, P, S, T and W, are kept one over the other but not necessarily in the same order. Only E is kept above D. Only P is kept between D and B. Only W is kept below T. How many boxes are kept between S and W?**

A. One
B. Four
C. Three
D. Two

Answer: A

Sol: **Given**:
Seven boxes, B, D, E, P, S, T and W, are kept one over the other but not necessarily in the same order.
Only E is kept above D.
Only P is kept between D and B.
Only W is kept below T.
From the given information arrangement will be.

OrderBoxes

7 E

6 D

5 P

4 B

3 S

2 T

1 W

So, **one** boxes are kept between S and W.
Thus, correct option is (a).

Q.31 **The arithmetic mean of 25 real numbers is 110. If 10 numbers are increased by $12\frac{1}{2}$ each, another 10 numbers are increased by 15 each and the remaining 5 numbers are unaltered, then the new value of the arithmetic mean is:**

A. 125
B. 121
C. 120
D. 112

Answer: B

Sol: **Given:**
Mean of 25 numbers = 110

Original total = 25$\times 110 = 2750.$

10 numbers increased by $12\frac{1}{2} = 12.$5 each.

Another 10 numbers increased by 15 each.

Remaining 5 numbers unchanged.

Formula Used:

New mean $= \frac{\text{New total}}{\text{Number of items}}$

Solution:
Total increment =$10 \times 12.5 + 10 \times 15 = 125 + 150 = 275$
New total = 2750 + 275 = 3025.
New mean = $\frac{3025}{25} = 121.$

Q.32 A dealer purchased a washing machine for ₹15,700. He allows a discount of 16% on its marked price and still makes a profit of 20%. Find the marked price (nearest in ₹) of the washing machine.

A. ₹22,249
B. ₹22,942
C. ₹22,492
D. ₹22,429

Answer: D

Sol: Given:

Cost price of the washing machine = ₹15,700

Discount allowed = 16%

Profit made = 20%

Formula Used:

Selling Price (SP) = Cost Price (CP) + Profit

Discounted Selling Price = Marked Price (MP) – Discount

Solution:

SP = 15700 + 0.$20 \times 15700 = 15700 + 3140 = 18840$

SP = MP - (M$P \times 0.16) = MP \times (1 - 0.16) = MP \times 0.84$

We know the selling price after the discount is

18840 = MP$\times 0.84$

MP $= \frac{18840}{0.84} \approx 22,429$

Thus, the marked price of the washing machine is **₹22,429**.

Q.33 Evaluate the given expression.
(-18) + 6 ÷ 3 + 5

A. -1
B. 1
C. -11
D. 11

Answer: C

Sol: Given:
(-18) + 6 ÷ 3 + 5

Concept Used:

Operation preference wise	Symbol
Brackets	[], {}, ()
Orders, of	^{x} (power), √ (root), of
Division	÷
Multiplication	×
Addition	+
Subtraction	-

Solution:

(-18) + 6 ÷ 3 + 5

= -18 + 2 + 5

= -11

Q.34 **What will come in place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?**
48 ÷ 16 + 366 × 6 − 53 = ?

A. 770
B. 790
C. 780
D. 760

Answer: D

Sol: **Given**: 48 ÷ 16 + 366 × 6 − 53 = ?

Given Sign + ×

Interchanged Sign - ÷

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

New equation: 48 × 16 - 366 ÷ 6 + 53 = ?
48 × 16 - 61 + 53 = ?
768 - 61 + 53 = ?
821 - 61 = ?
? = **760**
Thus, correct option is (d).

Q.35 What will come in place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?
168 × 7 – 66 + 5 ÷ 9 = ?

A. 45
B. 49
C. 42
D. 47

Answer: A

Sol: **Given**: 168 × 7 – 66 + 5 ÷ 9 = ?

Given Sign + ×

Interchanged Sign0 - ÷

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

New equation: 168 ÷ 7 + 66 - 5 × 9 = ?
24 + 66 - 5 × 9 = ?
24 + 66 - 45 = ?
90 - 45 = ?
? = **45**
Thus, correct option is (a).

Q.36 Which smallest number should be added to 25553 so that the sum is completely divisible by 38?

A. 21
B. 22
C. 23
D. 18

Answer: A

Sol: **Given:**
Number = 25553

Divisor = 38

Formula Used:

Required number = Divisor - Remainder

Solution:

25553 ÷ 38 = 672 remainder 17

Required number = 38 - 17 = 21

Q.37 Rigveda consists of a collection of:

A. 1028 hymns
B. 4023 hymns
C. 2028 hymns
D. 3028 hymns

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Answer: A

Sol: The Correct Answer **is (a) 1028 hymns.**
Rigveda:

- The Rigveda is one of the Oldest Veda.
- It is the oldest of the Vedas and consists of a collection of 1028 hymns or Suktas.
- The Rigveda is divided into 10 Mandalas (books).
- The priest who recites the hymns of the Rigveda is known as "Hotri".
- The Aitareya Brahmana and the Kaushitaki (Shankhayana) Brahmana
- Upveda of Rigveda is Ayurveda.

Information Booster:

The Vedas: An Overview

The Vedas comprise four texts: the Rigveda, Samaveda, Yajurveda, and Atharvaveda. The first three are collectively referred to as Vedatrayi and are considered the oldest and most significant. The Atharvaveda was added later to this sacred corpus.

Bharatamuni's Natyashastra is often regarded as the Panchama Veda (Fifth Veda). Traditionally, the Vedas remained in oral form for a long period before being documented in written texts.

Structure of the Vedas

Scholars hold different views regarding the structure of the Vedas. Some classify them into two parts: the Samhitas and the Brahmanas, while others categorize them into four sections:

1. **Samhitas - Collection of hymns and mantras**
2. **Brahmanas - Ritualistic explanations**
3. **Aranyakas - Philosophical discussions**
4. **Upanishads - Metaphysical and spiritual knowledge**

The Samhitas and Brahmanas form the **Karma-Kanda (ritualistic segment), whereas the Aranyakas and Upanishads constitute the Jnana-Kanda (philosophical segment).**

Highlights of Each Veda

- **Rigveda -** The oldest Veda, containing 1,028 hymns divided into 10 mandalas. The Purushasukta, explaining the four varnas, is found in the 10th mandala.
- **Samaveda -** A collection of 1,603 verses, mostly borrowed from Rigveda, used in Soma sacrifices and significant in Indian music traditions.
- **Yajurveda -** Prescribes rituals and sacrifices; classified into Shukla Yajurveda (Vajasaneyi) and Krishna Yajurveda.
- **Atharvaveda -** The most distinct of the four, containing 711 hymns and 5,987 mantras in 20 kandas, often linked to folk traditions, superstitions, and protective charms.

Brahmanas: The Ritualistic Texts

The Brahmanas serve as commentaries on the Samhitas, elaborating on Vedic rituals and their significance.

- **Rigveda -** Aitareya Brahmana and Kausitaki Brahmana
- **Yajurveda -** Satapatha Brahmana, the most extensive Brahmana
- **Atharvaveda -** Gopatha Brahmana

Aranyakas: The Forest Treatises

The Aranyakas (forest texts) were composed by hermits who sought solitude in forests for deep spiritual study. These texts bridge the transition from ritualistic practices (Karma Marga) to philosophical knowledge (Jnana Marga).

- They emphasize symbolism and mysticism.
- Considered appendices to the Brahmanas.
- Prepare the foundation for Upanishadic teachings.

Upanishads: The Philosophical Texts

The Upanishads mark the culmination of Vedic thought, delving into metaphysics, spirituality, and philosophy. The term **'Upanishad'** signifies sitting close to a guru to receive esoteric knowledge.

- Composed between 800 BCE - 500 BCE.
- 108 Upanishads, categorized according to their associated Veda.
- Prominent Upanishads: **Isha, Kena, Katha, Prashna, Mundaka, Mandukya, Chhandogya, Brihadaranyaka, Aitareya, and Taittiriya.**
- Major contributors: **Maharshi Yagnavalkya, Rajarshi Janak, Mandukya Muni, and Pippalad Muni.**
- Key concepts: Brahman (Supreme Reality), Atman (Self), Karma, and Moksha (liberation).

- Influence: Inspired Indian philosophers like Shankara, Ramanuja, and Aurobindo.
- **National Motto: "Satyameva Jayate"** originates from the Mundaka Upanishad.

Vedangas: The Ancillary Sciences

The Vedangas emerged towards the later Vedic period, aiding in the understanding and preservation of Vedic knowledge.

The six Vedangas:

1. **Shiksha (Phonetics) - Proper pronunciation of Vedic texts.**
2. **Kalpa (Rituals) - Guidelines for conducting sacrifices.**
3. **Vyakarana (Grammar) - Sanskrit grammar and structure.**
4. **Nirukta (Etymology) - Explanation of difficult words in the Vedas.**
5. **Chandas (Meter) - Study of poetic meters used in hymns.**
6. **Jyotisha (Astronomy) - Determining auspicious times for rituals.**

The Vedangas played a pivotal role in preserving the sanctity and transmission of Vedic knowledge through generations.

Q.38 **The ratio of the present ages of X and Y is 3 : 4. Five years ago, the ratio of their ages was 5 : 7. What is the present age of Y?**

A. 60 years
B. 50 years
C. 30 years
D. 40 years

Answer: D

Sol: **Given:**
The ratio of the present ages of X and Y is 3 : 4.

Five years ago, the ratio of their ages was 5 : 7.

Solution:

Let the present age of X = 3x

Present age of Y = 4x

According to the question,

$$\frac{3x-5}{4x-5}=\frac{5}{7}$$

21x - 35 = 20x - 25

x = 10

Then,

Present age of X = 3x = 3$\times 10$ = 30 years

Present age of Y = 4x = $4 \times 10 = 40$ years

Q.39 **If α and β are the roots of the equation $x^2-11x+24=0$, then what is the value of ($\alpha^2+\beta^2$)?**

A. 64
B. 75

C. 80
D. 73

Answer: D

Sol: **Given:**
Quadratic equation: $x^2 - 11x + 24 = 0$

Roots: α and β

Concept Used:

If α and β are roots of a quadratic equation $x^2 - (\alpha + \beta)x + \alpha\beta = 0$

Solution:

From the equation:

Sum of roots: $\alpha + \beta$ = 11

Product of roots: $\alpha\beta$= 24

$$\alpha^2 + \beta^2 = (\alpha + \beta)^2 - 2\alpha\beta$$

$$\alpha^2 + \beta^2 = (11)^2 - 2(24) = 121 - 48 = 73$$

Q.40 **Refer to the following number series and answer the question that follows (all numbers are single digit numbers only). Counting to be done from left to right only.**
(Left) 7 2 8 6 7 3 8 5 9 6 2 4 5 2 8 7 8 6 3 6 4 9 5 1 2 4 3 (Right)
How many such odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an odd digit?

A. More than three
B. One
C. Three
D. Two

Answer: B

Sol: **Given**: (Left) 7 2 8 6 7 3 8 5 9 6 2 4 5 2 8 7 8 6 3 6 4 9 5 1 2 4 3 (Right)
Logic: Odd digit | Odd digit | Odd digit
(Left) 7 2 8 6 7 3 8 5 9 6 2 4 5 2 8 7 8 6 3 6 4 9 5 1 2 4 3 (Right)

So, **one** such odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an odd digit.
Thus, correct option is (b).

Q.41 **In August 2025, which test marked the successful end-to-end demonstration of the parachute-based deceleration system for the Gaganyaan crew module by ISRO?**

A. Integrated Air Drop Test (IADT-01)
B. Crew Escape System Test (CES-01)
C. Crew Module Landing Test (CMLT-03)
D. Pad Abort Test (PAT-02)

Answer: A

Sol: The correct answer is **(A) Integrated Air Drop Test (IADT-01)**

Explanation:
• ISRO successfully conducted the Integrated Air Drop Test (IADT-01) at the Satish Dhawan Space Centre to validate the parachute system.
• A dummy crew module was dropped from an aircraft to simulate the re-entry and landing phase of the Gaganyaan mission.

Information Booster:

• Gaganyaan is India's first human spaceflight mission, aiming to send a three-member crew to an orbit of 400 km for 3 days.

Additional Knowledge:

• Pad Abort Test (Option D): Focuses on the ability of the crew escape system to function while the rocket is still on the launch pad.

Q.42 **Raju and Raman can complete a piece of work in 12 days and 16 days, respectively. If they work on alternate days, starting with Raju, in how many days will the work be completed?**

A. $13\frac{2}{3}days$
B. $13\frac{1}{3}days$
C. $14\frac{1}{3}days$
D. $14\frac{2}{3}days$

Answer: A

Sol: **Given:**

Raju can complete the work in 12 days.

Raman can complete the work in 16 days.

Solution:

Total work = LCM of 12 and 16

= 48

Efficiency of Raju = 48/12 = 4 unit\day

Efficiency of Raman = 48\6 = 3 unit\day

When Raju and Raman do work alternative days than two days work of Raju and Raman = 4 + 3 = 7 unit

2 days work = 7 unit

12 days work = 42

Remaining work = 48 - 42 = 6 unit

13 days Raju does 4 unit then 2 unit work left

Left 2 unit work Raman complete = $\frac{2}{3}days$

Total number of days to complete the whole work when the do this work alternative days = $13 + \frac{2}{3} = 13\frac{2}{3}days$

Q.43 **In a certain code language, 'BITE' is coded as '3712' and 'TIDE' is coded as '1207'. What is the code for 'D' in that language?**

A. 3
B. 0
C. 7
D. 2

Answer: B

Sol: **Given**:

In a certain code language, 'BITE' is coded as '3712' and 'TIDE' is coded as '1207'.

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B I T E = 3 7 1 2

T I D E = 1 2 0 7

So, the code of '**D**' is **0**.
Thus, correct option is (b).

Q.44 **Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?**
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. PVU
B. ELK
C. LRQ
D. MSR

Answer: B

Sol:

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

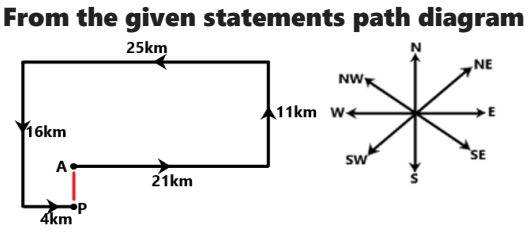
Logic: 1st letter + 6 = 2nd letter and 2nd letter - 1 = 3rd letter
Now, we check each options.
Option (a): PVU
P + 6 = V, V - 1 = U
Option (b): ELK
E + 6 $\neq$ L, L - 1 = K
Option (c): LRQ
L + 6 = R, R - 1 = Q
Option (d): MSR
M + 6 = S, S - 1 = R
Thus, correct option is (b).

Q.45 **Akshay starts from Point A and drives 21 km towards the east. He then takes a left turn, drives 11 km, then turns left and drives 25 km. He then takes a left turn and drives 16 km. He takes a final left turn, drives 4 km, and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90-degree turns only, unless specified.)**

A. 11 km towards south
B. 5 km towards north
C. 21 km towards west
D. 5 km towards east

Answer: B

Sol: **Given**:
Akshay starts from Point A and drives 21 km towards the east.
He then takes a left turn, drives 11 km, then turns left and drives 25 km.
He then takes a left turn and drives 16 km.
He takes a final left turn, drives 4 km, and stops at Point P.
From the given statements path diagram will be.



16 - 11 = 5 km
So, he far **5 km** and towards **north** direction should he drive in order to reach Point A again.
Thus, correct option is (b).

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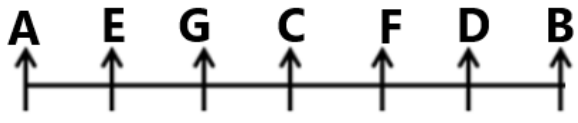
Q.46 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only two people sit to the right of F. Only three people sit between F and A. Both E and C are immediate neighbours of G. D sits immediately to the left of B. C is not an immediate neighbour of A. How many people sit between D and E?

A. 2
B. 3
C. 4
D. 1

Answer: B

Sol: **Given**:
Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north.
Only two people sit to the right of F.
Only three people sit between F and A.
Both E and C are immediate neighbours of G.
D sits immediately to the left of B.
C is not an immediate neighbour of A.
From the given information seating arrangement will be.



So, **3** people sit between D and E.
Thus, correct option is (b).

Q.47 Match the Articles with their corresponding descriptions:

Article	Description
1. Article 53	a. Office of the Vice President
2. Article 63	b. Executive power of President
3. Article 356	c. Office of the Attorney General
4. Article 76	d. State Emergency
5. Article 352	e. Internal Emergency

A. 1 - b, 2 - a, 3 - d, 4 - c, 5 - e
B. 1 - a, 2 - b, 3 - e, 4 - c, 5 - d
C. 1 - b, 2 - a, 3 - d, 4 - e, 5 - c
D. 1 - a, 2 - e, 3 - d, 4 - b, 5 - c

Answer: A

Sol:
Answer: (a) 1 - b, 2 - a, 3 - d, 4 - c, 5 - e
Explanation:
· **Article 53** deals with the **Executive power of the President**, which includes the authority to govern the country.
· **Article 63** relates to the **Office of the Vice President**, who serves as the Chairman of the Rajya Sabha.
· **Article 356** talks about **State Emergency**, which allows the President to intervene in case of a breakdown of law and order in a state.
· **Article 76** refers to the **Office of the Attorney General**, the chief legal advisor to the government.
· **Article 352** deals with **Internal Emergency**, which can be declared in the event of a threat to national security or public order.

Q.48 In a certain code language, 'van oak canoe' is coded as 'cs vd zb' and 'canoe jet wheat' is coded as 'vc cs uw'. How is 'canoe' coded in that language?

A. vc
B. zb

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C. cs
D. vd

Answer: C

Sol: **Given**:
In a certain code language, 'van oak canoe' is coded as 'cs vd zb' and 'canoe jet wheat' is coded as 'vc cs uw'.

van oak canoe = cs vd zb

canoe jet wheat = vc cs uw

So, the code of '**canoe**' is **cs**.
Thus, correct option is (c).

Q.49 **Five people A, B, C, D and E are sitting in a row facing towards north. Only 2 people are sitting between A and D. B is sitting at the third position from extreme left of the row. B is sitting immediate right to A. B is sitting immediate left to E. Exactly how many people are sitting in between E and A?**

A. One
B. Three
C. None
D. Two

Answer: A

Sol: **Given**:
Five people A, B, C, D and E are sitting in a row facing towards north.
Only 2 people are sitting between A and D.
B is sitting at the third position from extreme left of the row.
B is sitting immediate right to A.
B is sitting immediate left to E.
From the given information seating arrangement will be.

So, exactly **one** people are sitting in between E and A.
Thus, correct option is (a).

Q.50 **51 people are standing in a row facing north. Rohit is 19th from the left end while Anupam is 12th from the right end. How many people are there between Rohit and Anupam?**

A. 17
B. 18
C. 19
D. 20

Answer: D

Sol: **Given**:
51 people are standing in a row facing north.
Rohit is 19th from the left end while Anupam is 12th from the right end.
Solution:
Total people = 51
Rohit is 19th from the left.
Anupam is 12th from the right.
Position from the left = 51 − 12 + 1 = 40
Anupam is 40th from the left.
People between them = 40 − 19 − 1 = 20
So, **20** people are there between Rohit and Anupam.
Thus, correct option is (d).

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Q.51 **The process of a solid, like dry ice, changing directly into a gas without first becoming a liquid is called:**

A. Evaporation
B. Condensation
C. Melting
D. Sublimation

Answer: D

Sol:

The correct answer is Sublimation.
Explanation Sublimation is the phase transition of a substance directly from the solid to the gas state, without passing through the liquid state. Dry ice {solid carbon dioxide} is a common example.
Additional Information
· **{a}** Evaporation: The process of a liquid changing to a gas.
· **{b}** Condensation: The process of a gas changing to a liquid.
· **{c}** Melting: The process of a solid changing to a liquid.

Q.52 **Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched in which year?**

A. 1998
B. 2000
C. 2005
D. 2015

Answer: B

Sol:

✔ **The correct answer is (b) 2000.**
Explanation
· **Pradhan Mantri Gram Sadak Yojana (PMGSY)** was launched on **25 December 2000**.
· The objective was to provide **all-weather road connectivity** to unconnected rural habitations.
· It is a **100% centrally sponsored scheme**.
Information Booster
· Launched on **Good Governance Day**.
· Roads built under PMGSY are called **rural core roads**.
Additional Knowledge
· The scheme plays a major role in **rural connectivity, employment, and access to services**.

Q.53 **An amount of ₹440 is divided among three persons in the ratio of 7 : 17 : 16. The difference between the largest and the smallest shares (in ₹) in the distribution is:**

A. 110
B. 84
C. 114
D. 127

Answer: A

Sol: **Given:**

Total amount = ₹440

Ratio = 7 : 17 : 16

Solution :

Sum of ratios = 7 + 17 + 16 = 40

1 part = $\frac{440}{40} = 11$

Shares:

Smallest (7 parts) = 7 × 11 = 77

Largest (17 parts) = 17 × 11=187

Difference = 187 - 77 = 110
The difference between largest and smallest shares = ₹110

Q.54 **Which of the following best protects sensitive data stored in RAM from unauthorized access during system sleep or hibernation?**

A. Disk Defragmentation
B. BitLocker Drive Encryption
C. Regular BIOS update
D. Enabling Firewall

Answer: B

Sol: When a computer enters **sleep or hibernation**, the contents of **RAM** may be written temporarily to storage (hibernation file).
If this data is not protected, an attacker can extract sensitive information through memory-based attacks.

BitLocker Drive Encryption protects this data by **encrypting the hibernation file and memory contents**, preventing unauthorized access even if someone tries to read it offline.

Therefore, **BitLocker** offers the strongest protection among the given options.

- **A) Disk Defragmentation** → Improves disk performance, **not** memory security.
- **C) Regular BIOS update** → Enhances hardware compatibility/security but does **not** protect RAM data.
- **D) Enabling Firewall** → Protects network traffic, **not RAM contents**.

Important Key Points

- RAM contents during hibernation get stored in **hiberfil.sys**.
- BitLocker encrypts this file, preventing offline extraction.
- Sleep/hibernation attacks include **cold boot attacks** and **DMA attacks**.

Knowledge Booster

- Operating systems that use TPM + BitLocker increase protection against **cold boot attacks**, where attackers freeze RAM chips to extract data.
- Full-disk encryption is one of the most effective defenses against memory-based data theft.

Q.55 **Which key combination is commonly used to paste copied text?**

A. Ctrl + C
B. Ctrl + X
C. Ctrl + V
D. Ctrl + Z

Answer: C

Sol: **Introduction:** Keyboard shortcuts are widely used to perform common tasks quickly.
Information Booster: The standard shortcut for pasting copied or cut content is **Ctrl + V** on Windows and **Command + V** on macOS.

Additional Knowledge: Option (a) Ctrl + C is used to copy, option (b) Ctrl + X is used to cut, and option (d) Ctrl + Z is used to undo the last action. Hence, only (c) represents the paste command.

So the correct answer is (c).

Q.56 **In a certain code language,**
'A + B' means 'A is the mother of B'

'A - B' means 'A is the sister of B'

'A × B' means 'A is the son of B'

'A ÷ B' means 'A is the brother of B'
If 'D + E - F ÷ G × K', then how is D related to K?

A. Daughter
B. Mother
C. Sister
D. Wife

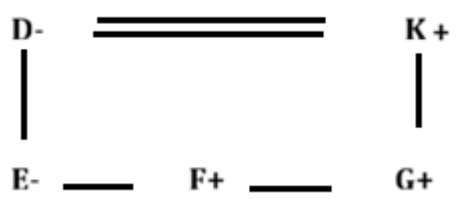
Answer: D

Sol: In a certain code language,
'A + B' means 'A is the mother of B'

'A - B' means 'A is the sister of B'

'A × B' means 'A is the son of B'

'A ÷ B' means 'A is the brother of B'
If 'D + E - F ÷ G × K',



D is the wife of K.

Q.57 **What is the theme for the 16th National Voters' Day celebrated in 2026?**

A. Making Elections Inclusive, Accessible and Participative
B. Nothing Like Voting, I Vote for Sure
C. My India, My Vote
D. Electoral Literacy for Stronger Democracy

Answer: C

Sol:
The correct answer is (c) My India, My Vote
Explanation:
· The theme for the **16th National Voters' Day (2026)** is **"My India, My Vote"**.
· This theme emphasizes the personal connection and responsibility of every citizen towards the nation through the power of their vote.
· It also features the tagline **"Citizen at the Heart of the Indian Democracy"**.
Information Booster:
· The theme is used to organize debates, discussions, and competitions in educational institutions across the country.
· It reinforces the importance of informed and ethical voting.
Additional Knowledge:
· (Option a) This was the theme for **NVD 2022**.
· (Option b) **"Nothing Like Voting, I Vote for Sure"** was the theme for **NVD 2023** and **2024**.
· (Option d) **"Electoral Literacy for Stronger Democracy"** was the theme for **NVD 2020**.

Q.58 **If 36 : y :: y : 9, find the positive value of y.**

A. 18
B. 24
C. 13
D. 22

Answer: A

Sol: **Given:**
Proportion:

36 : y :: y : 9

Find the positive value of (y).

Solution:

$$\frac{36}{y} = \frac{y}{9}$$

$$36 \times 9 = y^2$$

$$y^2 = 324$$

y = $\sqrt{324}$ = 18

Q.59 **In a certain code language,**
P + Q means 'P is the husband of Q',
P # Q means 'P is the brother of Q',
P & Q means 'P is the mother of Q' and
P % Q means 'P is the sister of Q'.
How is S related to M if 'S # D + V & I % M'?

A. Wife's father
B. Father's mother
C. Father's father
D. Father's brother

Answer: D

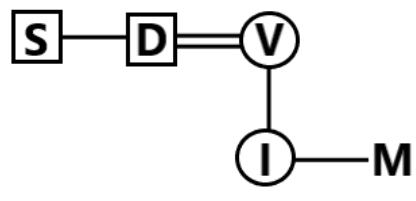
Sol: **Given**: In a certain code language,
P + Q means 'P is the husband of Q',
If 'S # D + V & I % M'?

Symbols + # & %

Relation Husband Brother Mother Sister

Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
|	Difference Of Generation

From the given information blood relation diagram will be.



So, S is the **Father's brother** of M.
Thus, correct option is (d).

Q.60 **The average speed of a car travelling at 70 km/hr for 1 hour and 'p' km/hr for $1\frac{1}{2}$ hours is 58 km/hr. Find the value of p.**

A. 70

B. 62.5
C. 67.5
D. 50

Answer: D

Sol: **Given:**
Speed 1 = 70 km/hr for time t1 = 1 hour.
Speed 2 = p km/hr for time t2 = 1.5 hours.
Average speed = 58 km/hr.
Formula Used:
Average Speed = $\frac{\text{Total Distance}}{\text{Total Time}}$
Distance = $\text{Speed} \times \text{Time}$
Solution:
Total time = 1 + 1.5 = 2.5 hours.
Total distance = $70 \times 1 + p \times 1.5 = 70 + 1.5p$
We know Average Speed = $\frac{70 + 1.5p}{2.5}$

$$58 = \frac{70 + 1.5p}{2.5}$$

$$145 = 70 + 1.5p$$

$$1.5p = 145 - 70$$

$$1.5p = 75$$

$$p = \frac{75}{1.5} = 50$$

Final Answer
So the correct answer is (d)

Q.61 **Seven boxes M, N, O, P, Q, R and S are kept one over the other but not necessarily in the same order. Only three boxes are kept below N. Only two boxes are kept between N and P. Only Q is kept above O. S is kept at some place below R and at some place above M. Which box is kept at second position from the bottom?**

A. M
B. O
C. S
D. P

Answer: A

Sol: **Given**:
Seven boxes M, N, O, P, Q, R and S are kept one over the other but not necessarily in the same order.
Only three boxes are kept below N.
Only two boxes are kept between N and P.
Only Q is kept above O.
S is kept at some place below R and at some place above M.
From the given information arrangement will be.

Order	**Boxes**
7	Q
6	O
5	R
4	N
3	S
2	M

1 P

So, **M** box is kept at second position from the bottom.
Thus, correct option is (a).

Q.62 **The 'Padhe Bharat Badhe Bharat' (PBBB) initiative, launched as a sub-programme of the Sarva Shiksha Abhiyan, primarily focuses on which of the following educational aspects?**

A. High school vocational training and skill development
B. Early grade reading, writing, and mathematics
C. Digital literacy for senior secondary students
D. Providing free laptops to college students

Answer: B

Sol:
The correct answer is (b) **Early grade reading, writing, and mathematics**
Explanation:
· **'Padhe Bharat Badhe Bharat' (PBBB)** is a nationwide sub-programme of the **Sarva Shiksha Abhiyan (SSA)**, now integrated under the **Samagra Shiksha** scheme.
· The primary objective of PBBB is to ensure that children in **Class I and II** develop foundational skills in **reading, writing, and early mathematics**.
· It recognizes that the ability to read with comprehension is the basic foundation for all future learning; a child who fails to learn to read in the early grades often struggles to catch up in later years.
· The initiative emphasizes a **pedagogical approach** that is child-centric, focusing on the use of diverse teaching-learning materials and promoting a print-rich environment in classrooms.
· It also encourages the use of the **mother tongue** or local language as the medium of instruction to facilitate better understanding during the early years of schooling.
Information Booster:
· **Foundational Literacy and Numeracy (FLN)**: PBBB aligns with the goals of the **NIPUN Bharat Mission**, which aims for every child to achieve foundational literacy and numeracy by the end of Grade 3.
· **Twin Tracks**: The programme operates on two tracks: **Track 1** focuses on Early Reading and Writing (ERW), and **Track 2** focuses on Early Mathematics (EM).
· **Library Strengthening**: A key component involves the creation of class libraries and the availability of age-appropriate storybooks to foster a habit of reading among young children.
· **Teacher Training**: The scheme provides specialized training to teachers to handle the specific needs of early graders, emphasizing "learning by doing" and play-based activities.
Additional Knowledge:
High school vocational training (Option a)
· This is primarily addressed under the **National Skill Qualification Framework (NSQF)** and the vocationalization component of Samagra Shiksha for higher classes.
· PBBB is strictly limited to the foundational primary level (Classes I and II).
Digital literacy for senior secondary (Option c)
· Programmes like **PM eVIDYA** or the ICT component of Samagra Shiksha focus on digital infrastructure for older students.
· PBBB focuses on manual cognitive skills like phonics, vocabulary, and basic arithmetic operations.
Free laptops to college students (Option d)
· This is generally part of various **State Government schemes** or higher education initiatives and does not fall under the mandate of the Ministry of Education's foundational primary school programmes.

Q.63 **Pipe A can fill a tank in 20 hours, pipe B can fill the same tank in 25 hours and pipe C can fill the same tank in 10 hours. The time taken by them to fill the same tank if they operate together is:**

A. $2\frac{5}{19}$ hours
B. $5\frac{5}{19}$ hours
C. $11\frac{5}{19}$ hours
D. $3\frac{5}{19}$ hours

Answer: B

Sol: **Given:**
Time taken by A = 20 hours.
Time taken by B = 25 hours.
Time taken by C = 10 hours.
Solution:
Let the total capacity of the tank be the LCM of 20, 25, and 10.

LCM(20, 25, 10) = 100 units.
Efficiency of A = 100 / 20 = 5 units/hour.
Efficiency of B = 100 / 25 = 4 units/hour.
Efficiency of C = 100 / 10 = 10 units/hour.
Combined efficiency = 5 + 4 + 10 = 19 units/hour.
Total time taken together = $\frac{100}{19}$ hours.
Convert $\frac{100}{19}$ to a mixed fraction:
$100 \div 19 = 5 \text{ with a remainder of } 5.$
Time = $5\frac{5}{19}$ hours
Final Answer
So the correct answer is (b)

Q.64 **The Santhal Rebellion (1855–56) took place in which region?**

A. Chhota Nagpur Plateau
B. Rajmahal Hills
C. Dooars region
D. Bhagalpur hills

Answer: B

Sol:

Ans:- (b) Rajmahal Hills
The Santhals, led by Sidhu and Kanhu Murmu, revolted in the Rajmahal Hills (Jharkhand) against exploitative moneylenders, zamindars, and British interference.
· Leaders: Sidhu Murmu and Kanhu Murmu, along with Chand and Bhairav
· The Santhals were brought from Chotanagpur to clear forests and cultivate land in the Rajmahal Hills.
· Gradually, their lands were taken over by zamindars, moneylenders (mahajans), and British revenue officers.
· On June 30, 1855, Sidhu and Kanhu Murmu proclaimed a rebellion and mobilized over 60,000 Santhals.
· They attacked moneylenders, zamindars, police stations, and disrupted British communication lines.
· The rebels hoped to establish Santhal Raj and restore tribal pride and justice.
· The British declared martial law and suppressed the rebellion brutally.
· Thousands of Santhals were killed, and leaders like Sidhu and Kanhu were captured and executed.
· The rebellion was crushed by early 1856.

Q.65 **Which one of the following is a cold ocean current?**

A. Gulf Stream
B. Kuroshio
C. Labrador
D. Brazil

Answer: C

Sol:

Correct Answer: (C) Labrador
Explanation:
→ The Labrador Current is a cold current flowing from the Arctic Ocean along the eastern coast of Canada toward the North Atlantic.
→ It brings cold water southward and influences the climate of Newfoundland and Labrador.
→ The other ocean currents listed are warm currents.
Information Booster:
→ Cold currents like Labrador reduce temperatures and often lead to fog when they meet warm currents (e.g., Gulf Stream).
→ Mixing of cold and warm currents creates rich fishing grounds, such as the Grand Banks.
→ Cold currents generally reduce rainfall along the coasts they pass.
Additional Information (Other Options):
Option (A) Gulf Stream: Warm current flowing from Gulf of Mexico toward Europe; moderates climate of Western Europe.
Option (B) Kuroshio: Warm current near Japan; part of the North Pacific gyre.
Option (D) Brazil: Warm current flowing along the coast of Brazil.

Q.66 **How many pairs of positive integers p, q exist such that the HCF of p, q is 37 and the sum of p and q is 1961?**

A. 54
B. 26
C. 53

D. 28

Answer: B

Sol: **Given:**

HCF(p, q) = 37

p + q = 1961

Need: Number of positive ordered pairs (p, q) satisfying the above conditions

Solution:

Let p = 37x and q = 37y, with HCF(x, y) = 1

Given p + q = 1961:

37(x + y) = 1961

x + y = 1961 ÷ 37 = 53

Since 53 is prime, every positive pair (x, y) with x + y = 53 is automatically coprime.

Possible values of x are 1, 2, 3, ..., 52

→ Total pairs = 52

Thus, the number of positive integer pairs (p, q) satisfying the conditions is 52.

Q.67 **Which author was recognized for their work in 'Literary Criticism' in the Tamil language for 2025?**

A. Sa. Tamilselvan
B. Ali Shaida
C. Khajur Singh Thakur
D. Haobam Nalini

Answer: A

Sol:

The correct answer is (a) Sa. Tamilselvan

Explanation:

· Sa. Tamilselvan won the Sahitya Akademi Award 2025 in the **Tamil** language.
· His awarded work is **'Thamiz Sirukathaiyin Thadangal'**, which falls under **Literary Criticism**.
· This was the **only work** in the category of Literary Criticism awarded in 2025.
· Tamil is one of the oldest and most historically significant languages in the award list.
· The award emphasizes the importance of academic and critical evaluation in literature.

Information Booster:

· **Literary Criticism** is a scholarly genre that analyzes and interprets creative works.
· Tamil literature has a consistent presence in the **National Academy of Letters** awards.

Additional Knowledge:

· **Ali Shaida** (Option b): Won in **Kashmiri** for **Poetry** titled *Najdavanek'y Pot Aalav*.
· **Khajur Singh Thakur** (Option c): Won in **Dogri** for **Poetry/Couplets** titled *Thakur Satsayie*.
· **Haobam Nalini** (Option d): Won in **Manipuri** for **Short Stories** titled *Kanglamdriba Eephut*.

Q.68 **Which Article of the Indian Constitution permits the State to make special provisions for women and children?**

A. Article 21(5)
B. Article 19
C. Article 15(3)
D. Article 14

Answer: C

Sol: **The Correct Answer is Article 15(3)**

Explanation

Article **15(3)** allows the State to make **special provisions for women and children** as an exception to the general rule of non-discrimination under Article 15(1).

Key Points

- Article **15** prohibits discrimination based on **religion, race, caste, sex, or place of birth**.
- Clause **(3)** enables **positive discrimination** for women and children, supporting **reservations and welfare schemes**.

Additional Information

- **Article 21(5)** deals with personal liberty but not special provisions.
- **Article 19** ensures freedoms like speech and movement.
- **Article 14** guarantees **equality before the law** but allows reasonable classification.

Q.69 ABC and XYZ are two congruent triangles with ∠A : ∠B : ∠C = 2 : 4 : 4. Find ∠X + ∠Z.

A. 72°
B. 90°
C. 108°
D. 144°

Answer: C

Sol: **Given:**

Two congruent triangles — $\triangle ABC$ and $\triangle XYZ$.

$\angle A : \angle B : \angle C = 2 : 4 : 4$

Concept Used:

Sum of angles in a triangle = 180°

Congruent triangles have corresponding equal angles.

Solution:

2x + 4x + $4x = 180^\circ$

10x $= 180^\circ$

x = 18°

Thus,

$\angle A = 2x = 36^\circ, \quad \angle B = 4x = 72^\circ, \quad \angle C = 4x = 72^\circ$

Since triangles are congruent,

$\angle X = \angle A = 36^\circ, \quad \angle Z = \angle C = 72^\circ$

$\angle X + \angle Z = 36^\circ + 72^\circ = 108^\circ$

∴ ∠X + ∠Z = 108°.

Q.70 DRDO signed a Memorandum of Understanding (MoU) with which institution in December 2025 to strengthen defence and internal security collaboration?

A. Indian Institute of Technology Delhi
B. National Defence College
C. Rashtriya Raksha University
D. Jawaharlal Nehru University

Answer: C

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Sol: The correct answer is (c) Rashtriya Raksha University.

- DRDO signed an MoU with Rashtriya Raksha University (RRU) on 22 December 2025.
- The MoU aims to enhance collaboration in research, education, training, and technology support.
- The partnership focuses on strengthening defence preparedness and internal security capabilities.

Information Booster :

- The MoU was signed at South Block, New Delhi, in the presence of Defence Minister Rajnath Singh.
- Rashtriya Raksha University is an Institution of National Importance under the Ministry of Home Affairs.
- RRU is designated by the UGC as the Nodal Centre for Defence Studies.
- The collaboration aligns with the vision of Aatmanirbhar Bharat and national security during Amrit Kaal.

Q.71 **Which of the following food items is classified as 'Saatvik' according to traditional Indian dietary principles and Yoga?**

A. Red rice, honey, and seasonal fruits
B. Fried meat and fermented beverages
C. Excessive red chili and black pepper
D. Stale food and canned juices

Answer: A

Sol:
The correct answer is (a) **Red rice, honey, and seasonal fruits**
Explanation:
· **Saatvik food** is based on the quality of **Sattva**, which translates to purity, harmony, and balance.
· **Red rice** is considered highly Saatvik as it is an unrefined, whole grain that provides steady energy and is easy to digest.
· Other essential Saatvik components include **honey**, sprouts, nuts, seeds, and **fresh seasonal fruits**, which are believed to enhance the life force or **Prana**.
· These foods are naturally grown, prepared with minimal processing, and consumed while fresh to maintain their nutritional integrity.
· The philosophy of a Saatvik diet is to promote **mental clarity (Chitta Shuddhi)** and physical health without causing agitation.
Information Booster:
· **Bhagavad Gita Classification**: In Chapter 17, food is divided into three Gunas: **Sattva** (Pure), **Rajas** (Stimulating), and **Tamas** (Heavy/Dull).
· **Digestibility**: Saatvik foods are chosen because they do not produce "Ama" (toxins) in the body, helping in the prevention of lifestyle diseases.
· **Timing**: According to Yogic traditions, food loses its Saatvik property and becomes **Taamasic** if consumed more than three hours after being cooked.
· **Mindful Eating**: The state of mind while cooking and eating is considered as important as the ingredients themselves in the Saatvik tradition.
Additional Knowledge:
Fried meat and fermented beverages (Option b)
· These are categorized as **Taamasic** foods.
· They are believed to cause **lethargy, ignorance, and physical heaviness** by dulling the intellect and the senses.
· Fermented items like liquor and stale or processed meat are avoided by those seeking spiritual or mental discipline.
Excessive red chili and black pepper (Option c)
· These are known as **Raajasic** foods.
· While not "bad," they are highly **stimulating** and can lead to restlessness, anger, and physical overheating.
· They are often consumed by those in active, high-energy professions but are minimized in a meditative lifestyle to prevent **mental agitation**.
Stale food and canned juices (Option d)
· These fall under the **Taamasic** category because they lack freshness and life force.
· **Canned or preserved** items often contain chemicals that interfere with the natural balance of the body's Doshas (Vata, Pitta, and Kapha).
· Consumption of such items is linked to increased **tamas (darkness)** and a lack of motivation or clarity.

Q.72 **Which of the following places is known for copper mines in India?**

A. Khetri
B. Kudremukh
C. Kolar
D. Ratnagiri

Answer: A

Sol: **Correct Answer:** A
Explanation:

- **Khetri (Rajasthan)** is the most famous region for **copper mines in India**.
- Located in **Jhunjhunu district**, it is known as the **"Copper Belt of India."**
- The mines are operated by **Hindustan Copper Limited (HCL)**.

Information Booster:

- Rajasthan is the **leading producer of copper in India**.
- Other copper mining areas: **Singhbhum (Jharkhand)**, **Balaghat (Madhya Pradesh)**.
- Copper is used in **electrical equipment, coins, alloys (bronze, brass)**.

- India's copper reserves are mainly concentrated in **Rajasthan, Jharkhand, and Madhya Pradesh**.
- Copper mining in Khetri dates back to **ancient times**.

Additional Knowledge:

- Kudremukh: Known for **iron ore mines** (Karnataka).
- Kolar: Famous for **gold mines** (Karnataka).
- Ratnagiri: Known for **manganese and bauxite deposits** (Maharashtra).

Q.73 **Which country will host the 2025 FIFA Club World Cup, featuring the top football clubs from around the world?**

A. Spain
B. Qatar
C. United States
D. Saudi Arabia

Answer: C

Sol: **The correct answer is (C) United States**

Explanation:

● The **2025 FIFA Club World Cup**, the first expanded 32-team edition, will be **hosted by the United States**.

● FIFA officially confirmed the USA as the host nation for this global club tournament, which will feature top football clubs from different confederations.

Information Booster:

● The tournament will be held in **June–July 2025**.

● This is the first Club World Cup to follow a **World Cup–style format** with group and knockout stages.

● Hosting the event also supports the USA's preparation for the **2026 FIFA World Cup**, which it will co-host with Canada and Mexico.

Q.74 **What is the mean of the following distribution?**

Marks	14	26	44	61	84
No. of Students	91	78	95	36	98

A. 45
B. 46
C. 54
D. 69

Answer: A

Sol: **Given:**

Discrete data with marks x_i ={14,26,44,61,84} and frequencies f_i ={91,78,95,36,98}.

Formula Used:

Mean of discrete distribution

$$\bar{x} = \frac{\sum f_i x_i}{\sum f_i}$$

Solution:

$$\sum f_i = 91 + 78 + 95 + 36 + 98 = 398$$

$$\sum f_i x_i = 14(91) + 26(78) + 44(95) + 61(36) + 84(98) = 17910$$

$$\bar{x} = \frac{17910}{398} = 45$$

Q.75 **The average age of 34 boys in a class is 12 years. If the age of teacher is also included, the average age increases by 1 year. What is the age of the teacher?**

A. 45
B. 42
C. 44
D. 47

Answer: D

Sol: **Given:**
The average age of 34 boys in a class is 12 years.

If the age of the teacher is also included, the average age increases by 1 year = 12 + 1 = 13 years.

Formula Used:

Average Value = (Sum of all the values) / (Total values)

Solution:

According to the question,
Let the age of teacher be T, then

Average age = (34 × 12 + T) / 35

13 = (34 × 12 + T) / 35

455 = 408 + T

T = 455 - 408 = 47 years

The age of the teacher is 47 years.

Q.76 **During which of the following dynasties was the Kailasa Temple at Ellora built?**

A. Pallavas
B. Cholas
C. Rashtrakutas
D. Chalukyas

Answer: C

Sol: The correct answer is (c) Rashtrakutas
Explanation:
• The Kailasa Temple (Cave 16) at Ellora was commissioned by Rashtrakuta king Krishna I in the 8th century CE.
• It is a single-rock monolithic excavation — a marvel of rock-cut architecture.
• The temple is dedicated to Lord Shiva and showcases grand sculptural programs.
• Ellora contains Hindu, Buddhist and Jain caves from different periods.
Information Booster:
• Ellora is a UNESCO World Heritage Site.

Q.77 **Schedule 1 of The Occupational Safety, Health and Working Conditions Code, 2020 primarily deals with:**

A. List of hazardous industries and operations requiring special safety measures
B. Minimum wages and allowances for workers
C. Provisions related to industrial relations and dispute resolution
D. Social security benefits for unorganized workers

Answer: A

Sol: The correct answer is: **(a) List of hazardous industries and operations requiring special safety measures**

Explanation:

- Schedule 1 of The Occupational Safety, Health and Working Conditions Code, 2020 primarily provides a list of **hazardous industries and operations** where special safety, health, and working condition standards must be followed.
- This includes industries and processes that pose significant risks to the health and safety of workers and the environment. The schedule helps identify workplaces requiring heightened regulatory oversight and compliance to ensure worker safety.

Information Booster:

- **Schedule 2:**
  - Includes a **list of safety matters and working conditions** where specific standards must be followed.
  - This covers hygiene, ventilation, lighting, welfare facilities like canteens, first aid, drinking water, and sanitary conveniences.
  - It also defines duties of employers related to safety officers, safety committees, and training.
- **Schedule 3:**
  - Lists **notifiable diseases** linked to occupational hazards.
  - Employers are mandated to report cases of these diseases to appropriate authorities for monitoring and intervention.
  - This schedule aids in tracking workplace-related illnesses and preventing their spread.

Q.78 Under which of the following laws are the conditions, health, and safety standards for working in night shifts in India primarily modernized and governed (including provisions for all establishments and specific consent for women)?

A. The Factories Act, 1948
B. The Occupational Safety, Health and Working Conditions Code, 2020
C. The Industrial Relations Code, 2020
D. The Code on Social Security, 2020

Answer: B

Sol:

The correct answer is (b) **The Occupational Safety, Health and Working Conditions Code, 2020**

Explanation:

· The **Occupational Safety, Health and Working Conditions Code, 2020 (OSH Code)** is the landmark consolidated law that replaces 13 existing central labor laws, including the **Factories Act, 1948**.

· **Section 43** of this Code is particularly significant as it legally enables **women to be employed in all establishments** for all types of work, including **night shifts** (between 7 PM and 6 AM), provided they give voluntary written consent.

· For all workers, **Section 28** of the OSH Code specifically governs night shifts, stating that if a shift extends beyond midnight, the following 24-hour period (starting when the shift ends) is counted as the worker's rest day or weekly holiday.

· The Code mandates that employers ensure **safety, health, and welfare** through measures like adequate lighting, security, and transportation (especially for women), making it a comprehensive framework for modern shift-work standards.

· This transition moves the Indian labor market from a "restrictive" regime (like the old Factories Act) to a "facilitative" one, promoting gender equality and workforce flexibility.

Information Booster:

· **Consolidation**: The OSH Code merges 13 laws, including the **Factories Act (1948)**, **Mines Act (1952)**, and **Contract Labour Act (1970)**, to ensure uniform safety standards across all sectors.

· **Working Hours**: The Code standardizes a maximum of **8 hours per day** and **48 hours per week**, with overtime paid at **double the normal wage rate**.

· **Consent and Revocation**: Unlike previous laws, the OSH Code mandates that night work for women requires **explicit written consent**, ensuring that employment is not coercive.

· **Implementation**: While passed in 2020, the Government of India announced the formal implementation of these Codes to be effective from **November 21, 2025**.

Additional Knowledge:

The Factories Act, 1948 (Option a)

· This was the **erstwhile** primary law that governed night shifts.

· **Section 66** of this Act originally prohibited women from working in factories between **7 PM and 6 AM**, though many states had issued specific exemptions with safety riders.

The Industrial Relations Code, 2020 (Option c)

· This Code consolidates laws related to **Trade Unions**, conditions of employment in industrial establishments, and investigation/settlement of **industrial disputes**.

· It does not primarily deal with daily occupational safety or shift-specific health standards.

The Code on Social Security, 2020 (Option d)

· This Code focuses on extending **social security benefits** (like insurance, pension, and maternity benefits) to all workers, including gig and platform workers.

· While it protects worker welfare, the physical "conditions and safety standards" of a shift are the domain of the OSH Code.

Q.79 **If 'A' stands for '÷', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '−', what will come in place of the question mark (?) in the following equation?**

16 C 24 A 6 B 28 D 32 = ?

A. 58
B. 87
C. 96
D. 98

Answer: C

Sol: **Given**: 16 C 24 A 6 B 28 D 32 = ?

Given LetterABCD

New Sign ÷×+ -

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{}(root), of$
Division	$\div$
Multiplication	$\times$
Addition	$+$
Subtraction	$-$

New equation: 16 + 24 ÷ 6 × 28 - 32 = ?

16 + 4 × 28 - 32 = ?

16 + 112 - 32 = ?

128 - 32 = ?

? = **96**

Thus, correct option is (c).

Q.80 The radius of a sphere and the base radius of cone both are equal to $3\sqrt{2}$. cm If the surface area of the sphere is the same as the total surface area of the right circular cone, then what is the height of the cone?

A. 8 cm
B. $9\sqrt{2}$ cm
C. 12 cm
D. $8\sqrt{2}$ cm

Answer: C

Sol: Given:

Radius of sphere = base radius of cone = r = $3\sqrt{2}$ cm

Surface area of sphere = Total surface area of cone

Find: Height h of the cone

Formula Used:

Surface area of sphere = $4\pi r^2$

Total surface area of cone = $\pi r(l + r)$,

where l = slant height = $\sqrt{r^2 + h^2}$

Solution:

Both surface areas equal, so

$$4\pi r^2 = \pi r(r + \sqrt{r^2 + h^2})$$

$$4r = r + \sqrt{r^2 + h^2}$$

$$3r = \sqrt{r^2 + h^2}$$

$$(3r)^2 = r^2 + h^2$$

$$9r^2 = r^2 + h^2$$

$$8r^2 = h^2$$

$$h = \sqrt{8r^2} = r\sqrt{8}$$

Substituting $r = 3\sqrt{2}$:

$$h = 3\sqrt{2} \times \sqrt{8}$$

$$= 3\sqrt{2} \times 2\sqrt{2}$$

$$= 3 \times 2 \times 2$$

$$= 12 \text{ cm}$$

Q.81 If a sum of ₹8,20,000 is invested for a year at 6% per annum compounded half yearly, then find the compound interest.

A. ₹50,028
B. ₹49,938
C. ₹49,685
D. ₹48,444

Answer: B

Sol: **Given:**
Principal(P) = 820000
Rate(R) = 6%
Time(T) = 1
Compounding = Half-yearly
Concept Used:
Compound Interest
Formula Used:
$A = P\left(1 + \frac{R}{2 \times 100}\right)^{2T}$
$\text{CI} = A - P$
Solution:
$A = 820000\left(1 + \frac{6}{200}\right)^{2}$
$A = 820000(1.03)^2$
$A = 820000 \times 1.0609 = 869938$
$\text{CI} = 869938 - 820000 = 49938$
Final Answer:
49938

Q.82 **The Municipal Corporations are generally created for the administration of**

A. medium cities
B. metropolitan cities
C. big towns
D. all the cities

Answer: B

Sol: **Correct Answer:** B). metropolitan cities

Explanation:

- **Municipal Corporations** are established in **metropolitan cities** with large populations and greater administrative needs.
- They manage civic services like water supply, waste management, street lighting, health, and urban planning.
- Created by an **Act of State Legislature** or **Parliament (for UTs)**.

Information Booster:

- First Municipal Corporation in India: **Madras (Chennai) in 1687**, followed by Bombay (1726) and Calcutta (Kolkata).
- Constitutionally recognized under **74th Amendment Act, 1992**.
- **12th Schedule** lists 18 functions of urban local bodies.
- Headed by a **Mayor**; administrative head is the **Municipal Commissioner**.
- Population benchmark: generally for **cities with over 10 lakh (1 million) people**.

Additional Knowledge:

- **Medium cities (A):** Administered by *Municipal Councils (Municipalities)*, not Corporations.
- **Big towns (C):** Generally fall under Municipalities or Nagar Palikas.
- **All the cities (D):** Incorrect, since smaller cities are not governed by Corporations.

Q.83 **Seven boxes, A, B, C, D, E, F and G, are kept one over the other, but not necessarily in the same order. A is kept second from the bottom. Only three boxes are kept between A and D. B is kept at one of the positions below A. Only E is kept between D and G. F is kept at one of the positions above D. How many boxes are kept below C?**

A. Two
B. None
C. Three
D. One

Answer: A

Sol: **Given**:

Seven boxes, A, B, C, D, E, F and G, are kept one over the other, but not necessarily in the same order.
A is kept second from the bottom.
Only three boxes are kept between A and D.
B is kept at one of the positions below A.
Only E is kept between D and G.
F is kept at one of the positions above D.
From the given information arrangement will be.

Order	Boxes
7	F
6	D
5	E
4	G
3	C
2	A
1	B

So, **two** boxes are kept below C.
Thus, correct option is (a).

Q.84 **In which year Tamil language was declared as a classical language?**

A. 2005
B. 2002
C. 2003
D. 2004

Answer: D

Sol:

Solution: Correct Answer: (d) 2004
Explanation:
Tamil language was declared as a Classical Language in 2004 by the Government of India. It was the first Indian language to receive this honour.
Information Booster:
→The Government of India introduced the "Classical Language" status in 2004 to recognize languages with ancient origins and rich literary traditions.
→Tamil, being one of the oldest living languages in the world, fulfilled all the criteria.
→Tamil has a continuous history of over 2000 years, with rich ancient literature like the Sangam literature.
→After Tamil, other Indian languages such as Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013) and Odia (2014) were also declared classical.
Additional Knowledge:
To be recognized as a Classical Language, the following criteria are considered:
→The language must have antiquity of at least 1500–2000 years.
→It should possess a rich and ancient literary tradition.
→The literary heritage must be distinct from modern forms of the language.
→The language and its literature should have a body of ancient texts considered valuable heritage.
Thus, Tamil's declaration in 2004 marked an important milestone in preserving and promoting India's linguistic and cultural heritage.

Q.85 **If 1 is added to each odd digit and 1 is subtracted from each even digit in the number 632517, what will be the sum of the greatest and smallest digits in the new number thus formed?**

A. 8
B. 10
C. 7
D. 9

Answer: D

Sol: **Information Given:**
Number = 632517
Rule: +1 to odd digits, −1 from even digits
Step-by-step:
6 (even) → 5
3 (odd) → 4
2 (even) → 1
5 (odd) → 6
1 (odd) → 2
7 (odd) → 8
New number = 541628
Greatest digit = 8
Smallest digit = 1
Sum = 8 + 1 = 9
Final Answer:
9
Final Correct Option:
D

Q.86 **Madhur ranked 58th from top and 6th from bottom. How many students are there?**

A. 61
B. 64
C. 63
D. 62

Answer: C

Sol: **Given**: Madhur ranked 58th from top and 6th from bottom.
Solution:
Total students = Rank from top + Rank from bottom - 1
Total = 58 + 6 − 1
Total = **63**
So, **63** students are there.
Thus, correct option is (c).

Q.87 **Two trains, each 230 meters long, are running parallel to each other in the same direction. The speed of the faster train is 102 km/h and the speed of the slower train is 66 km/h. How long will it take for the faster train to completely pass the slower train?**

A. 56 seconds
B. 42 seconds
C. 46 seconds
D. 36 seconds

Answer: C

Sol: **Given:**
Length of each train = 230 meters
Speed of faster train = 102 km/h
Speed of slower train = 66 km/h
Direction = Same direction.
Formula Used:
Total Distance = $L_1 + L_2$
Relative Speed = $V_1 - V_2$ (Same direction)
Time = $\frac{\text{Total Distance}}{\text{Relative Speed}}$
Speed in m/s = $\text{Speed in km/h} \times \frac{5}{18}$
Solution:
Total distance to be covered = 230 + 230 = 460 meters
Relative speed = 102 - 66 = 36 km/h
Convert relative speed to m/s:
$36 \times \frac{5}{18} = 2 \times 5 = 10 \text{ m/s}$

Time taken = $\frac{460}{10} = 46 \text{ seconds}$

Final Answer

So the correct answer is (c)

Q.88 **If the length, breadth and height of a room are 10.5 m, 8.5 m and 11 m, respectively, then what is the area (in m^2) of the four walls of the room?**

A. 414
B. 418
C. 416
D. 412

Answer: B

Sol: **Given**

Length (l) = 10.5 m
Breadth (b) = 8.5 m
Height (h) = 11 m

Formula Used

Area of four walls = 2h(l + b)

Solution

Area = 2 × 11 × (10.5 + 8.5)
Area = 22 × (19)
Area = 22 × 19
Area = 418 m^2

Final Answer

So the correct answer is (b)

Q.89 **Which of the following organisations is primarily responsible for the fabrication and supply of the metallic hardware and structural modules (such as the Crew Module and Service Module) for India's Gaganyaan mission?**

A. Defence Research and Development Organisation (DRDO)
B. Indian Space Research Organisation (ISRO)
C. Hindustan Aeronautics Limited (HAL)
D. Bharat Electronics Limited (BEL)

Answer: C

Sol:

The correct answer is **(c) Hindustan Aeronautics Limited (HAL)**

Explanation:

· **Hindustan Aeronautics Limited (HAL)** is the primary strategic partner responsible for the **fabrication and assembly** of the structural hardware for the Gaganyaan mission.
· HAL has handed over critical components like the **Crew Module (CM)** fairing and the **Interface Adapters** to ISRO for mission integration.
· The organisation manufactures the **structural assemblies** for the LVM3 (Launch Vehicle Mark-3), which is the human-rated rocket used for this mission.
· While ISRO designs the systems, the **physical "shell"** and complex metallic structures are produced at HAL's specialized aerospace facilities.
· This collaboration is a key part of the **"Atmanirbhar Bharat"** initiative, showcasing indigenous manufacturing capabilities in the high-tech space sector.

Information Booster:

· **Crew Module (CM)**: This is the pressurized habitat where the three "Gaganauts" will reside during the orbital mission.
· **Service Module (SM)**: An unpressurized structure containing the propulsion system, fuel tanks, and solar panels to support the Crew Module.
· **Orbital Module**: The combined assembly of the Crew Module and Service Module is referred to as the Orbital Module.
· **LVM3**: The Launch Vehicle Mark-3 is India's heaviest rocket, which has been upgraded with "human-rated" systems to ensure maximum safety for the crew.

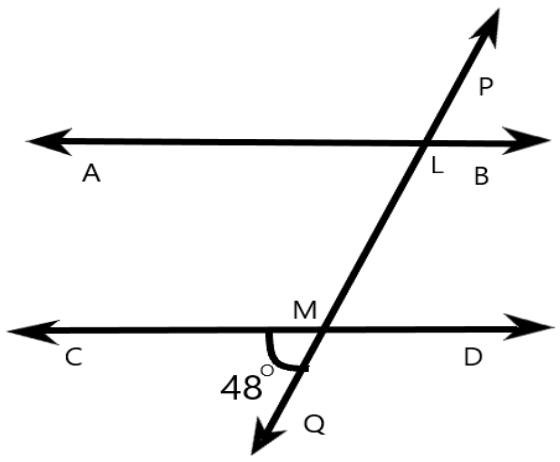
Additional Knowledge:

Indian Space Research Organisation (ISRO) (Option b)
· ISRO is the **architect and mission lead**; it provides the "brain" (software, guidance, sensors) and overall mission management.
· ISRO conducts the final integration and testing of the hardware provided by partners like HAL.

Defence Research and Development Organisation (DRDO) (Option a)
· DRDO provides **human-centric systems** rather than the primary metallic structures.
· This includes specialized items like **space food**, survival kits, and medical monitoring systems for the astronauts.

Bharat Electronics Limited (BEL) (Option d)
· BEL's role is focused on the **avionics and electronic sub-systems**.
· They provide components for communication, radar, and cockpit display systems, but not the physical structural hardware.

Q.90 In the given figure, AB and CD are parallel lines intersected by a transversal PQ at L and M, respectively. If ∠CMQ = 48, then ∠PLA is:



A. 110°
B. 132°
C. 125°
D. 120°

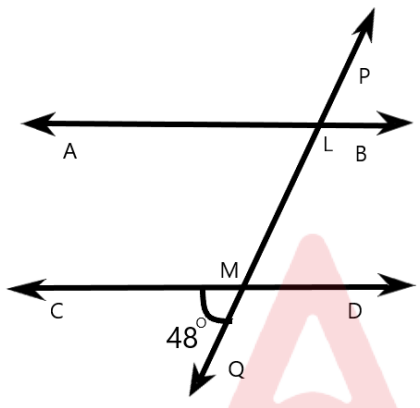
Answer: B

Sol: **Given:**
AB and CD are parallel lines intersected by a transversal PQ at points L and M, respectively.
$\angle CMQ = 48^\circ$.
We need to find $\angle PLA$
Concept Used:

Corresponding Angles: When two parallel lines are intersected by a transversal, the corresponding angles are equal.

Vertically Opposite Angles: When two lines intersect, the vertically opposite angles are equal.

Solution:



$\angle CMQ = 48^\circ$
Since AB and CD are parallel lines intersected by transversal PQ, $\angle CMQ$ and $\angle ALM$ are corresponding angles.

$\angle CMQ = 48^\circ = \angle ALM$
Since , $\angle ALM + \angle PLA = 180^\circ$ (Straight line)

$\angle PLA = 180^\circ - 48^\circ = 132^\circ$

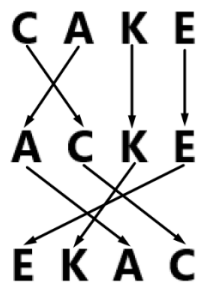
Q.91 In the following triads, each group of letters is related to the subsequent one following a certain logic. Select from the given options, the one which follows the same logic.
CAKE - ACKE - EKAC
KING - IKNG - GNIK

A. ROAD - ORAD - OADR
B. POST - OPST - TSOP
C. MUTE - UMTE - EUTM
D. KEYS - KYES - SYEK

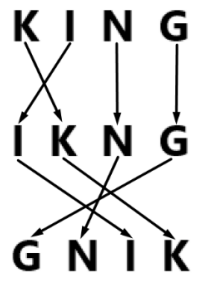
Answer: B

Sol: **Given**:

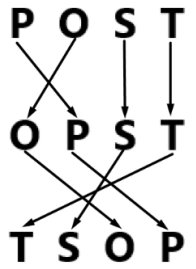
CAKE - ACKE - EKAC
KING - IKNG - GNIK
Logic: Position of letters are interchanged.
For, CAKE - ACKE - EKAC



For, KING - IKNG - GNIK



Similarly,
POST - OPST - TSOP



Thus, correct option is (b).

Q.92 **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:
1. No student is a teacher.
2. No student is a carpenter.
Conclusion:
I. Some teachers are carpenters.
II. Some students are teachers.

A. Neither conclusion (I) nor (II) follows
B. Only conclusion (II) follows
C. Both conclusions (I) and (II) follow
D. Only conclusion (I) follows

Answer: A

Sol: **Statements**:
1. No student is a teacher.
2. No student is a carpenter.
From the given statements possible Venn diagram will be.

Conclusion:
I. Some teachers are carpenters. (**False**, there is no relation between teachers and carpenters).
II. Some students are teachers. (**False**, no student is a teacher).
So, **Neither conclusion (I) nor (II) follows.**
Thus, correct option is (a).

Q.93 **With which of the following states Raut Nacha dance is associated?**

A. Chhattisgarh
B. Assam
C. Arunachal Pradesh
D. Bihar

Answer: A

Sol: The correct answer is (a) **Chhattisgarh**

Explanation:

- **Raut Nacha** is a traditional folk dance performed by the **Yadav/Yaduvanshi** community (descendants of Krishna) in the state of **Chhattisgarh**.
- It is performed during the festival of **Dev Uthani Ekadashi**, which occurs after Diwali, to mark the awakening of the gods after a period of rest.
- The dance is a symbolic representation of the **battle between King Kansa and Lord Krishna**, celebrating the ultimate victory of good over evil.
- Performers wear colorful traditional attire, carry **decorated sticks (laathi)** and shields, and dance to the rhythmic beats of instruments like the *mandar*, *dhol*, and *nagada*.
- A unique feature of this dance is the recitation of **'Doha'** (couplets) related to mythology, bravery, and social messages during the performance.

Information Booster:

- **Bilaspur Connection**: The "Raut Nacha Mahotsav" in Bilaspur is one of the most famous annual events in Chhattisgarh, held since 1978.
- **Costume**: Dancers often wear metallic waistbands, ghungroos (bells), and elaborate headgears decorated with peacock feathers.
- **Religious Significance**: It is deeply linked to the **Gowari** culture and the worship of Lord Krishna, who is the presiding deity of the shepherd community.
- **Martial Elements**: The use of sticks and shields highlights the martial origin of the dance, representing the warrior spirit of the Yadavas.

Additional Knowledge:

Assam (Option b)

- Assam is famous for the **Bihu** dance, performed during the Bihu festival.
- Other notable dances include **Sattriya** (Classical) and folk forms like Bagurumba and Bhortal.

Arunachal Pradesh (Option c)

- This state is known for its tribal dances such as **Buiya**, **Chalo**, and the famous **Mask Dance** (Mukhota Nritya) performed by the Monpa tribe.
- **Ponung** and **Popir** are other popular folk dances in this region.

Bihar (Option d)

- Bihar is known for folk dances like **Jat-Jatin**, **Bideshiya**, and **Jhijhian**.
- During the Chhath festival and other occasions, the **Sama Chakeva** and Panwariya are also performed.

Q.94 A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 725 grams for 1000 grams. What ishis profit percentage (rounded off to 2 decimal places)?

A. 40.58
B. 38.02
C. 39.3
D. 37.93

Answer: D

Sol: **Given:**
The vendor claims to sell goods at cost price.
He is actually weighing 725 grams instead of 1000 grams.
We need to find his profit percentage (rounded off to 2 decimal places).
Concept Used:
Profit Percentage Formula:

$$\text{Profit Percentage} = \left(\frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}}\right) \times 100$$

Solution:
Assume the cost price of 1000 grams is ₹1000.
Cost price per gram:

$$\frac{1000}{1000} = ₹1 \text{ per gram}$$

The vendor is actually selling 725 grams but charging for 1000 grams.

Cost price of 725 grams:

$725 \times 1 = ₹725$

Selling price of 725 grams (but charging for 1000 grams):

₹1000

$$\text{Profit} = \text{Selling Price} - \text{Cost Price} = 1000 - 725 = ₹275$$

$$\text{Profit Percentage} = \left(\frac{275}{725}\right) \times 100$$

$$\text{Profit Percentage} = 0.3793 \times 100 = 37.93\%$$

Q.95 Two successive discounts of 15% and x% on the sale of an item is equivalent to a single discount of 23.5%. What is the value of x%?

A. 11%
B. 12%
C. 10%
D. 9%

Answer: C

Sol: **Given:**

Two discount of 15% and x%

Equivalent discount =23.5%

Formula Used:

Successive Discount Formula = $d_1 + d_2 - \frac{d_1 d_2}{100}$

Solution:

Here equivalent discount = 23.5%

$$23.5 = 15 + x - \frac{15x}{100}$$

$$x - \frac{3x}{20} = 23.5 - 15$$

$$\frac{20x - 3x}{20} = 8.5$$

$$17x = 20 \times 8.5$$

$$x = \frac{20 \times 8.5}{17}$$

x= 10%

Q.96 The Battle of Wandiwash was fought between—

A. The English and the French
B. The English and the Marathas
C. The English and the Nawab of Carnatic
D. The English and Hyder Ali

Answer: A

Sol: **Correct Answer: (A) The English and the French**

Explanation:

The Battle of Wandiwash (1760) was fought between the English (British East India Company) and the French near Vandavasi (Wandiwash) in Tamil

Nadu during the Third Carnatic War (1758–1763). Under Sir Eyre Coote, the British decisively defeated the French forces led by Count de Lally, marking the end of French political influence in India. This victory paved the way for the British to become the dominant European power in India.

Information Booster:

→ The battle took place on 22 January 1760.
→ The French commander Count de Lally was captured after the defeat.
→ This was the decisive battle of the Third Carnatic War.
→ The victory at Wandiwash ensured British supremacy in South India.
→ The French later lost Pondicherry in 1761 to the British.
→ After this battle, the French retained only minor trading posts in India, such as Chandernagore and Pondicherry, without military control.

Additional Information (Other Options):

Option (B) The English and the Marathas: Refers to the First Anglo-Maratha War (1775–1782), not related to Wandiwash.
Option (C) The English and the Nawab of Carnatic: The Nawab of Carnatic allied with the British during this war.
Option (D) The English and Hyder Ali: Hyder Ali fought the British during the Anglo-Mysore Wars (1767–1799), much later.

Q.97 **Fill in the blanks: Under Article 249, the Rajya Sabha can empower Parliament to legislate on subjects in the _____ List.**

A. State
B. Union
C. Concurrent
D. Residuary

Answer: A

Sol: The correct answer is **(A) State**

Explanation:

• Article 249 of the Indian Constitution is a special power of the Rajya Sabha. It allows the Rajya Sabha to pass a resolution, supported by not less than two-thirds of the members present and voting, declaring that it is necessary or expedient in the national interest that Parliament should make laws with respect to any matter enumerated in the State List.
• This provision highlights the federal nature of the Indian Constitution with a strong unitary bias, as it allows the Central Parliament to encroach upon the state's legislative domain under specific circumstances.
• Such a resolution remains in force for a period not exceeding one year, but it can be renewed any number of times for a further period of one year.

Information Booster:

• **Article 250:** Gives Parliament power to legislate with respect to any matter in the State List if a Proclamation of Emergency is in operation.
• **Article 252:** Parliament can legislate for two or more states by their consent.
• **Article 253:** Parliament can make laws for the whole or any part of India for implementing any treaty, agreement, or convention with any other country.

Additional Knowledge:

• **Union List (Option B):** Parliament already has exclusive power to legislate on matters in the Union List (Article 246).
• **Concurrent List (Option C):** Both Parliament and State Legislatures can legislate on the Concurrent List, so no special Rajya Sabha resolution is needed for Parliament to act here.
• **Residuary (Option D):** Under Article 248, the power to legislate on residuary subjects (matters not mentioned in any of the three lists) is already vested exclusively in Parliament.

Q.98 **A man sold an article for ₹390 by first giving a d% discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹3900, then what is the value of d?**

A. 45
B. 50
C. 48
D. 41

Answer: A

Sol: **Given:**

The marked price of the article is 3900.

A man sold an article for 390

First giving a d% discount on its marked price

Formula used:

$$Discount = \frac{d}{100} \times 100$$

Solution:

$$FirstDiscount = \frac{d}{100} \times 3900 = 39d$$

After the first discount,

$$\text{Price after first Discount} = M - 39d = 3900 - 39d.$$

After the second discount,

$$\text{Price after second Discount} = (3900 - 39d) - 39d = 3900 - 78d$$

The final selling price is 390.

$$3900 - 78d = 390.$$

$$3900 - 390 = 78d$$

$$3510 = 78d$$

$$d = \frac{3510}{78} = 45$$

Thus, the value of d is **45**.

Q.99 **Which Mountain range in Nepal is a continuation of the Mussoorie Range?**

A. Mahabharat Lekh
B. Rajmahal Hills
C. Siwaliks
D. Karakoram

Answer: A

Sol:

The Mahabharat Lekh (also known as the Mahabharat Range) in southern Nepal is a continuation of the Mussoorie Range of the Middle Himalayas. This range forms a significant part of the Lower Himalayas and extends into Nepal, continuing the geographical and topographical features of the Mussoorie Range.
Information booster
Rajmahal Hills: These are located in eastern India (Jharkhand and West Bengal) and have no direct connection to the Himalayan ranges.
Siwaliks: Also known as the Outer Himalayas, they are the southernmost mountain range of the Himalayas but do not extend from the Mussoorie Range directly.
Karakoram: This is a high mountain range located further north, extending from Pakistan into India and China, not directly related to the Mussoorie Range or the Lesser Himalayas.

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Q.100 **The national initiative 'Padhe Bharat Badhe Bharat' (PBBB), launched in 2014, was designed as a sub-programme of which of the following to improve foundational learning?**

A. Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
B. Sarva Shiksha Abhiyan (SSA)
C. Mid-Day Meal Scheme
D. Saakshar Bharat Mission

Answer: B

Sol:

The correct answer is (b) **Sarva Shiksha Abhiyan (SSA)**

Explanation:

· **'Padhe Bharat Badhe Bharat' (PBBB)** was officially launched on **August 26, 2014**, as a nationwide sub-programme of the **Sarva Shiksha Abhiyan (SSA)**.

· The initiative's primary motive is to improve the **foundational learning** of children in **Classes I and II**, specifically targeting two key areas: Early Reading and Writing (ERW) and Early Mathematics (EM).

· It recognizes that early literacy and numeracy are the "building blocks" of all future education; children who fail to acquire these basics in early grades often face a permanent learning deficit.

· The programme emphasizes a **pedagogical shift** toward child-centric learning, advocating for a "print-rich" environment in schools and the use of age-appropriate storybooks and local languages for instruction.

· Under the current administrative structure, PBBB has been integrated into the **Samagra Shiksha** scheme, which subsumed the SSA, RMSA, and Teacher Education in 2018.

Information Booster: Two Tracks: PBBB is implemented via two distinct tracks: **Track 1** for language development (comprehension and vocabulary) and **Track 2** for mathematical logic (number sense and basic operations).

· **Teacher's Role**: The scheme places heavy emphasis on specialized training for primary teachers to move away from rote memorization toward **activity-based learning**.

· **NIPUN Bharat**: In 2021, the government launched the **NIPUN Bharat Mission** (National Initiative for Proficiency in Reading with Understanding and Numeracy) to further the goals of PBBB, aiming for every child to achieve foundational proficiency by Grade 3.

Additional Knowledge: Rashtriya Madhyamik Shiksha Abhiyan (RMSA) (Option a)

· Launched in 2009, this scheme focused on enhancing access to and quality of **secondary education** (Classes IX and X).

· It did not cover foundational primary education, which is the sole focus of PBBB.

Mid-Day Meal Scheme (Option c)

· This is a school meal programme designed to better the **nutritional status** of school-age children nationwide.

· While it helps with school enrollment and retention, it is a nutritional initiative rather than a pedagogical framework for reading and math.

Saakshar Bharat Mission (Option d)

· This was a centrally sponsored scheme launched in 2009 to promote **adult education** and literacy, particularly among women.

· It targeted non-literate adults aged 15 and above, unlike PBBB which targets children aged 6–8 years.

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