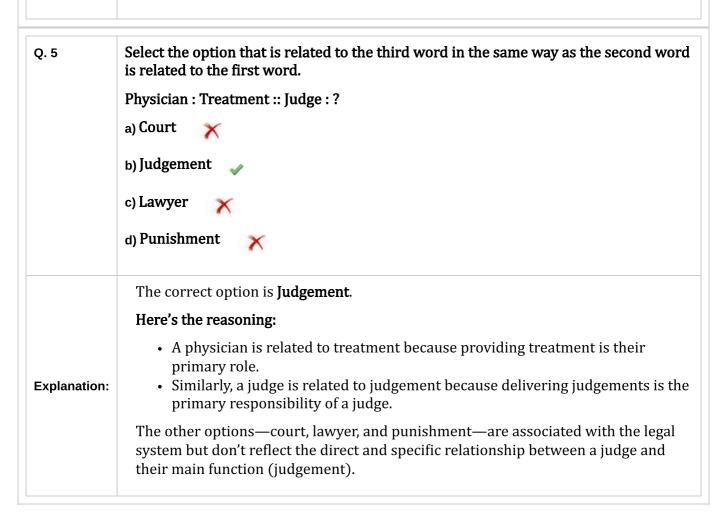
# RBE NTPC 2025 Live Mock June 03,2025

| Q. 1         | Which of the following can be considered a part of a parallel economy?  a) Under declared income.  |
|--------------|--|
|              | b) Value of domestic work done by the housewife. c) Payments made to domestic helpers or housekeepers. d) Payments for private tuition.  |
| Explanation: | The correct answer is: a  Explanation:  A parallel economy (or shadow economy) refers to economic activities that are not reported to the government and thus escape taxation and regulation. This includes: |
|              | <ul> <li>Under-declared income (e.g., businesses or professionals not reporting full earnings to evade taxes).</li> <li>Black market transactions.</li> <li>Unreported cash transactions.</li> </ul>         |

| Q. 2 If $(x+2)$ and $(x+3)$ are factors of $ax^3 + 5x^2 + bx$ then the values of a and b are:<br>a) $a = 1$ and $b = 6$ $\Rightarrow$<br>b) $a = 2$ and $b = 5$ $\Rightarrow$<br>c) $a = -1$ and $b = -6$ $\Rightarrow$<br>d) $a = 5$ and $b = 1$ $\Rightarrow$ |              |  |
|---|--------------|--|
|   | Q. 2         | a) $a = 1$ and $b = 6$<br>b) $a = 2$ and $b = 5$ |
| from (i) b(i),  | Explanation: |  |

| 5/2025, 19:03 | RBE-NTPC-2025-Live-Mock-June-03-2025   |
|---------------|--|
| Q. 3          | $\left\{ \left(2 - \frac{1}{3}\right) + \left(\frac{2}{3} \times 1\frac{1}{5}\right) \right\} + \frac{3}{5} \times 2\frac{5}{7}$ |
|               | a) $2\frac{4}{21}$ $\times$  |
|               | b) $4\frac{2}{21}$   |
|               | c) $2\frac{4}{27}$   |
|               | d) $4\frac{2}{27}$   |
|               | of (2-13) + (3/3 ×1/5) ) + 3/5 × 25/7  |
|               | *(5/3 + 7/5) + 3/5 × 1/4   |
| Explanation:  | $\frac{37}{15} + \frac{57}{35}$  |
| Explanation.  | 2 259 + 171 1120   |

| Q. 4         | Which of the following is a Palaeolithic site of archaeological importance in India?  a) Burzahom b) Hunasagi c) Mehrgarh d) Chirand   |
|--------------|--|
|              | The correct answer is: b  Explanation:  The Palaeolithic Age (Old Stone Age) in India dates back to around 2.6 million years ago to 10,000 BCE, characterized by the use of crude stone tools. Among the given options:  |
| Explanation: | <ol> <li>Hunasagi (Hunsgi) – Located in Karnataka, this is a well-known Lower Palaeolithic site where numerous stone tools (like hand axes and cleavers) have been discovered. It was a habitation site for early humans.</li> <li>Burzahom – A Neolithic site in Kashmir (around 3000 BCE), known for pit dwellings and early agriculture.</li> <li>Mehrgarh – A Neolithic-Chalcolithic site in Balochistan (Pakistan), associated with early farming (7000 BCE).</li> <li>Chirand – A Neolithic-Chalcolithic site in Bihar (around 2000 BCE), known for pottery and bone tools.</li> </ol> |
|              | Since, <b>Hunasagi</b> is the only Palaeolithic site among the options, it is the correct answer.  |



| Q. 6         | Which of the following is a shortcut key to undo the last action in many word processors?  |
|--------------|--|
|              | a) Ctrl + Z  |
|              | ы) Ctrl + X  |
|              | c) Ctrl + C  |
|              | d) Ctrl + V  |
|              | The correct answer is: a   |
| Explanation: | In most word processors (like Microsoft Word, Google Docs, Notepad, etc.) and many other software applications, the keyboard shortcut $\mathbf{Ctrl} + \mathbf{Z}$ is used to $\mathbf{undo}$ the last action.                                 |
|              | <ul> <li>Ctrl + Y (or Ctrl + Shift + Z in some apps) is used to redo an action if you undo too much.</li> <li>Ctrl + Z works in most programs, including graphic editors (like Photoshop), file explorers, and coding environments.</li> </ul> |

| P# Q' means 'P is the father of Q';  P+Q' means 'P is the mother of Q';  P+Q' means 'P is the brother of Q';  P*Q' means 'P is the sister of Q';  Which of the following shows that A is the aunt of E?  a) A+B-C*D#E  b) A#B*C+D-E  c) A*B#C*D-E  d) A-B+C#D*E  The correct answer is: c   **The correct answer is: c**  **The correct answer | 0,2023, 13.03 | NDE INTIG 2025 ENG PIOCK JUIC 05 2025                 |
|--|---------------|---|
| 'P-Q' means 'P is the brother of Q';  'P*Q' means 'P is the sister of Q';  Which of the following shows that A is the aunt of E?  a) A+B-C*D#E   | Q. 7          | 'P # Q' means 'P is the father of Q';                 |
| 'P* Q' means 'P is the sister of Q';  Which of the following shows that A is the aunt of E?  a) A + B - C* D # E   |               | 'P + Q' means 'P is the mother of Q';                 |
| Which of the following shows that A is the aunt of E?  a) A + B - C * D # E  |               | 'P - Q' means 'P is the brother of Q';                |
| a)A+B-C*D#E b)A#B*C+D-E c)A*B#C*D-E d)A-B+C#D*E  The correct answer is: c  From Option(C),  Explanation:  A B Explanation:  A B Explanation:   |               | 'P * Q' means 'P is the sister of Q';                 |
| b) A # B * C + D - E   c) A * B # C * D - E   d) A - B + C # D * E    The correct answer is: c  From Option(C),  Explanation:  A - B   C - D - E   A' is the aunt of 'E'.  |               | Which of the following shows that A is the aunt of E? |
| c) A*B#C*D-E d) A-B+C#D*E  The correct answer is: c  From Option(c),  Explanation:  A-B  A' is the aunt of 'E'.  |               | a) A + B - C * D # E                                  |
| c) A*B#C*D-E d) A-B+C#D*E  The correct answer is: c  From Option(c),  Explanation:  A-B  A' is the aunt of 'E'.  |               | b) A # B * C + D – E                                  |
| The correct answer is: c  from option(c),  Explanation:  A-B  A-B  A' is the aunt  of 'E'.   |               |   |
| The correct answer is: c  From Option(c),  A-B  C-D-E  'A' is the aunt  of 'E'.  |               | c) A * B # C * D - E                                  |
| From option(c),  A-B  C-D-E  A' is the aunt of 'E'.  |               | d) A – B + C # D * E                                  |
| Explanation:  (A) B  (C) D - E  (A) is the aunt  (b) (8).  |               | The correct answer is: c                              |
| A' is the aunt of (E).   |               | from option(c),                                       |
| of 'E'.  | Explanation:  | A-B<br>C-D-E  |
| of 'E'.  |               | 'A' is the  |
| V  |               |   |
| (0 → Female; [] → Male)  |               | of (E).   |
|  |               | (0 → Female; [] → Male)                               |
|  |               |   |

| Q. 8 | In which state of India is Kund or Tanka used for water harvesting? |
|------|---|
|      | a) Rajasthan  |
|      | b) Andhra Pradesh   |
|      | c) Uttar Pradesh  |
|      | d) Punjab   |

The correct answer is: a

### **Explanation:**

Kund or Tanka is a traditional rainwater harvesting system primarily used in the arid regions of Rajasthan.

- **Kund**: A saucer-shaped underground structure with a circular catchment area that collects rainwater.
- **Tanka**: A covered underground tank used to store rainwater, often connected to rooftops for water collection.

### 1. Rajasthan

- **Kund / Tanka** (Underground covered tanks for rainwater storage)
- **Johad** (Earthen check dams)
- Nadi (Village ponds)

### 2. Maharashtra

- **Phad** (Small irrigation system using canals & diversion channels)
- **Kere** (Traditional tanks in Karnataka-Maharashtra border)

### 3. Tamil Nadu

- **Eri** (Traditional tank system for irrigation)
- **Ooranis** (Small village ponds for drinking water)

### 4. Karnataka & Andhra Pradesh

- **Katta** (Temporary check dams built across streams)
- Kunta / Cheruvu (Man-made lakes for irrigation)

### 5. Kerala

• **Surangam** (Horizontal stepwells dug into hillsides)

### 6. Madhya Pradesh & Gujarat

- Bavadis / Vavs (Stepwells for drinking water)
- **Talab** (Ponds for rainwater storage)

### 7. Uttar Pradesh & Bihar

- Ahar-Pyne (Traditional floodwater harvesting system)
- Ponds (Pokhar / Chaur)

### 8. Jammu & Kashmir

• **Zing** (Small tanks collecting glacier meltwater)

### 9. Meghalaya

• Bamboo Drip Irrigation (Used in Khasi & Jaintia Hills)

### 10. Ladakh

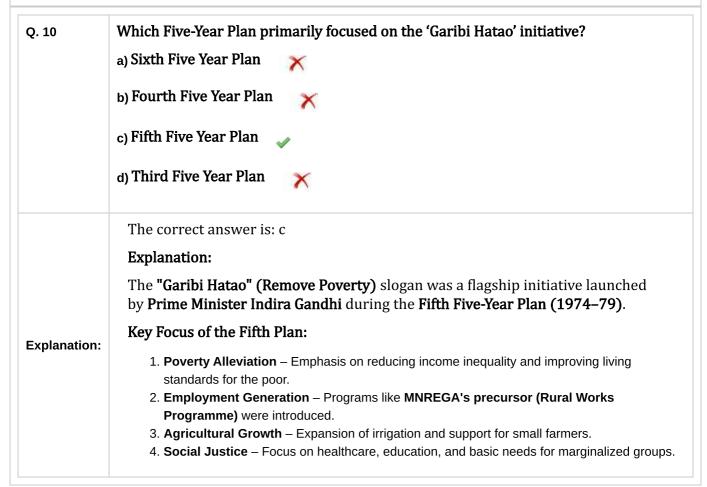
• **Zings** (Small tanks for glacier water storage)

### 11. West Bengal

• **Dighis** (Large ponds for rainwater storage)

These methods reflect India's **rich indigenous knowledge** of water conservation suited to local climates.

| Q. 9         | Two successive discounts of 30% and 35% on a deal are equivalent to a single discount of: |
|--------------|---|
|              | a) 54.5%  |
|              | b) 65% ×  |
|              | c) 60% ×  |
|              | d) 55.5%  |
| Explanation: | Successive discounts = $30\% + 35\% - \frac{30 \times 35}{100}\%$                         |
| Explanation. | => 65% - 10.5% => 54.5%   |



| Q. 11        | How many pairs of positive integers p, q exist such that the HCF of p, q is 43 and the sum of p and q is 2537? |
|--------------|--|
|              | a) 59 ×  |
|              | b) 28 ×  |
|              | c) 29 🗳  |
|              | d) 61 ×  |
|              | Required Numbers = 43 a & 436  |
|              | » 43a + 436 = 2537   |
|              | 2) a+6 = 59  |
| Explanation: | a le b must be co-primes,  |
|              | also the given sum i.e. 59 is also a prime no.   |
|              |  |
|              | :. No. of possible pairs = 59-1<br>=> 29 (Ans)   |
|              | 2) 29 CAN1   |

| Q. 12        | Who was the Viceroy of India when Mahatma Gandhi started Dandi March on 12 March 1930?  |
|--------------|---|
|              | a) Lord Chelmsford  |
|              | b) Lord Minto II  |
|              | c) Lord Irwin   |
|              | d) Lord Willingdon  |
|              | The correct answer is: c  |
|              | Explanation:  |
|              | 1. Historical Context of the Dandi March  |
|              | <ul> <li>The Dandi March (Salt Satyagraha) began on 12 March 1930, led by Mahatma Gandhi to protest the British salt monopoly and the oppressive Salt Laws.</li> <li>This was a pivotal moment in India's Civil Disobedience Movement, marking Gandhi's defiance of British rule through nonviolent means.</li> </ul> |
| Explanation: | 2. Lord Irwin's Role as Viceroy   |
|              | • <b>Tenure</b> : Lord Irwin (Edward Frederick Lindley Wood) served as Viceroy from <b>1926 to 1931</b> .   |
|              | <ul> <li>Response to the March: Initially, Irwin underestimated the impact of Gandhi's protest but later negotiated the Gandhi-Irwin Pact (1931) after the movemen gained mass support.</li> </ul>  |
|              | <ul> <li>Repression: His government arrested over 60,000 Indians during the protests including Gandhi himself.</li> </ul>   |

| Q. 13        | In a certain language, 'oka peru' means 'fine cloth'; 'meta lisa' means 'clear water' and 'dona lisa peru' means 'fine clear weather', which word in that language means 'weather'? |
|--------------|---|
|              | a) peru   |
|              | b) oka  |
|              | c) Meta   |
|              | d) Dona   |
|              | The correct answer is: d  |
|              | Explanation:  |
|              | 1. From the phrase 'oka peru' means 'fine cloth', we understand that:   |
|              | <ul> <li>'oka' corresponds to 'fine/cloth'.</li> </ul>  |
|              | • 'peru' corresponds to <b>'fine/cloth'</b> .   |
| Explanation: | <ul><li>2. From the phrase 'meta lisa' means 'clear water', we understand that:</li><li>'meta' corresponds to 'water/clear'.</li></ul>  |
|              | <ul> <li>'lisa' corresponds to 'water/clear'.</li> </ul>  |
|              | 3. From the phrase 'dona lisa peru' means 'fine clear weather', we observe:   |
|              | <ul> <li>'lisa' (already known) corresponds to 'clear'.</li> <li>'peru' (already known) corresponds to 'fine'.</li> </ul>   |
|              | <ul> <li>The new word 'dona' must correspond to 'weather'.</li> </ul>   |
|              | Thus, the word <b>'dona'</b> in this language means <b>'weather'</b> .  |

| Q. 14 | Select the set in which the numbers are related in the same way as are the numbers of the following sets. (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.) |
|-------|---|
|       | (34, 108, 7)  |

(33, 121, 23)

a) (12, 62, 23)

b) (36, 135, 24)

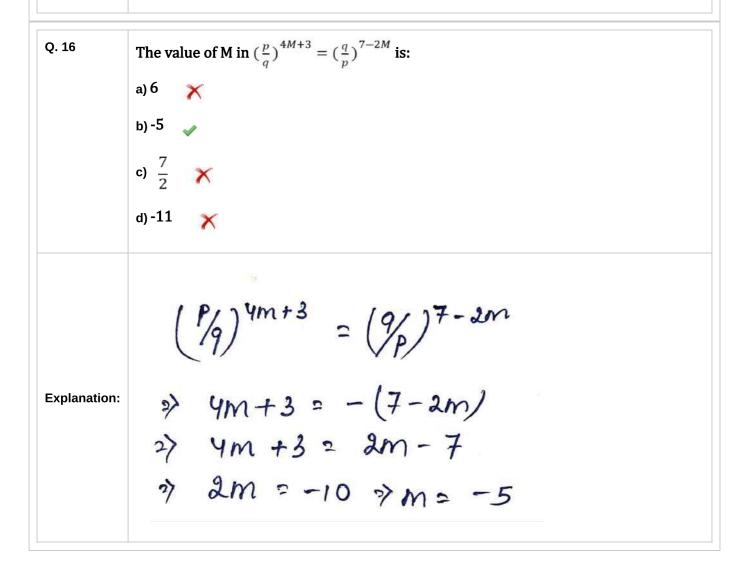
c) (48, 147, 4)

d) (41, 131, 5)

The correct answer is: c

(33, 121, 23)

| Q. 15        | In which state is the Sambhar Salt Lake located?   |
|--------------|--|
|              | a) Odisha  |
|              | b) Maharashtra   |
|              | c) Rajasthan   |
|              | d) West Bengal   |
|              | The correct answer is: c   |
|              | Explanation:   |
|              | 1. About Sambhar Salt Lake   |
| Explanation: | <ul> <li>Location: Situated in Rajasthan, near the border of Nagaur and Jaipur districts.</li> <li>Significance:</li> </ul>              |
|              | <ul> <li>It is India's largest inland saltwater lake.</li> <li>Produces ~9% of India's salt (supplied to states like Gujarat,</li> </ul> |
|              | Maharashtra, etc.).  |
|              | <ul> <li>A Ramsar Wetland Site (recognized for ecological importance).</li> </ul>  |



| Q. 17 | Select the alphanumeric group from the given options that can replace the question |
|-------|--|
|       | mark (?) in the following series.  |

2J8, 7H10, 14F12, ?, 34B16

- a) 23E14
- X
- b) 23D14
- c) 23D16
- d) 24D14
- X

The correct answer is: b

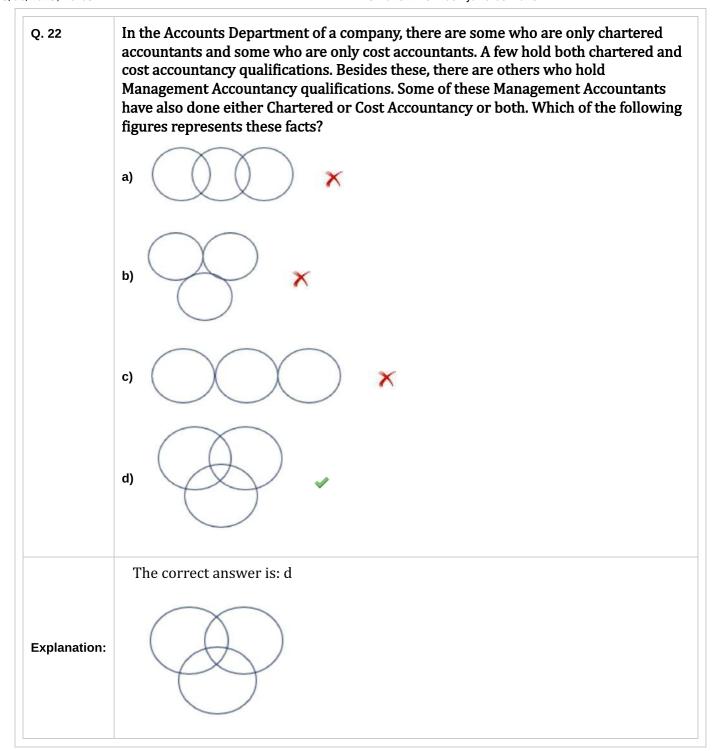
7 H 1+7 1-2

| Q. 18        | What is the main objective of the 'Graded Response Action Plan'?   |
|--------------|--|
|              | a) Legalizing illegal colonies   |
|              | b) To control the cases of malaria   |
|              | c) Introduction of electric vehicles   |
|              | d) Controlling Air pollution   |
|              | The correct answer is: d   |
|              | Explanation:   |
|              | 1. What is the Graded Response Action Plan (GRAP)?   |
|              | <ul> <li>Definition: GRAP is a dynamic, anti-air pollution plan implemented in the National Capital Region (NCR) to combat deteriorating air quality.</li> <li>Launched by: Ministry of Environment, Forest &amp; Climate Change (MoEFCC) in 2017, based on Supreme Court directives.</li> <li>Governed by: Commission for Air Quality Management (CAQM).</li> </ul>   |
| Explanation: | 2. Primary Objective   |
|              | <ul> <li>To prevent and control air pollution (especially PM2.5/PM10) by triggering pre-defined emergency measures as per the Air Quality Index (AQI) levels:         <ul> <li>Stage I (Poor AQI): Ban on diesel generators, increased parking fees.</li> <li>Stage II (Very Poor AQI): Halting coal/firewood use in eateries.</li> <li>Stage III (Severe AQI): Ban on construction, brick kilns, BS-III/IV vehicles.</li> </ul> </li> </ul> |
|              | <ul> <li>Stage IV (Severe+ AQI): Odd-Even scheme, work-from-home orders.</li> </ul>  |

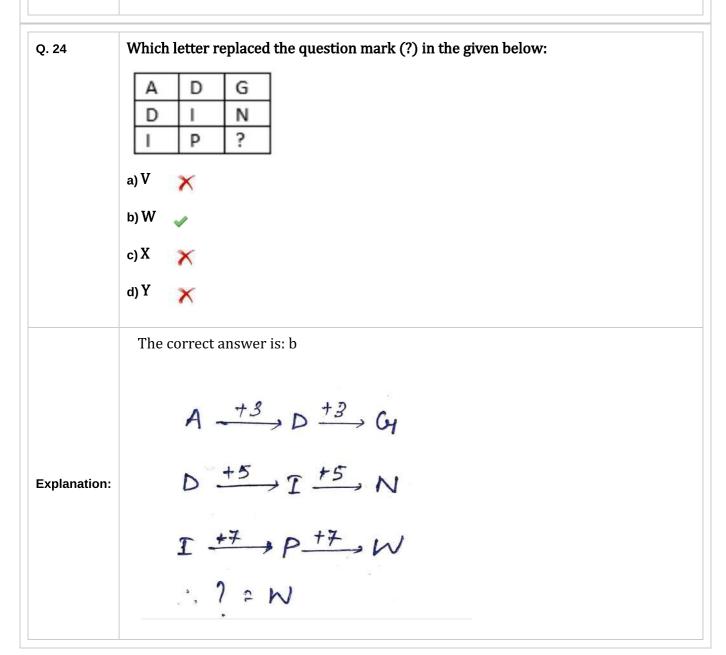
| Q. 19        | If '+' means ' $\times$ ', '-' means '+', ' $\times$ ' means ' $\div$ ', ' $\div$ ' means '-', then what will come in place of '?' in the given equation? |
|--------------|---|
|              | $500 \div 5 - 5 \times 5 + 2 = ?$   |
|              | a) 477  |
|              | b) -21.74   |
|              | c) -22.73   |
|              | d) 497  |
|              | The correct answer is: d  |
|              | $500 \div 5 - 5 \times 5 + 2 = ?$   |
|              | If '+' means 'x', '-' means '+', 'x' means '÷', '÷' means '-', then   |
| Explanation: | => 500 - 5 + 5 <sub>+</sub> 5 <sub>×</sub> 2  |
|              | =>500-5+2=500-3   |
|              | => 497 (Ans)  |
|              |   |

## Who among the following Sultans of the Khilji dynasty started giving cash salary to Q. 20 his soldiers and controlled the market during his reign? a) Jalal-ud-din Khilji ы) Shihab-ud-din Omar c) Alauddin Khilji d) Qutb-ud-din Mubarak The correct answer is: c **Explanation:** 1. Alauddin Khilji's Market Reforms & Military Reforms • Cash Salary to Soldiers: • Alauddin introduced **cash payments (naqd)** instead of land grants (iqta) to soldiers to ensure direct control and prevent rebellions. **Explanation:** • This made the army **more professional and loyal** to the Sultan. • Market Control (Diwan-i-Riyasat): • He established **price controls** on essential goods (grains, cloth, etc.) to curb inflation and ensure affordability. • Officials (Shahna-i-Mandi) monitored markets, punished hoarders, and fixed prices. • **Storage systems** were built to stabilize supply during shortages.

| Q. 21        | A woman has invested ₹95,000 at a rate of $9\frac{1}{2}\%$ per annum simple interest for 4 years. Find the amount that she will receive after 4 years. |
|--------------|--|
|              | a) ₹36,100 ×   |
|              | b) ₹1,15,200   |
|              | c) ₹72,200 ×   |
|              | d) ₹1,31,100 🗳   |
| Explanation: | $SI = 95,000 \times 19 \times 4$<br>$2 \times 100$<br>2 = 36,100<br>Amount = 95,000 + 36,100<br>$2 \times 5,131,100 \text{ (Ams)}$                     |



| Q. 23        | Which of the following places receives rainfall from the Bay of Bengal branch of southwest monsoon?  |
|--------------|--|
|              | a) Surat   |
|              | b) Panaji  |
|              | c) Kolkata   |
|              | d) Ratnagiri   |
|              | The correct answer is: c   |
|              | Detailed Explanation:  |
|              | 1. Monsoon Branches in India   |
| Explanation: | The <b>southwest monsoon</b> splits into two branches over India:  |
|              | <ul> <li>Arabian Sea Branch: Hits the western coast (e.g., Surat, Panaji, Ratnagiri).</li> <li>Bay of Bengal Branch: Moves towards eastern and northeastern India (e.g., Kolkata, Cherrapunji).</li> </ul> |



| Q. 25        | is one of the first criticism of the caste system written by Mahatma Phule and published in the year 1873.   |
|--------------|--|
|              | a) Gulami Ki Kahani  |
|              | b) Gulamgiri   |
|              | c) Bharat Mein Jaati Evam Prajaati   |
|              | d) Jati ka Unmoolan  |
|              | The correct answer is: b   |
|              | Explanation:   |
|              | 1. About Gulamgiri   |
|              | Author: Mahatma Jyotirao Phule (1827–1890), a social reformer and anti-  |
|              | <ul><li>caste activist.</li><li>Published in: 1873 (dedicated to the abolition of slavery in the US,</li></ul>   |
|              | symbolizing global oppression).  |
|              | • Language: Written in Marathi.  |
| Explanation: | 2. Significance of the Book  |
|              | <ul> <li>First Systematic Critique: Phule's Gulamgiri ("Slavery") is one of the earliest critiques of the caste system in India.</li> <li>Central Argument:</li> </ul> |
|              | <ul> <li>Exposed Brahmanical dominance and the oppression of Shudras/Ati-</li> </ul>   |
|              | <ul><li>Shudras (lower castes).</li><li>Linked caste oppression to religious scriptures like Manusmriti.</li></ul>   |
|              | <ul> <li>Advocated for education and social equality to dismantle caste hierarchies.</li> </ul>  |

| Q. 26        | In order to pass in an examination a student is required to get 840 marks out of the maximum aggregate marks. Sonal got 772 marks and was declared failed by 5%. What is the maximum aggregate marks that a student can get in the examination? |
|--------------|---|
|              | a) 1260   |
|              | b) 1360 🗳   |
|              | c) 1280   |
|              | d) 1440   |
|              | =>5% = (840 - 772) marks  |
| Explanation: | =>5% = 68  marks  |
|              | => 100% = 1360  |
|              | Maximum aggregate marks that a student can get in the examination is 1360.  |

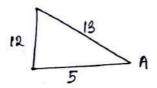
If A lies in the second quadrant and  $13\sin A - 12 = 0$ , then  $5\sin A + 12\cos A + \tan^2 A - (\sec^2 A - 1) = ?$ 

- a)  $\frac{120}{13}$  ×
- b)  $\frac{48}{5}$  ×
- c) 0 🧳
- d)  $\frac{24}{5}$

# A lies in the second graduant. cos, sec, tan & cot will be negative.

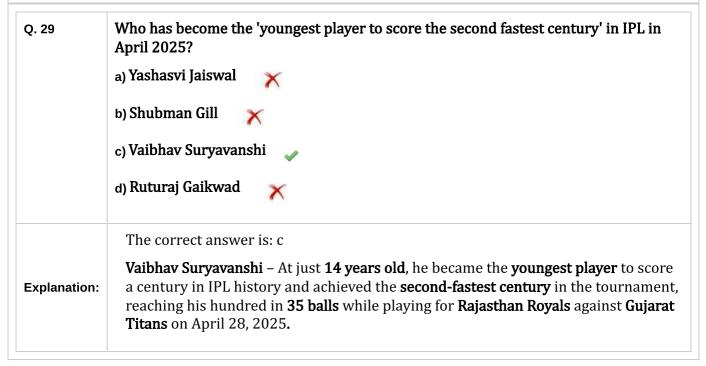
» 13 Sing - 12 20

>> SinA = 12/13



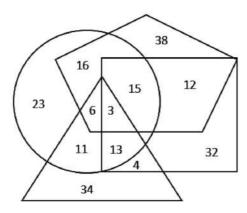
5 sin 4 + 12cos 4 + tan<sup>2</sup> 4 - (sec<sup>2</sup> 4-1)  
3 5 × 12/13 + 12(-5/13) + (-12/5)<sup>2</sup> - [(13/5)<sup>2</sup>-1]  
3 60/13 - 60/13 + 
$$\frac{144}{25}$$
 -  $\frac{144}{25}$  20

| Q. 28        | In which of the following regions, a cyclone is known as "Typhoon"?   |
|--------------|---|
|              | a) India  |
|              | b) Japan 🧳  |
|              | c) Canada   |
|              | d) Brazil   |
|              | The correct answer: b   |
|              | Explanation:  |
| Explanation: | <ul> <li>A typhoon is the regional name for a tropical cyclone that forms in the Northwest Pacific Ocean (west of the International Date Line).</li> <li>Identical to hurricanes/cyclones but named differently based on location.</li> </ul> |
|              | <ul> <li>Japan lies in the Northwest Pacific basin, where cyclones are called typhoons.</li> <li>Examples: Typhoon Hagibis (2019), Typhoon Jebi (2018).</li> </ul>  |





In the given diagram, the shapes represent different types of women in a small region. Circle represents women who are doctors, pentagon represents women who are married, square represents women who are mothers, triangle represents women who are scientists.



Which number represents women who are married as well as mothers, doctors and scientists?

- a) 9
- X
- b) 6
- c) 3
- d) 4

The correct answer is: c

### **Explanation:**

No. of women who are married as well as mothers, doctors and scientists are 3.

### Q. 31

If two litres of water is evaporated from a 5 litre solution containing 3% salt, then what is the percentage of salt in the remaining solution?

a) 3%



- b) 5%
  - 70 🦠
- с) 7%



d) 6%



Equating the concentration of salt,

5 litre  $\times$  3% = 3 litre  $\times$   $\times$ 

### **Explanation:**

The percentage of salt in the remaining solution is 5%.

| a) Kakori Incident   |
|--|
| a) Nakoli liicidelit   |
| b) Bardoli Satyagraha 🧳  |
| c) Dandi March   |
| d) Kheda Satyagraha 🔀  |
| The correct answer is: b   |
| Explanation:   |
| 1. Bardoli Satyagraha (1928)   |
| • Leader: Sardar Vallabhbhai Patel (earned the title Sardar after this   |
| movement).  • Cause: Protests against the British government's 22% tax hike on farmers in  |
| Bardoli (Gujarat) despite famine conditions.   |
| <ul> <li>Outcome:</li> <li>Successful peasant resistance forced the British to roll back taxes.</li> <li>Boosted Patel's leadership and the Civil Disobedience Movement.</li> </ul>                                    |
| Other Options Explained:   |
| • Kakori Incident (1925): Hindustan Republican Association's train robbery (led by Ram Prasad Bismil, Ashfaqulla Khan).  |
| <ul> <li>Dandi March (1930): Gandhi's Salt Satyagraha against the salt tax.</li> <li>Kheda Satyagraha (1918): Earlier peasant movement in Gujarat (led by Gandhi/Patel) against high taxes during a plague.</li> </ul> |
| •  |

| Q. 33        | A baker got an order to make a five-layer cake with the flavours vanilla, black curran red velvet, chocolate and strawberry mixed one above the other. The bottom layer is numbered as 2 and the layer just above the bottom layer is numbered as 3 and so on There is only one layer between black currant and red velvet. The red velvet layer is just above the strawberry layer. Chocolate is an even numbered layer below the red velvet layer but not immediately below. Vanilla is the fifth layer. |
|--------------|--|
|              | Red velvet flavour is in which layer?  |
|              | a) Third   |
|              | b) Second  |
|              | c) First   |
|              | d) Fourth  |
|              | The correct answer is: d   |
|              | 6 → Black Current 5 → Vanika 4 → Red velvet 3 → Strawberry 2 → Chocolate Red velvet is in forth layer.   |
|              | 5 → Vanilla  |
| Explanation: | y -> Red velvet  |
|              | 3 -> Strawberry  |
|              | 2 - Chocolate  |
|              | Red refret is in tourth layer.   |

| <u>'</u>     | INDE-INTI C-2023-LIVE-MOCK-Julie-03-2023   |
|--------------|--|
| Q. 34        | Which of the following war dances is performed in Ngada festival and is a performed by the tribes of Nagaland?  a) Jawara  |
|              | ы) Dalkhai   |
|              | c) Rengma  |
|              | d) Garadi  |
|              | The correct answer is: c   |
|              | Explanation:   |
|              | 1. Rengma Dance  |
|              | <ul> <li>Performed by: The Rengma Naga tribe of Nagaland.</li> <li>Occasion: Part of the Ngada festival, a major post-harvest celebration markin the end of the agricultural year.</li> <li>Features:</li> </ul> |
| Explanation: | <ul> <li>A war dance showcasing bravery, agility, and traditional warrior culture</li> <li>Dancers wear vibrant tribal attire, headgear with horns, and carry spears/drums.</li> </ul>                           |
|              | Rhythmic movements mimic battle sequences.  Other entions explained.   |
|              | Other options explained:   |
|              | <ul> <li>Jawara: A harvest dance from Madhya Pradesh (performed by Bundeli farmers).</li> <li>Dalkhai: A folk dance of Odisha's tribal women (associated with the Dusshera)</li> </ul>                           |

# Q. 35 The price of a car is $\[ = 9,75,000 \]$ . It was insured to 85% of its price. The car was damaged completely, and the insurance company paid 90% of the insurance. What was the difference between the price of the car and the amount received? a) $\[ = 2,27,545 \]$ b) $\[ = 2,244,335 \]$ c) $\[ = 2,29,125 \]$ d) $\[ = 2,33,650 \]$ Price of the car = $\[ = 9,75,000 \]$ Insurance value = $\[ = 85\% \times \[ = 9,75,000 \]$ Amount paid by the insurance company = $\[ = 90\% \]$ Difference between the price of the car and the amount received = $\[ = > \[ = 9,75,000 \]$ - $\[ = 7,45,875 \]$ = $\[ = 2,29,125 \]$ (Ans)

• Garadi: A monkey dance from Puducherry (linked to Ramayana lore).

| Q. 36        | Which of the following ministries launched the PM Daksh scheme?  a) Ministry of Education  b) Ministry of Electronics and Information Technology  c) Ministry of Social Justice and Empowerment  d) Ministry of Food Processing Industries   |
|--------------|--|
| Explanation: | The correct answer is: c  Explanation:  1. About PM-DAKSH Scheme  • Full Name: Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH).  • Launched in: 2020–21 (as a Central Sector Scheme).  • Target Beneficiaries:  • Scheduled Castes (SCs), Other Backward Classes (OBCs), Economically Backward Classes (EBCs),  • Denotified Tribes (DNTs), Sanitation Workers, Manual Scavengers, and their dependents. |
|              | 2. Key Objectives  |
|              | <ul> <li>Skill Development: Free skill training programs (short-term/long-term) to enhance employability.</li> <li>Entrepreneurship Support: Training for self-employment (e.g., tailoring, plumbing, IT skills).</li> <li>Placement Assistance: Job linkages after training completion.</li> </ul>  |

Which Number replaced the question mark (?) in the given below:

| 8 | 6  | 12 | 216 |
|---|----|----|-----|
| 4 | 22 | 3  | ?   |
| 7 | 13 | 5  | 191 |

- a) 152
- b) 184
- c) 166
- d) 162

15

The correct answer is: c

1st row =>  $(8 \times 6) + (6 \times 12) + (12 \times 8) = 48 + 72 + 96 = 216$ 

 $3rd row = > (7 \times 13) + (13 \times 5) + (7 \times 5) = 91 + 65 + 35 = 191$ 

**Explanation:** 

Similarly,

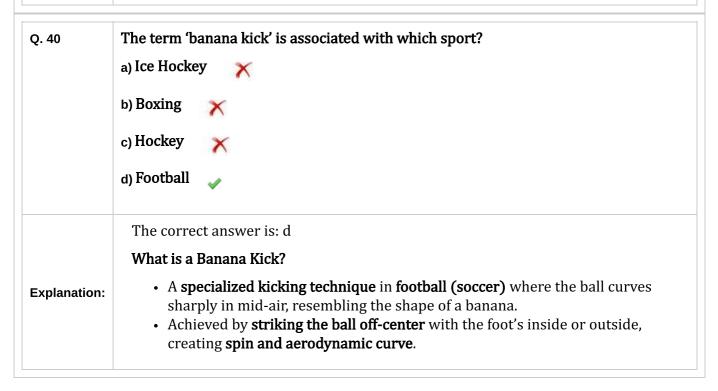
2nd row =>  $(4 \times 22) + (22 \times 3) + (4 \times 3) = 88 + 66 + 12 = 166$ 

Therefore, '166' is the answer.

If the radius of a circle is decreased by 45%, then its area decreases by:

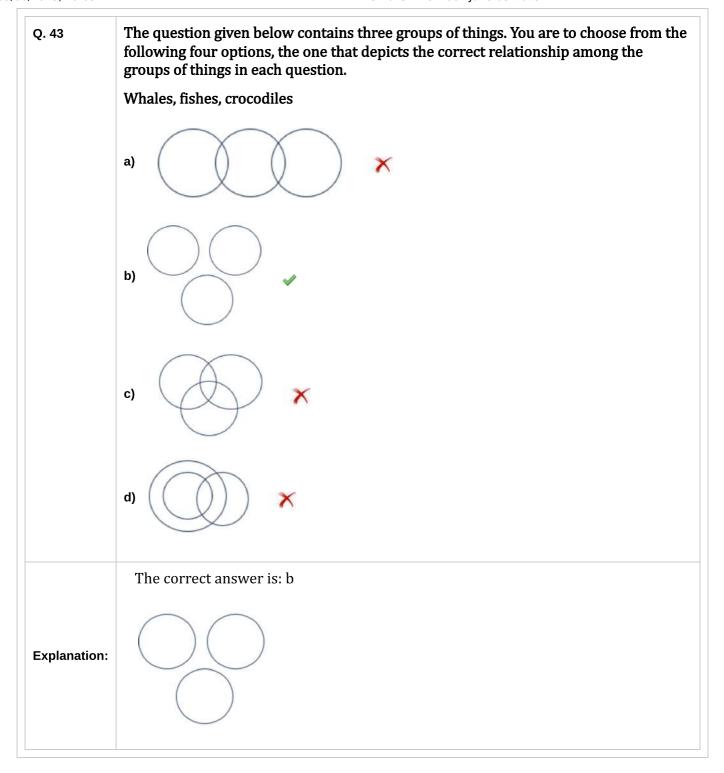
- a)  $67\frac{3}{4}\%$
- b)  $69\frac{1}{4}\%$
- c)  $67\frac{1}{4}\%$
- d)  $69\frac{3}{4}\%$   $\checkmark$

| Q. 39        | If TRUTH is coded as SUQSTVSUGI, then the code for FALSE will be: |
|--------------|---|
|              | a) EGZBKMRDE  |
|              | b) EGZKMRTDF  |
|              | c) EGZBKMRTDF   |
|              | a) FGZBKNRTDF   |
|              | The correct answer is: c  |
|              |   |
|              | TY T                          |
| Explanation: | SUQSTVSUGI  |
| •            |   |
|              | ーンヤーンヤーンヤーンヤー   |
|              | EGZBKMRTD F   |
|              |   |

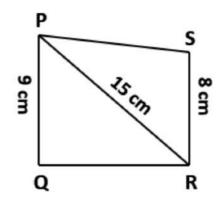


| 2025, 19:03  | RBE-NTPC-2025-Live-Mock-June-03-2025   |
|--------------|--|
| Q. 41        | The product of two positive numbers is 0.50. If one number is $1/18^{th}$ of the other, then what are the two numbers?  a) 0.6, 1.0   b) 0.16, 3.0   c) 0.3, 2.0   d) 0.3, 1.6 |
| Explanation: | let, 1st no. = X<br>2nd no. = XX/18<br>2) XXX/18 = 0.5<br>3 X2 = 9 = X = 3<br>2nd no. = 3/18<br>= 0.16<br>Required numbers<br>= 0.16, 3.0                                      |

| Q. 42        | Which of the following is the SI unit of temperature?  |
|--------------|--|
|              | a) Celsius (°C)  |
|              | b) Fahrenheit (F)  |
|              | c) Kelvin (K)  |
|              | d) Pascal (Pa)   |
| Explanation: | The correct answer is: c   |
|              | Explanation:   |
|              | 1. Kelvin (K) – The SI Unit of Temperature   |
|              | <ul> <li>Definition: Kelvin is the base unit of thermodynamic temperature in the International System of Units (SI).</li> <li>Absolute Scale:</li> </ul> |
|              | • <b>0 K (absolute zero)</b> = theoretically coldest temperature (-273.15°C), where molecular motion stops.  |
|              | <ul> <li>Unlike Celsius/Fahrenheit, it has no negative values.</li> </ul>  |



Observe the figure below and find the area of trapezium PQRS. Angle  $PQR = 90^{\circ}$ .



- a)  $108 \, \text{cm}^2$
- b) 114 cm<sup>2</sup>
- c)  $119 \text{ cm}^2$
- d)  $102 \text{ cm}^2$

**Explanation:** 

 $\Delta PQR$  is a right angled  $\Delta$ ,  $\therefore QR = \sqrt{(15)^2 - (9)^2} = 12$ 

Area of trapezium PQRS,

2) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

2) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

2) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

2) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

2) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

3) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

3) /2 (Sum of paraulul sides) xheight

Area of trapezium PQRS,

| Q. 45        | The "Bridgetown Initiative", proposed in 2022, seeks to reform the global financial architecture to address climate vulnerability and debt crises in developing nations. Through which of the following international organizations is this initiative primarily being advocated?  a) International Monetary Fund (IMF) |
|--------------|---|
|              | b) World Trade Organization (WTO)   |
|              | c) United Nations Framework Convention on Climate Change (UNFCCC) d) Organisation for Economic Co-operation and Development (OECD)  |
| Explanation: | The correct answer is: a  Explanation:  |
|              | <ul> <li>1. Bridgetown Initiative:         <ul> <li>Led by Barbados Prime Minister Mia Mottley, it proposes reforms like:</li></ul></li></ul>   |

| Q. 46 | The average marks obtained by a group of 25 students was 36. One left the group, as a result of which the average of the remaining students rose to 37.5. Soon after another student joined the same group, as a result of which the average marks dropped to 37.2. Find the average marks of the student who joined the group. |
|-------|---|
|       | a) 15 🔀   |
|       | ы 37.5  |

- c) 30 🧳
- d) 22.5

Student who foined = X

One Student left the
group, therefore there
are 24 Students in the group.

**Explanation:** 

2) 
$$\frac{24 \times 37.5 + 2}{25} = 37.2$$
  
 $900 + 2 = 25 \times 37.2$   
2)  $900 + 2 = 930$   
2)  $2 = 30$  (Am)

| Q. 47        | The 'Gaia Mission' which ended on January 15, 2025, was related to which space agency?   |
|--------------|--|
|              | a) ISRO  |
|              | ы) ESA 🧳   |
|              | c) NASA  |
|              | d) JAXA  |
|              | The correct answer is: b   |
|              | About the Gaia Mission   |
| Explanation: | <ul> <li>Full Name: Global Astrometric Interferometer for Astrophysics (Gaia).</li> <li>Launched: 19 December 2013 (operational until 15 January 2025).</li> <li>Primary Objective: To create the most precise 3D map of the Milky Way galaxy by surveying:</li> </ul> |
| •            | • 1.8 billion stars (positions, distances, motions).   |
|              | <ul> <li>Exoplanets, asteroids, and dark matter distribution.</li> </ul>   |
|              | Developed & Operated by the European Space Agency (ESA).   |
|              | <ul> <li>Mission Control: ESA's European Space Operations Centre (ESOC) in Germany.</li> </ul>   |
|              | Data Processing: Handled by the European Data Processing Consortium.   |

The following table shows the total candidates appeared and number of candidates present, in different exam centres – P. O and R.

Study the table and answer the question that follows.

'Total' denotes total candidates applied for the centre, 'Present' denotes the candidates appeared.

In which year was the number of absentees the second highest in total of all centres?

|      | P     |         | Q     |         | R     |         |
|------|-------|---------|-------|---------|-------|---------|
| Year | Total | Present | Total | Present | Total | Present |
| 2016 | 45    | 42      | 56    | 45      | 55    | 50      |
| 2017 | 50    | 45      | 75    | 55      | 45    | 40      |
| 2018 | 64    | 60      | 65    | 45      | 65    | 55      |
| 2019 | 80    | 69      | 84    | 72      | 70    | 62      |
| 2020 | 55    | 44      | 80    | 66      | 90    | 85      |

- a) 2018
- X
- b) 2019
- •
- c) 2017 d) 2020
- X

The correct answer is: b

No. of absentees in 2016 = 3 + 11 + 5 = 19

No. of absentees in 2018 = 4 + 20 + 10 = 34

**Explanation:** No. of absentees in 2019 = 11 + 12 + 8 = 31

No. of absentees in 2017 = 5 + 20 + 5 = 30

No. of absentees in 2020 = 11 + 14 + 5 = 30

# Q. 49

Where has the 6th edition of India and Uzbekistan joint military exercise 'Dustlik' been organized?

a) Pune



ы) Cochin



c) Vishakhapatnam



d) Tuticorin



#### The correct answer is: a

#### **Explanation:**

The 6th edition of the India-Uzbekistan joint military exercise 'Dustlik' was organized at the Foreign Training Node, Aundh (Pune), Maharashtra. The exercise was conducted from April 16 to April 28, 2025, focusing on joint multi-domain subconventional operations in a semi-urban scenario.

| Q. 50        | Find the number of bricks, each measuring $36 \text{ cm} \times 15 \text{ cm} \times 8 \text{ cm}$ , required to construct a wall $27 \text{ m}$ long, $9 \text{ m}$ high and $60 \text{ cm}$ thick if $10\%$ of the wall is filled with mortar? |
|--------------|--|
|              | a) 27,225 ×  |
|              | ы) 30,375  |
|              | c) 32,275 ×  |
|              | d) 36,625  |
| Explanation: | The volume of wall to be used  2 2700 × 900 × 60 × 90./.  The volume of bricks  2 36 × 15 × 8  NO. of bricks = 2700 × 900×60×9  36 × 15 × 8 × 10  30,375 (Am)  |

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

| Subjects | Number of books |
|----------|-----------------|
| B1       | 120             |
| B2       | 150             |
| В3       | 150             |
| B4       | 120             |
| B5       | 120             |

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

The correct answer is: d

The number of books for subject B1 = 120

**Explanation:** 

Average number of books per subject =  $\frac{120 + 150 + 150 + 120 + 120}{5}$  =>  $\frac{660}{5}$ 

Average number of books per subject = 132

Required Ratio = 120:132 = > 10:11

Q. 52

Who has been appointed as the Director General of 'Indian Council of Agricultural Research (ICAR)' in April 2025?

a) Dr. Himanshu Pathak



b) Dr. Rajendra Saxena



c) Dr. Mangi Lal Jat



d) Dr. Vinay Kumar Singh



Explanation:

The correct answer is: c

In **April 2025, Dr. Mangi Lal Jat** was appointed as the **Director General of the Indian Council of Agricultural Research (ICAR)** and **Secretary of the Department of Agricultural Research and Education (DARE).** He is a distinguished Agronomist with over 25 years of experience in sustainable agriculture, climate-resilient farming, and conservation agriculture.

| Q. 53 | A dice is cast twice, and the sum of the appearing numbers is 9. Then the probability |
|-------|---|
|       | that the number 3 has appeared at least once is:                                      |

- a)  $\frac{1}{2}$
- b)  $\frac{1}{4}$
- c)  $\frac{1}{5}$
- d)  $\frac{1}{3}$

## Explanation:

Total number of outcomes where the sum is 9 = (3,6), (4,5), (5,4), (6,3)

Total number of favourable outcomes = (3,6) and (6,3)

P(3 appears at least once) = =>.

## Q. 54 Identify the organelle present in plant cell that is not there in an animal cell.

- a) Nucleus
- b) Plastids 🧼
- c) Neuron
- d) Cytoplasm



## **Explanation:**

- 1. Plastids Unique to Plant Cells
  - **Definition**: Membrane-bound organelles **exclusive to plant cells** (and some algae).
  - Types & Functions:
    - Chloroplasts: Perform photosynthesis (contain chlorophyll).
    - **Chromoplasts**: Store pigments (e.g., give fruits/flowers colour).
    - **Leucoplasts**: Store starch, lipids, or proteins (e.g., amyloplasts in potatoes).

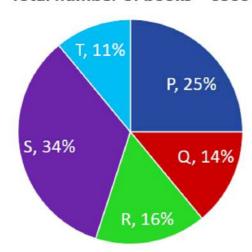
## **Explanation:**

## 2. Key Contrast: Plant vs. Animal Cells

| Feature   | Plant Cell                   | Animal Cell              |
|-----------|------------------------------|--------------------------|
| Plastids  | Present (e.g., chloroplasts) | Absent                   |
| Cell Wall | Present (cellulose)          | Absent                   |
| Vacuoles  | Large central vacuole        | Small/temporary vacuoles |

Q. 55 The given pie chart shows the percentage distribution of a mathematics book in 5 different stores.

Total number of books = 6500



Find the central angle for the book in store S.

- a) 122.4°
- b) 107.3°
- c) 118.9°
- d) 117.5°

The correct answer is: a

**Explanation:** 

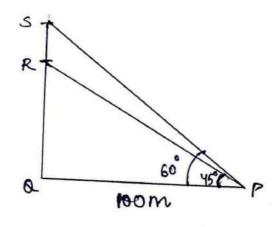
The central angle for the book in store  $S = \frac{360^{\circ}}{100\%} \times 34\% = 122.4$ 

| Q. 56        | Flowerless plants, naked seeds, needle like leaves and cones as reproductive structure are the characteristics of:       |
|--------------|--|
|              | a) Bryophyta   |
|              | b) Gymnosperms   |
|              | c) Angiosperms   |
|              | d) Pteridophyte  |
|              | The correct answer is: b   |
|              | Explanation:   |
|              | 1. Characteristics of Gymnosperms  |
|              | <ul> <li>Naked Seeds: Seeds are not enclosed in fruits (unlike angiosperms). They develop on cones or scales.</li> </ul> |
| Explanation: | • Needle-like/Scale-like Leaves: Adapted to cold/dry climates (e.g., pine, spruce).                                      |
|              | Cones as Reproductive Structures:  |
|              | <ul> <li>Male cones: Produce pollen.</li> </ul>  |
|              | • <b>Female cones</b> : Bear ovules (seeds after fertilization).   |
|              | <ul> <li>No Flowers/Fruits: Unlike angiosperms, they lack true flowers.</li> </ul>                                       |

| Q. | 57 |
|----|----|
| •  |    |

A pole consists of a steel portion, and a wooden portion on top of the steel portion. Point A on the ground is 100m away from the base of the pole. The angle of elevation from point A to the top S of the wooden portion of the pole, is 60°. The angle of elevation, from A to the top R of the steel portion of the pole, is 45°. What is the height of the wooden potion of the pole? (Take  $\sqrt{3}$ =1.732)

- a) 98.2 m
- b) 73.2 m
- c) 114.2 m
- d) 141.2 m



**Explanation:** 

| Q. 58        | Who among the following was the first musician ever to be awarded the Bharat Ratna?  |
|--------------|--|
|              | a) Semmangudi Srinivasa Iyer   |
|              | ь) Girija Devi   |
|              | c) Siddeswari Devi   |
|              | d) M.S. Subbulakshmi   |
|              | The correct answer is: d   |
|              | M.S. Subbulakshmi (1916–2004)  |
|              | Bharat Ratna Awarded: 1998 (first musician to receive India's highest civilian   |
|              | honour).   |
| Explanation: | <ul> <li>Contributions:         <ul> <li>Legendary Carnatic vocalist; popularized Indian classical music globally</li> <li>Iconic renditions of Bhajans (e.g., "Venkateswara Suprabhatam") and classical compositions.</li> <li>First Indian musician to perform at the UN Assembly (1966).</li> </ul> </li> </ul> |
|              | After M.S. Subbulakshmi, only Bismillah Khan (2001, Shehnai maestro) and Ravi Shankar (1999, Sitarist) received Bharat Ratna for music.  |

d) 72 km/h

| Q. 59 | Suhas can cover the distance between point A and point B in 7 hours, if he travels at an average speed of 104 km/h. He travelled for the first four hours at an average speed of 118 km/h. What should be his average speed for the rest of the journey if he wants to reach his destination in a total time of 8 hours from the start of the journey? |
|-------|--|
|       | a) 64 km/h   |
|       | b) 60 km/h   |
|       | c) 70 km/h   |

Jotal distance Suras Las to covere 2) 7 × 104 = 728 Fm Distance travelled during first 4 Lower, 2) 4 × 118 = 472 Fm

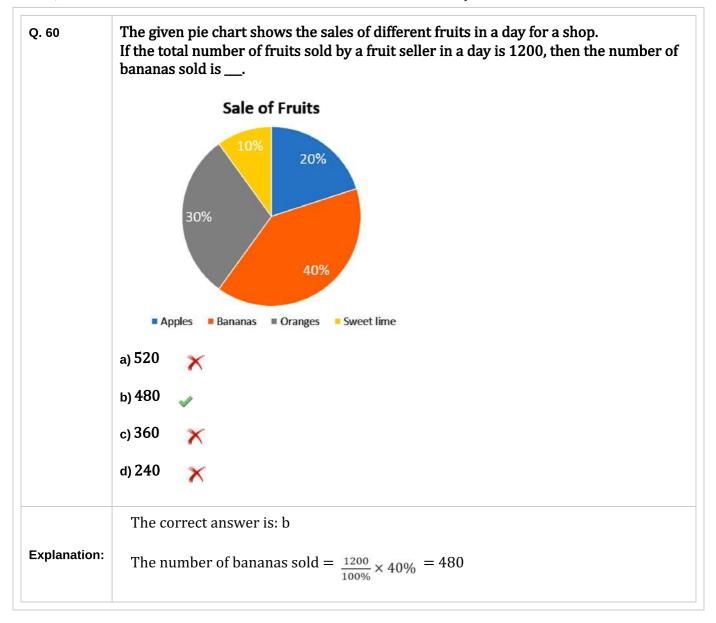
**Explanation:** 

Distance left to be covered = (728 - 472)km

2) 256 km

... Average speed for the rest of the fourney

2 256 2 64 km/hr



| Q. 61        | In the flocculation method of water treatment chemical is added to water.  a) electro-neutral  b) low negatively charged  |
|--------------|---|
|              | c) high negatively charged d) positively charged  |
|              | The correct answer is: d  Explanation:  1. Flocculation in Water Treatment  |
| Explanation: | <ul> <li>Purpose: To remove suspended particles (e.g., dirt, bacteria) by forming larger clumps (flocs) that settle or can be filtered out.</li> <li>Process: <ul> <li>A coagulant (positively charged chemical) is added to neutralize negatively charged particles in water.</li> <li>Neutralized particles then aggregate into flocs during slow mixing (flocculation).</li> </ul> </li> </ul> |
|              | <ul> <li>2. Why Positively Charged Chemicals?</li> <li>Most colloidal impurities (clay, microbes) carry a negative surface charge, causing them to repel each other.</li> <li>Positively charged coagulants (e.g., alum [Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>], ferric chloride [FeCl<sub>3</sub>])</li> </ul>  |

Read the given statements and conclusions carefully. Assuming that the information Q. 62 given in the statements is true, even if it seems to be at variance with commonly known facts, decide which of the given conclusions logically follows from the given statements. Statements: All planets are rockets. No rocket is meteor. **Conclusions:** (I) Some planets are meteors. (II) No planets are meteors. a) Both conclusions I and II follow b) Only conclusion I follows c) Only conclusion II follows d) Neither conclusion I nor conclusion II follows X The correct answer is: c **Explanation:** Only conclusion I follows.

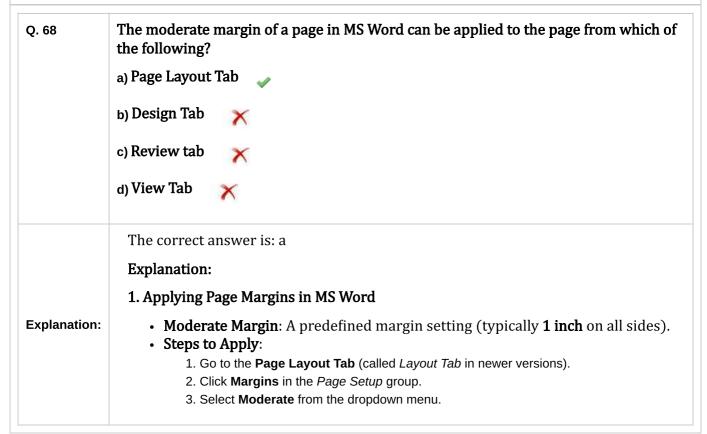
| Q. 63        | Which two kings fought in the Battle of Hydaspes?  |
|--------------|--|
|              | a) Mihirakula and Yasodharman  |
|              | ь) Chandragupta and Dhana Nanda  |
|              | c) Alexander and Porus   |
|              | d) Ashoka and Mahapadmanabha   |
| Explanation: | The correct answer is: c   |
|              | Explanation:   |
|              | 1. Battle of Hydaspes (326 BCE)  |
|              | <ul> <li>Location: Fought on the banks of the Hydaspes River (modern-day Jhelum River in Punjab, Pakistan).</li> <li>Opponents:</li> </ul> |
|              | <ul> <li>Alexander the Great (Macedonian king) vs. King Porus (Puru/Porus) of<br/>the Paurava kingdom (modern Punjab).</li> </ul>          |
|              | <ul> <li>Outcome:</li> <li>Alexander won but was impressed by Porus's bravery.</li> </ul>  |
|              | <ul> <li>Restored Porus as a satrap (governor) under Macedonian rule.</li> </ul>   |

| /2025, 19:03 | RBE-NTPC-2025-Live-Mock-June-03-2025  |
|--------------|---|
| Q. 64        | If $4a = 5b = 6c$ and $a + b + c = 74\sqrt{2}$ , then $a^2 + b^2 + c^2$ is:  a) 2575  b) 2892  c) 3196  d) 3752   |
| Explanation: | 4a = 5b = 6C  Dividing by 60, $\frac{\alpha}{15} = \frac{b}{12} = \frac{c}{10} \Rightarrow K$ $\Rightarrow \alpha = 15K, b = 12K, c = 10K$ $\Rightarrow \alpha + b + c = 74\sqrt{2}$ $\Rightarrow 37K = 74\sqrt{2}$ $\Rightarrow 15 = 24\sqrt{2}$ $\Rightarrow 25 = 24\sqrt{2}$ |

| 72025, 19:03 | RBE-NTPC-2025-Live-Mock-June-03-2025  |
|--------------|---|
| Q. 65        | One mole of an ideal gas occupies a volume of litre at 273 K and 1 atm pressure.  a) 22.4  b) 21.2  c) 25.1  d) 20.3  |
|              | The correct answer is: a  Explanation:  1. Standard Conditions (STP)  • Temperature (T): 273 K (0°C).  • Pressure (P): 1 atm (760 mmHg or 101.325 kPa).     |
| Explanation: | <ul> <li>2. Molar Volume of an Ideal Gas</li> <li>At STP, 1 mole of any ideal gas occupies 22.4 litres.</li> <li>Derived from the Ideal Gas Law:</li> </ul> |
| ·            | PV=nRT  |
|              | $\circ~P=1~\mathrm{atm}$ , $T=273~\mathrm{K}$ , $n=1~\mathrm{mole}$ ,   |
|              | $\circ$ . $\circ$ Solving for $V$ :   |
|              | $V=rac{nRT}{P}=rac{1	imes 0.0821	imes 273}{1}=22.4 	ext{ litres}$   |

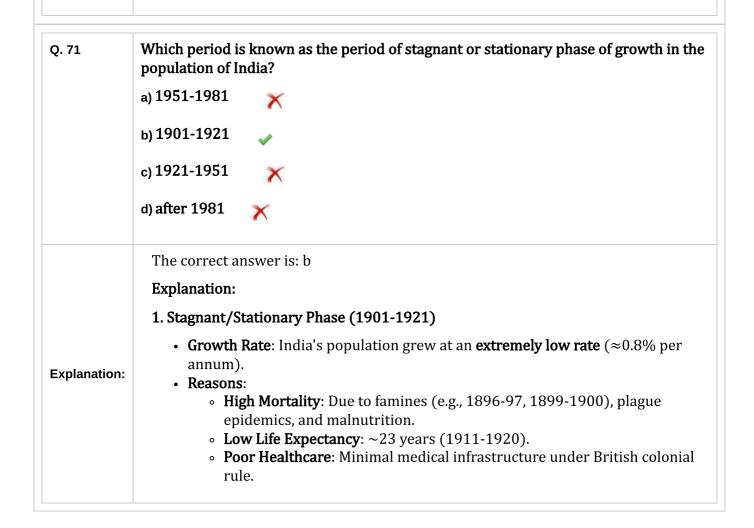
| Q. 66        | The given statements are followed by two conclusions I and II. On the basis of the given statements decide which of the given conclusions is/are true. |
|--------------|--|
|              | Statement:   |
|              | Z = P > X > W = M > B  |
|              | Conclusions:   |
|              | I. X = M   |
|              | II. Z > B  |
|              | a) Only Conclusion II  |
|              | ь) Both Conclusion I and II  |
|              | c) Only Conclusion I   |
|              | d) Neither Conclusion I nor II   |
|              | The correct answer is <b>Only Conclusion II</b> .  |
|              | Here's the explanation:  |
|              | 1. Given Statement: Z = P > X > W = M > B  |
|              | <ul> <li>The equality and inequality signs indicate the relationship among the<br/>variables:</li> </ul>   |
|              | <ul><li>Z is equal to P, which is greater than X.</li></ul>  |
|              | <ul> <li>X is greater than W, which is equal to M.</li> </ul>  |
| Explanation: | M is greater than B.  2. Complexion I. Y. a. M.  |
|              | <ul> <li>2. Conclusion I: X = M</li> <li>From the statement, X &gt; W = M, we see that X is greater than M, not</li> </ul>                             |
|              | equal to M.  • Hence, <b>Conclusion I is false</b> .   |
|              | <ul><li>Hence, Conclusion I is faise.</li><li>3. Conclusion II: Z &gt; B</li></ul>   |
|              | • From the statement, $Z = P > X > W = M > B$ , we clearly see that Z is   |
|              | greater than B.  |
|              | <ul> <li>Hence, Conclusion II is true.</li> </ul>  |

| Q. 67        | A bus and a car start from points x and y respectively and travel towards each other at the speed of $60 \text{ km/h}$ and $50 \text{ km/h}$ respectively. By the time they meet, the bus has travelled $50 \text{ km}$ more than the car. What is the distance between x and y? |
|--------------|--|
|              | a) 450 km  |
|              | ь) 550 km  |
|              | c) 500 km  |
|              | d) 600 km  |
|              | Jime is constant,<br>Distance & Speed  |
| Explanation: | Speed > 60 km/h 50 km/h Distance + 6 5   |
|              | 300 km 1 → 50 km 250 km<br>250 km<br>250 km<br>250 km<br>250 km (Am)   |



| Q. 69        | To complete a given task, Rahim takes 13 days, Tanya takes 15 days and Amir takes 18 days. Working together they finish the task and get ₹2,097. What will be the share of Rahim provided the daily wage is proportional to their efficiency? |
|--------------|---|
|              | a) ₹720 ×   |
|              | b) ₹630 ×   |
|              | c) ₹810 🗳   |
|              | d) ₹560   |
|              | 90 - Rahim - 13<br>78 - Tanya - 15 > 90 x 13<br>65 - Amir - 18  |
| Explanation: | $(90+78+65) \rightarrow 2097$   |
|              | 233 ×9 2097   |
|              | = 2810 (AM)   |
|              | = \$810 (AM)  |

| Q. 70        | Following a certain logic, 27 is related to 48. Following the same logic, 36 is related to 64. Following the same logic, 45 is related to which of the following? |
|--------------|---|
|              | a) 95   |
|              | ь) 85   |
|              | c) 80 🗳   |
|              | d) 90 🔀   |
|              | The correct answer is: c  |
|              | . (9x3) 27 → 48 (16x3)<br>. (9x4) 36 → 64 (16x4)<br>. (9x5) 45 → 80 (16x5)<br>. 45 is yelated to 80.  |
| Explanation: | (9x4) 36 -> 64 (16 x4)  |
|              | • $(9\times5)$ 45 $\longrightarrow$ 80 $(16\times5)$  |
|              | . 45 is yelated to 80.  |

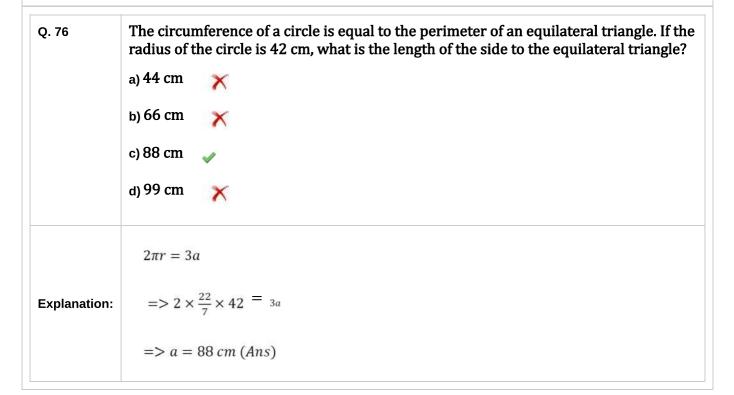


| Q. 72        | Select the number from the given options that can replace the question mark (?) in the following series. |
|--------------|--|
|              | 5, 11, 24, 51, 106, ?  |
|              | a) 217 🗳   |
|              | ы) 215   |
|              | c) 216   |
|              | d) 218 ×   |
|              | The correct answer is: a   |
| Explanation: | 5, 11, 24, 51, 106, 217<br>X2+1 X2+2 X2+3 X2+4 X2+5<br>? 2 217 (Ams)                                     |

| Q. 73        | unemployment refers to the time lag between jobs when an individual is searching for a new job or is switching between jobs.  |
|--------------|---|
|              | a) Structural   |
|              | b) Seasonal   |
|              | c) Frictional   |
|              | d) Technological  |
|              | The correct answer is: c  |
|              | Frictional Unemployment   |
|              | <ul> <li>Definition: Temporary unemployment caused by the time gap when workers transition between jobs, enter the workforce for the first time, or re-enter after a break.</li> <li>Examples:</li> </ul> |
|              | <ul> <li>A recent graduate searching for their first job.</li> </ul>  |
| Explanation: | <ul><li>A professional quitting one job to seek a better position.</li><li>Relocating to a new city and looking for work.</li></ul>   |
|              | Other options explained:  |
|              | • Structural Unemployment: Caused by mismatched skills (e.g., factory workers replaced by automation).  |
|              | <ul> <li>Seasonal Unemployment: Due to seasonal demand fluctuations (e.g., farm labourers post-harvest).</li> <li>Technological Unemployment: Results from automation replacing human</li> </ul>          |
|              | labour (e.g., ATMs reducing bank tellers).  |

| 06/2025, 19:03 | RBE-NTPC-2025-Live-Mock-June-03-2025   |
|----------------|--|
| Q. 74          | If $\left(x + \frac{1}{x}\right) = 5\sqrt{2}$ , and $x > 1$ , what is the value of $\left(x^6 - \frac{1}{x^6}\right)$ ?  a) $23060\sqrt{23}$ b) $23030\sqrt{23}$ c) $22960\sqrt{23}$ d) $22970\sqrt{23}$   |
| Explanation:   | $ \begin{array}{lll} \Im & \Lambda^{6} - \frac{1}{96} = \left[9^{3} + \frac{1}{95}\right] \left[9^{3} - \frac{1}{95}\right] \\ \therefore & \Omega_{1} - \frac{1}{96} = \sqrt{\left[9(1 + \frac{1}{9})^{2} - \frac{1}{9}\right]} \\ \Rightarrow & \Omega^{6} - \frac{1}{10} = \sqrt{16} \\ \therefore & \Omega^{6} - \frac{1}{10} = \sqrt{16} \\ \therefore & \Omega^{6} - \frac{1}{10} = \sqrt{16} \\ \Rightarrow & \Omega^{6} - \frac{10} = \sqrt{16} \\ \Rightarrow & \Omega^{6} - \frac{1}{10} = \sqrt{16} \\ \Rightarrow & \Omega^{6} - \frac{1}{10}$ |
|                | = n <sup>6</sup> -1 <sub>06</sub> = 235\2 × 49\46 = 23030\23   |

| Q. 75        | Which of the following Amendments of the Constitution of India gave the status of state to Goa?   |
|--------------|---|
|              | a) 56th Amendment   |
|              | b) 48th Amendment   |
|              | c) 52nd Amendment   |
|              | d) 59th Amendment   |
|              | The correct answer is: a  |
|              | Explanation:  |
|              | The 56th Amendment (1987)   |
| Explanation: | <ul> <li>Enacted: 30 May 1987.</li> <li>Key Provision: <ul> <li>Granted full statehood to Goa (India's 25th state).</li> <li>Created Daman &amp; Diu as a separate UT (carved out from former Goa UT).</li> </ul> </li> </ul> |
|              | <ul> <li>Constitutional Changes:</li> <li>Amended Article 240 (President's rule over UTs) to exclude Goa.</li> <li>Added Goa as a state in the First Schedule of the Constitution.</li> </ul>                                 |



| Q. 77 | The number of players in baseball is: |
|-------|---------------------------------------|
|-------|---------------------------------------|

- a) 8 💢
- b) 6
- c) 9 🧹
- d) 7

The correct answer is: c

## **Explanation:**

## 1. Standard Baseball Team Composition

- **Players on the Field**: A baseball team has **9 players** in defensive positions during gameplay.
- Defensive Positions:

## **Explanation:**

- 1. Pitcher
- 2. Catcher
- 3. First Baseman
- 4. Second Baseman
- 5. Third Baseman
- 6. Shortstop
- 7. Left Fielder
- 8. Center Fielder
- 9. Right Fielder

Q. 78 If 
$$5\sin\theta + 12\cos\theta = 13$$
, then find the value of  $5\sin\theta - 12\cos\theta$ .

- a)  $\frac{12}{13}$  X
- b) 144
- c) 0 💢
- d)  $\frac{-119}{13}$

$$5\sin_{\cdot} + 12\cos_{\cdot} = 13$$

$$5\sin_{\theta/13} + 12\cos_{\theta/13} = 1$$

# $Sin^2 + Cos^2 \theta = 1$

## **Explanation:**

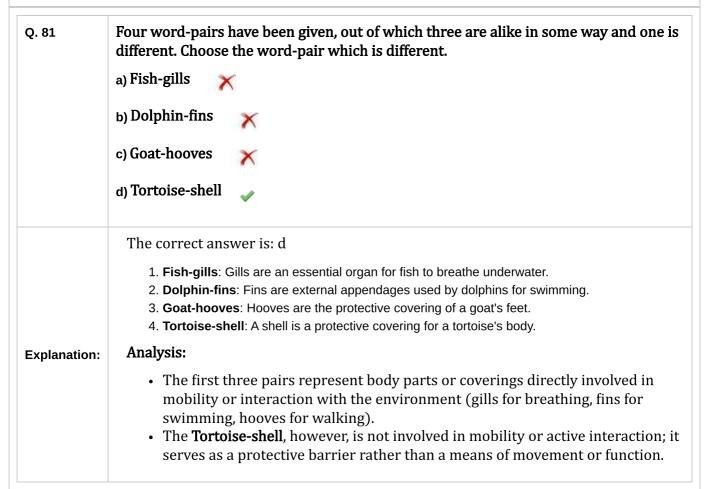
comparing,

We get Sin 
$$\theta = \frac{5}{13}$$
; Cos  $\theta = \frac{12}{13}$ 

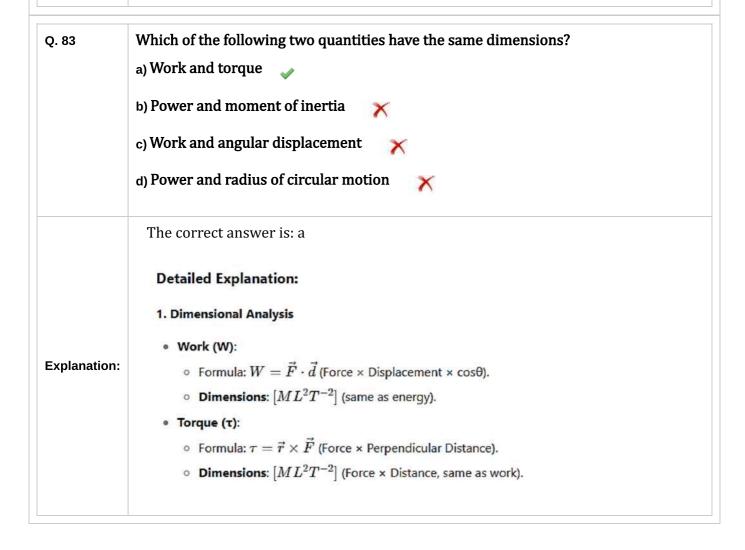
$$5 \sin_{\cdot} - 12\cos_{\cdot} = 5 * \frac{5}{13} - 12 * \frac{12}{13} = -119/13$$

| Jasmine walked 10 km south from her school. Then she turned east and covered a distance of 5 km. Then she turned north and covered a distance of 2 km. Finally turning west, she covered a distance of 5 km. In which direction is she now from her school? |  |  |  |
|---|--|--|--|
| a) North  |  |  |  |
| b) West   |  |  |  |
| c) East   |  |  |  |
| d) South  |  |  |  |
| The correct answer is: d  |  |  |  |
| School  |  |  |  |
|   |  |  |  |
| 10 Km   |  |  |  |
| Jakm<br>5km   |  |  |  |
| In respect to her school.   |  |  |  |
|   |  |  |  |
|   |  |  |  |

| Q. 80        | Which type of muscles do the uterus, iris of the eye, and bronchi contain?  |  |  |  |  |
|--------------|---|--|--|--|--|
|              | a) Striated muscles   |  |  |  |  |
|              | b) Cardiac muscles  |  |  |  |  |
|              | c) Smooth muscles   |  |  |  |  |
|              | d) Skeletal muscles   |  |  |  |  |
|              | The correct answer is: c  |  |  |  |  |
|              | Explanation:  |  |  |  |  |
|              | 1. Smooth Muscles (Non-Striated/Involuntary Muscles)  |  |  |  |  |
|              | <ul> <li>Location: Found in hollow organs (e.g., uterus, bronchi, blood vessels) and structures like the iris of the eye.</li> <li>Key Features:</li> </ul> |  |  |  |  |
| Explanation: | <ul> <li>Non-striated: Lack the striped appearance seen in skeletal/cardiac muscles.</li> </ul>   |  |  |  |  |
| Explanation. | <ul> <li>Involuntary Control: Function automatically (e.g., uterine contractions during childbirth, pupil dilation/constriction).</li> </ul>                |  |  |  |  |
|              | <ul> <li>Slow, Sustained Contractions: Adapted for prolonged functions (e.g., peristalsis in the digestive tract).</li> </ul>                               |  |  |  |  |
|              | <b>2. Striated/Skeletal Muscles:</b> Attached to bones (e.g., biceps, quadriceps); voluntary control.   |  |  |  |  |
|              | 3. Cardiac Muscles: Only in the heart; striated but involuntary.  |  |  |  |  |
|              | control.  |  |  |  |  |



| Q. 82        | The average of all the prime number between 25 and 50 is:  a) 36 |
|--------------|--|
|              | ы) 39.5  |
|              | c) 38  |
|              | d) 36.5  |
|              | Prime numbers between 25 and 50 is: 29, 31, 37, 41, 43, 47       |
| Explanation: | Average = $\frac{29+31+37+41+43+47}{6}$                          |
|              | $=>\frac{228}{6}=38$   |



| Q. 84        | The value of $\frac{1}{0.6} + \frac{1}{0.06} + \frac{1}{0.006}$   |
|--------------|---|
|              | a) 18518.33 ×   |
|              | ы) 18518518.33  |
|              | c) 1851851.833  |
|              | d) 185185.18  |
|              | 20.6 + 1006 + 1000 108  |
|              | » / [10'+10²+10³108],  Where, 8 = 10, 0= 10, 1= 8'  |
| Explanation: | $\therefore 80m = \frac{\alpha(3^{n}-1)}{3^{n}-1}$ $\Rightarrow \frac{10(10^{8}-1)}{10^{n}-1} \Rightarrow 1111111110$ |
|              | $\Rightarrow \frac{10(10^8-1)}{10-1} \Rightarrow 111111110$   |
|              |   |

| Q. 85        | Which Article deals with the provisions in case of failure of the constitutional machinery in the State?   |
|--------------|--|
|              | a) Article 356   |
|              | b) Article 448   |
|              | c) Article 395   |
|              | d) Article 342   |
|              | The correct answer is: a   |
|              | Article 356: President's Rule  |
|              | • Purpose: Allows the Central Government to take direct control of a State   |
|              | Government if:   |
|              | <ul> <li>The constitutional machinery breaks down (e.g., hung assembly, violen<br/>unrest).</li> </ul>   |
|              | <ul> <li>The State government fails to comply with federal directives.</li> </ul>  |
|              | • Process:   |
| Explanation: | <ul> <li>President (on Governor's report or suo moto) issues a proclamation.</li> <li>State Assembly is dissolved/suspended, and the Governor administers</li> </ul> |
|              | the State <b>on behalf of the President</b> .  |
|              | <ul> <li>Requires Parliamentary approval within 2 months (max duration: 6<br/>months extendable to 3 years with repeated approval).</li> </ul>                       |
|              | Article 448: Oath format for constitutional offices.   |
|              | Article 395: Repeals the Government of India Act, 1935.  |
|              | Article 342: Lists Scheduled Tribes (socio-administrative).  |

| Q. 86        | In the following triad, each group of letters is related to the subsequent one followin a certain logic. Select from the given options, the triad which follows the same logic. BF – TY – DJ |
|--------------|--|
|              | a) PT-OT-NS  |
|              | b) VZ-KP-CI  |
|              | c) JN-EJ-KP  |
|              | d) AE-TX-FL  |
|              | The correct answer is: b   |
|              | BF-TY-DJ<br>+4 +5 +6   |
| Explanation: | from option (b),   |
|              | VX - KP - CI<br>+4 +5 +6   |

| Q. 87        | In a certain code language,  |
|--------------|--|
|              | 'P + Q' means 'P is the mother of Q',                              |
|              | 'P - Q' means 'P is the brother of Q',                             |
|              | 'P @ Q' means 'P is the wife of Q',                                |
|              | 'P * Q' means 'P is the father of Q'.                              |
|              | Based on the above, how is P related to S, if 'P @ Q * R - S + T'? |
|              | a) Sister  |
|              | b) Mother  |
|              | c) Daughter  |
|              | d) Mother-in-law   |
|              | The correct answer is: b   |
|              |  |
|              |  |
|              | (P)=Q  |
|              |  |
|              | To Co  |
| Explanation: | I RICE   |
|              | T T  |
|              |  |
|              | 'p' is the mother of 5'.<br>(0 → Female, $\Box$ → Male)            |
|              | ( a = comale. [] - Male)   |
|              |  |
|              |  |

| Q. 88        | Who has successfully test fired Long Range Glide Bomb (LRGB) 'Gaurav' from Sukhoi 30 MKI in April 2025? |
|--------------|---|
|              | a) Indian Space Research Organisation (ISRO)  |
|              | ы) Defence Research and Development Organisation (DRDO)   |
|              | c) Hindustan Aeronautics Limited (HAL)  |
|              | d) Bharat Electronics Limited (BEL)   |
|              | The correct answer is: b  |
|              | About the Long Range Glide Bomb (LRGB) 'Gaurav'   |
|              | • Developed by: DRDO (in collaboration with the Indian Air Force).                                      |
|              | • Purpose: A precision-guided, long-range air-to-surface weapon designed to                             |
| Explanation: | strike high-value enemy targets (e.g., bunkers, radars) beyond 100 km.                                  |
|              | Key Features:   |
|              | • <b>Glide Technology</b> : Uses aerodynamic lift to extend range (no engine).                          |
|              | • Sukhoi-30 MKI Integration: Enhances IAF's stand-off strike capability.                                |
|              | <ul> <li>Indigenous: Part of India's Atmanirbhar Bharat initiative in defence.</li> </ul>               |

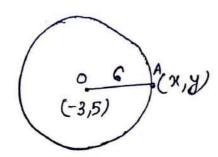
If the centre of a circle (c) is (-3, 5) and its radius is 6, then find the equation of the circle.

a) 
$$x^2 + y^2 + 6x - 10y - 2 = 0$$

b) 
$$x^2 + y^2 - 6x + 10y - 2 = 0$$

c) 
$$x^2 + y^2 + 6x - 10y + 2 = 0$$

d) 
$$x^2 + y^2 - 6x + 10y + 2 = 0$$



#### **Explanation:**

Applying distance formula on 0A, 
$$[\chi - (-3)]^2 + (y-5)^2 = (6)^2$$

$$\chi^2 + 9 + 6\chi + y^2 + 25 - 10y = 36$$

$$\chi^2 + y^2 + 6\chi - 10y - 2 = 0$$

#### Q. 90

Look at the following letter, number, symbol series and answer the question asked below.

M 6  $\infty$  R Z  $\Omega$  K & 4 D  $\pi$  S Q 2 %  $\beta$  Y 7 @ 3 E

How many such numbers are there in the given series each of which is immediately preceded by a letter and immediately followed by a symbol?

- a) Two
- b) One
- c) Three
- d) None of the above



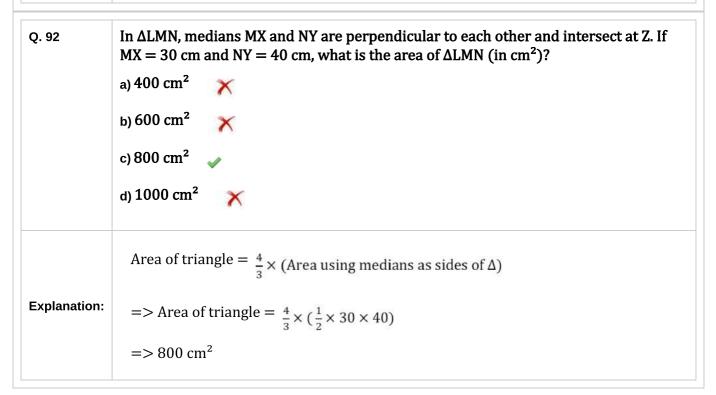
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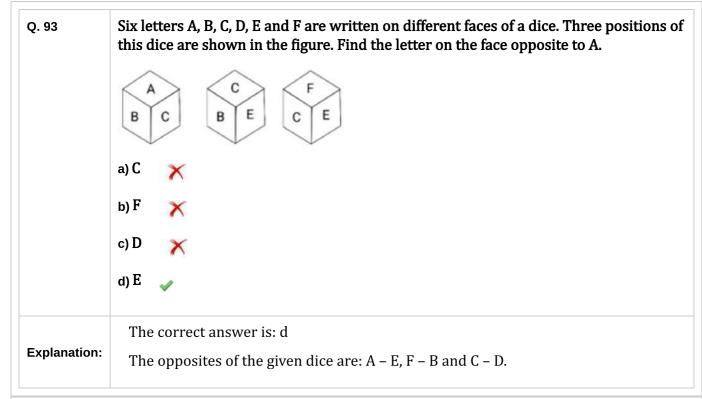
The correct answer is: c

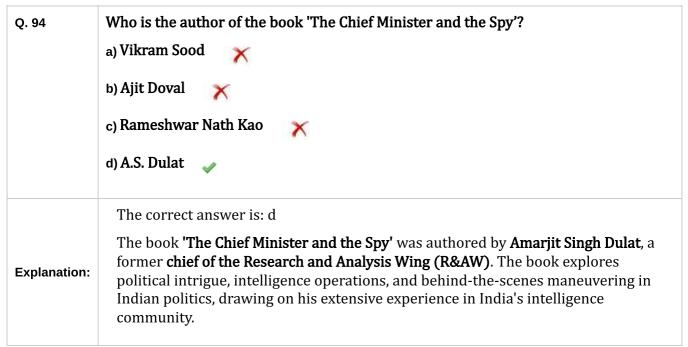
## Explanation:

There are three such numbers which are immediately preceded by a letter and immediately followed by a symbol: M 6  $\infty$  ; Q 2 % and Y 7 @.

| Q. 91        | Which of the following government schemes was launched to provide financial assistance to start-ups for proof of concept, prototype development, product trials, market entry and commercialisation on 19 April 2021? |  |  |  |
|--------------|---|--|--|--|
|              | a) Start-up India Seed Fund Scheme (SISFS)  |  |  |  |
|              | ы) Pradhan Mantri MUDRA Yojana (PMMY)   |  |  |  |
|              | c) Procurement and Marketing Support (PMS) Scheme   |  |  |  |
|              | d) Pradhan Mantri Rozgar Yojana (PMRY)  |  |  |  |
|              | The correct answer is: a  |  |  |  |
|              | Start-up India Seed Fund Scheme (SISFS)   |  |  |  |
| Explanation: | • Launched: 19 April 2021 by the Department for Promotion of Industry and Internal Trade (DPIIT).   |  |  |  |
|              | • <b>Objective</b> : To provide <b>financial assistance</b> (grants/debt) to early-stage start-ups for:   |  |  |  |
|              | <ul> <li>Proof of Concept (validation of ideas).</li> </ul>   |  |  |  |
|              | <ul> <li>Prototype Development (building initial product models).</li> </ul>  |  |  |  |
|              | <ul> <li>Product Trials (testing in real-world conditions).</li> </ul>  |  |  |  |
|              | <ul> <li>Market Entry &amp; Commercialization (scaling up).</li> </ul>  |  |  |  |







The classification of 100 students based on the marks obtained by them in English and Mathematics in an examination is given in the table below.

| MARKS OUT OF 50 |              |              |              |              |             |
|-----------------|--------------|--------------|--------------|--------------|-------------|
| SUBJECT         | 40 and above | 30 and above | 20 and above | 10 and above | 0 and above |
| ENGLISH         | 10           | 31           | 80           | 92           | 100         |
| MATHEMATICS     | 3            | 23           | 65           | 81           | 100         |
| AGGREGATE       | 7            | 27           | 73           | 87           | 100         |

If at least 40% marks in Mathematics are required for pursuing higher studies in Mathematics, how many students will be eligible to pursue higher studies in Mathematics?

a) 70

X

b) 55

c) 50

d) 65

The correct answer is: d

Maximum marks in mathematics = 50

**Explanation:** 

Therefore, 40% marks in Mathematics =  $40\% \times 50 = 20$ 

In the chart, 20 and above marks is scored by 65 students in Mathematics.

In the question below a statement is given followed by two conclusions, I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You are to decide which of the given conclusions is drawn from the given statement.

Statement: Government has spoiled many top ranking financial institutions by appointing bureaucrats as Directors of these institutions.

#### **Conclusions:**

- I. Government should appoint Directors of the financial institutions taking into consideration the expertise of the person in the area of finance.
- II. The Director of the financial institute should have expertise commensurate with the financial work carried out by the institute.
- a) Both conclusions I and II follow.



b) Only conclusion II follows.



c) Only conclusion I follows.



d) Neither conclusion I nor II follows.



The correct answer is: a

Conclusion I: Government should appoint Directors of financial institutions taking into consideration the expertise of the person in the area of finance.

• This logically follows from the statement. The problem highlighted is that bureaucrats, who likely lack financial expertise, are being appointed as Directors. To avoid further harm, appointing Directors with relevant financial expertise is a reasonable solution. **Conclusion I follows.** 

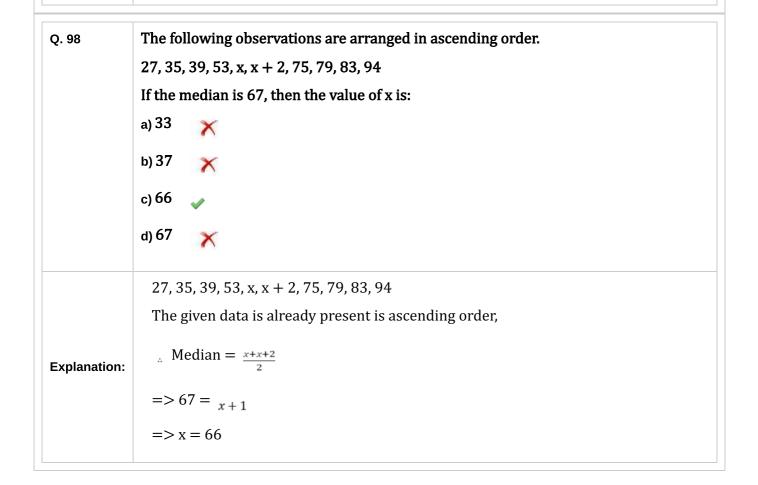
#### **Explanation:**

Conclusion II: The Director of the financial institute should have expertise commensurate with the financial work carried out by the institute.

• This also follows logically. The statement implicitly suggests that the mismatch of expertise has caused damage to financial institutions, making it essential that Directors have expertise aligned with the institution's work. **Conclusion II follows.** 

Therefore, both conclusions I and II follow.

| Q. 97          | Which shortcut key is used to paste a slide in Microsoft PowerPoint?   |
|----------------|--|
|                | a) CTRL + C  |
|                | b) CTRL + P  |
|                | c) CTRL + V  |
|                | d) CTRL + X  |
|                | The correct answer is: c   |
|                | Shortcut Keys in PowerPoint  |
| Explanation:   | <ul> <li>Ctrl + V: Pastes a copied/cut slide (or any content) into the presentation.</li> <li>Source: Works universally across Windows/Mac for pasting clipboard content.</li> </ul> |
| ∟∧µiaiiaii0ii. | Ctrl + C: Copies the selected slide/content.   |
|                | Ctrl + X: Cuts the selected slide/content (moves it to clipboard).   |
|                | <b>Ctrl + P</b> : Opens the Print dialog box .   |



In the question, a statement is given, followed by two arguments, I and II. You have to consider the statement to be true even it seems to be at variance from commonly known facts. You have to decide which of the given arguments, if any, is a strong argument.

Statement: State Council For Teacher Education (SCTE) has laid down guidelines in respect of minimum qualifications for a person to be employed as a teacher in universities or in recognized institutions.

### **Assumptions:**

- I. The authorities will now appoint only qualified teachers.
- II. Only qualified people will apply for the teaching post.
- III. SCTE decides all the norms of educational qualifications for teaching faculty.
- a) Only I is implicit.
- ы) Only I and III is implicit.
- c) All are implicit.
- d) None is implicit.



#### **Explanation:**

The correct answer is: c

Since the SCTE has laid down the necessary qualifications for a person to be employed as a teacher in all universities and institutions, so all are implicit.

# In the given question a statement followed by two courses of action numbered I and Q. 100 II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing. Statement: Inspite of the principal's repeated warnings, a child was caught exploding crackers secretly in the school. Courses of action: I. All the crackers should be taken away from the child and he should be threatened not to do it again. II. The child should be severely punished for his wrong act. a) If only I follows b) If only II follows c) If both I and II follow d) If neither I nor II follows The correct answer is: b Since the act has been repeated despite various warnings, so course I would only be **Explanation:** another warning and would not help. Severe punishment to set example for him and others is inevitable. Thus, course II shall follow.