General Test Question Paper with Solution Set-C

Question 1: Simplify: $24 \div 4 \times 2 + 8 - 4 = ?$

(1) 1

(2) 7

(3) 16

(4) 56

Correct Answer: (3) 16

Solution: Using BODMAS rule:

$$24 \div 4 = 6, \quad 6 \times 2 = 12, \quad 12 + 8 = 20, \quad 20 - 4 = 16.$$

> **Quick Tip**
>
> Always follow BODMAS (Brackets, Orders, Division, Multiplication, Addition, Subtraction) for simplifying expressions.

Question 2: The difference of the greatest and the smallest of the fractions $\frac{1}{2}, \frac{8}{11}, \frac{7}{8}, \frac{7}{9}, \frac{5}{6}$ **is:**

(1) $\frac{3}{8}$

(2) $\frac{6}{7}$

(3) $\frac{7}{9}$

(4) $\frac{1}{3}$

Correct Answer: (2) $\frac{6}{7}$

Solution: The greatest fraction is $\frac{7}{8}$ and the smallest is $\frac{8}{11}$. The difference is:

$$\frac{7}{8} - \frac{8}{11} = \frac{77}{88} - \frac{64}{88} = \frac{13}{88}.$$

> **Quick Tip**
>
> Convert fractions to the same denominator for easy comparison.

Question 3: The sum of LCM and HCF of two numbers is 854. If the LCM is 60 times the HCF and one of the numbers is 70, then the other number is:

(1) 160

(2) 164

(3) 168

(4) 172

Correct Answer: (3) 168

Solution: Let HCF be x, so LCM $= 60x$. The sum of HCF and LCM is 854, so:

$$x + 60x = 854 \quad \Rightarrow \quad 61x = 854 \quad \Rightarrow \quad x = 14.$$

Hence, LCM $= 60 \times 14 = 840$. The product of the numbers is HCF $\times$ LCM, so:

$$70 \times \text{other number} = 14 \times 840 \quad \Rightarrow \quad \text{other number} = \frac{11760}{70} = 168.$$

Quick Tip

Use the formula Product of two numbers $=$ LCM $\times$ HCF to solve such problems.

Question 4: The present age of Harish is 8 times the sum of the ages of his two sons. After 8 years, his age will be twice the sum of the ages of his two sons. The present age of Harish (in years) is:

(1) 31

(2) 32

(3) 33

(4) 34

Correct Answer: (4) 34

Solution: Let the sum of the ages of Harish's sons be x. Currently, Harish's age is $8x$. After 8 years:

$$8x + 8 = 2(x + 16) \quad \Rightarrow \quad 8x + 8 = 2x + 32 \quad \Rightarrow \quad 6x = 24 \quad \Rightarrow \quad x = 4.$$

Thus, Harish's current age is $8 \times 4 = 32$.

Quick Tip

Set up equations based on the given age relationships to solve.

Question 5: In an examination, it is required to get 300 marks to pass. A student gets 225 marks and is declared fail by 10 percentage marks. What are the maximum marks of the examination?

(1) 700

(2) 750

(3) 800

(4) 850

Correct Answer: (2) 750

Solution: The student's score is 10

$$225 = 0.9 \times 300 \quad \Rightarrow \quad \text{Maximum marks} = \frac{225}{0.9} = 750.$$

Quick Tip

Use percentage-based equations to find the total marks or passing marks.

Question 6: In a class of 40 students, the ratio of boys to girls is 3:2. The average marks scored by boys is 42, and that by girls is 46. What is the average marks scored by the whole class?

(1) 43.4

(2) 43.6

(3) 43.8

(4) 44

Correct Answer: (2) 43.6

Solution: Let the number of boys be $3x$ and the number of girls be $2x$. Since $3x + 2x = 40$, $x = 8$, so there are 24 boys and 16 girls.

$$\text{Average} = \frac{(24 \times 42) + (16 \times 46)}{40} = \frac{1008 + 736}{40} = 43.6.$$

Quick Tip

Use weighted averages when combining averages of different groups.

Question 7: The sum of three numbers is 136. If the ratio between the first number and the second number is 2:3, and that between the second and the third number is 5:3, then

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the first number is:

(1) 42

(2) 40

(3) 36

(4) 32

Correct Answer: (2) 40

Solution: Let the numbers be $2x$, $3x$, and $\frac{9x}{5}$ respectively. Given that their sum is 136:

$$2x + 3x + \frac{9x}{5} = 136 \quad \Rightarrow \quad \frac{10x + 15x + 9x}{5} = 136 \quad \Rightarrow \quad 34x = 680 \quad \Rightarrow \quad x = 20.$$

The first number is $2x = 40$.

Quick Tip

For ratio problems, set the terms as multiples of a variable and solve using given sums.

Question 8: An item is sold for Rs.504 after allowing a 20 discount and still a profit of 5 has been earned. The marked price is how much more than the cost price?

(1) Rs.120

(2) Rs.135

(3) Rs.150

(4) Rs.160

Correct Answer: (2) Rs.135.

Solution: Let the cost price be x. The selling price is $1.05x$. Given that the item is sold for Rs.504 after a 20

$$0.8 \times \text{Marked Price} = 504 \quad \Rightarrow \quad \text{Marked Price} = 630.$$

Hence, $1.05x = 504 \quad \Rightarrow \quad x = \frac{504}{1.05} = 480$. Therefore, the marked price is Rs.630, and the difference is Rs.630 - Rs.480 = Rs.150.

Quick Tip

First, calculate the cost price and selling price before applying the discount or markup.

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Question 9: A certain sum becomes Rs.2356 in 3 years and Rs.2660 in 5 years on simple interest. What is the value of the sum?

(1) Rs.1800

(2) Rs.1880

(3) Rs.1900

(4) Rs.1980

Correct Answer: (3) Rs.1900.

Solution: The difference in interest for two years is:

$$2660 - 2356 = 304 \quad \Rightarrow \quad \text{Interest for 1 year} = \frac{304}{2} = 152.$$

Thus, the interest for 3 years is $152 \times 3 = 456$. The principal is:

$$2356 - 456 = Rs.1900.$$

> **Quick Tip**
>
> For simple interest problems, calculate the interest for one year and use it to find the principal.

Question 10: In a square, the lengths of the diagonals are $(4k + 6)$ cm and $(7k - 3)$ cm. What is the area of the square (in cm²)?

(1) 144

(2) 162

(3) 169

(4) 172

Correct Answer: (3) 169.

Solution: Since the diagonals of a square are equal:

$$4k + 6 = 7k - 3 \quad \Rightarrow \quad 3k = 9 \quad \Rightarrow \quad k = 3.$$

Thus, the diagonal is $4 \times 3 + 6 = 18$ cm. The area of the square is:

$$\text{Area} = \frac{1}{2} \times \text{diagonal}^2 = \frac{1}{2} \times 18^2 = 162 \, \text{cm}^2.$$

Question 11: The volume of a cylinder having a base radius of 3 cm is 396 cm³. Find its curved surface area (in cm²). (Use $\pi = \frac{22}{7}$).

(1) 280

(2) 301.5

(3) 264

(4) 320.6

Correct Answer: (2) 301.5.

Solution: The volume of the cylinder is given by $V = \pi r^2 h$:

$$396 = \frac{22}{7} \times 3^2 \times h \quad \Rightarrow \quad h = \frac{396 \times 7}{22 \times 9} = 7 \,\text{cm}.$$

The curved surface area is:

$$\text{CSA} = 2\pi rh = 2 \times \frac{22}{7} \times 3 \times 7 = 301.5 \,\text{cm}^2.$$

Question 12: A tap can fill a tank in 6 hours. After half the tank is filled, three more similar taps are opened. What is the total time taken to fill the tank completely?

(1) 4 hours

(2) 5 hours

(3) 3 hours 30 minutes

(4) 3 hours 45 minutes

Correct Answer: (4) 3 hours 45 minutes.

Solution: The first tap fills half the tank in 3 hours. After that, four taps are opened, so the remaining half is filled at four times the rate. The time to fill the remaining half is:

$$\frac{3}{4} = 0.75 \text{ hours.}$$

Total time = 3 + 0.75 = 3.75 hours = 3 hours 45 minutes.

Question 13: A train running at the speed of 80 km/h crosses a 350 m long tunnel in 36 seconds. What is the length of the train (in meters)?

(1) 350

(2) 380

(3) 420

(4) 450

Correct Answer: (3) 420.

Solution: The speed of the train is 80 km/h, which is converted to meters per second as:

$$80 \times \frac{1000}{3600} = 22.22 \text{ m/s.}$$

The total distance covered by the train in 36 seconds is:

$$22.22 \times 36 = 800 \text{ meters.}$$

Since the tunnel is 350 meters long, the length of the train is:

$$800 - 350 = 450 \text{ meters.}$$

Question 14: If the mean of 3, 4, 9, $2k$, 10, 8, 6 and $(k + 6)$ is 8, and the mode of 2, 2, 3, $2p$, $(2p + 1)$, 4, 4, 5 and 6 (where p is a natural number) is 4, then the value of $k - 2p$ is:

(1) 0

(2) 1

(3) 2

(4) 3

Correct Answer: (1) 0.

Solution: The mean of the first set is 8, so:

$$\frac{3 + 4 + 9 + 2k + 10 + 8 + 6 + (k + 6)}{8} = 8 \quad \Rightarrow \quad 46 + 3k = 64 \quad \Rightarrow \quad k = 6.$$

For the mode to be 4, $2p = 4$, so $p = 2$. Hence, $k - 2p = 6 - 4 = 2$.

> Quick Tip
>
> For mean and mode problems, always solve for the unknowns step by step and substitute them into the equations.

Question 15: In triangle ABC, points D and E are on AB and AC, respectively, such that DE is parallel to BC. If $AD = 6\,\text{cm}$, $DB = 4\,\text{cm}$, and $AE = 9\,\text{cm}$, then the length of EC (in cm) is:

(1) 7

(2) 6.4

(3) 6

(4) 5.5

Correct Answer: (2) 6.4.

Solution: Since DE is parallel to BC, triangles ADE and ABC are similar. Therefore, the ratios of corresponding sides are equal:

$$\frac{AD}{AB} = \frac{AE}{AC} \quad \Rightarrow \quad \frac{6}{6 + 4} = \frac{9}{9 + EC}.$$

Solving this:

$$\frac{6}{10} = \frac{9}{9 + EC} \quad \Rightarrow \quad 9 + EC = \frac{9 \times 10}{6} = 15 \quad \Rightarrow \quad EC = 15 - 9 = 6.$$

> Quick Tip
>
> For similar triangles, use the property of proportional sides to solve for the unknown length.

Question 16: If $\sin A = \frac{4}{5}$, then $(3 - \tan A)(2 + \cos A)$ **is:**

(1) $\frac{12}{5}$

(2) $\frac{13}{3}$

(3) $\frac{13}{5}$

(4) 3

Correct Answer: (2) $\frac{13}{3}$

Solution: Using $\sin A = \frac{4}{5}$, we calculate $\tan A = \frac{4}{3}$ and $\cos A = \frac{3}{5}$. Substituting into the given expression:

$$(3 - \tan A)(2 + \cos A) = \left(3 - \frac{4}{3}\right) \times \left(2 + \frac{3}{5}\right) = \frac{5}{3} \times \frac{13}{5} = \frac{13}{3}$$

> **Quick Tip**
>
> Use trigonometric identities to simplify complex expressions.

Question 17: A man can row a boat at 8 km/h in still water. If the speed of the water current is 2 km/h and it takes him 2 hours to row to a place and come back, how far off (in km) is the place?

(1) 7.5

(2) 6

(3) 9.5

(4) 10

Correct Answer: (1) 7.5

Solution: Let d be the distance to the place. The speed downstream is $8 + 2 = 10$ km/h, and upstream it is $8 - 2 = 6$ km/h. Total time is:

$$\frac{d}{10} + \frac{d}{6} = 2$$

Solving for d:

$$\frac{3d + 5d}{30} = 2 \quad \Rightarrow \quad 8d = 60 \quad \Rightarrow \quad d = 7.5 \, \text{km}.$$

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Question 18: From the given options, which pass connects Jammu with Srinagar?

(1) Banihal pass

(2) Nathu La pass

(3) Niti pass

(4) Rohtang pass

Correct Answer: (1) Banihal pass

Solution: The pass that connects Jammu with Srinagar is the Banihal pass.

Quick Tip

Banihal pass is crucial for road connectivity and lies in the Pir Panjal mountain range.

Question 19: Which of the following is not correctly matched regarding Padma Awards-2024?

(1) Padma Vibhushan Award → Shri Konidela Chiranjeevi

(2) Padma Shri Award → Mithun Chakraborty

(3) Padma Bhushan Award → M. Fathima Beevi

(4) Padma Bhushan Award → Sitaram Jindal

Correct Answer: (2) Padma Shri Award → Mithun Chakraborty

Solution: Option (2) is not correctly matched. Mithun Chakraborty has not received the Padma Shri Award in 2024.

Quick Tip

Verify the award recipients from official announcements.

Question 20: Match List-I with List-II:

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List-I (Person)	List-II (Area of work)
(A) Vishakhadatta	(I) Medicine
(B) Kartikeya Sarabhai	(II) Poet
(C) Charaka	(III) Environmentalist
(D) Satyendra Nath Bose	(IV) Mathematics

Options:

1. (A) - (I), (B) - (III), (C) - (IV), (D) - (II)

2. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

3. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)

4. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

Correct Answer: (2) (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

Solution:

Vishakhadatta was a notable **poet** and playwright, best known for his work "Mudrarakshasa."

Kartikeya Sarabhai is a renowned **environmentalist**, contributing significantly to environmental education and sustainable development.

Charaka is a pivotal figure in **medicine**, known for his contributions to Ayurveda through the "Charaka Samhita."

Satyendra Nath Bose was a brilliant physicist and mathematician, known for his work in quantum mechanics, particularly Bose-Einstein statistics.

Quick Tip

Understanding the contributions of historical and contemporary figures in their respective fields can help in making accurate matches in such questions.

Question 21: The following states were formed after 1960. What was the correct sequence of their formation?

(A) Haryana (B) Sikkim (C) Nagaland (D) Goa

(1) (C), (B), (A), (D)

(2) (C), (A), (B), (D)

(3) (C), (D), (A), (B)

(4) (D), (C), (A), (B)

Correct Answer: (2) (C), (A), (B), (D)

Solution: The correct sequence is Nagaland, Haryana, Sikkim, and Goa.

> Quick Tip
>
> Memorize state formation years to avoid confusion in such questions.

Question 22: Out of the given options, which scheme's objective is to conduct an annual survey at the gram panchayat level to monitor the progress in the development process of rural areas?

(1) Mission Antyodaya (2022-23)

(2) Mission Karmayogi (2022-23)

(3) Mission Rashtriya Gokul (2022-23)

(4) Mission Atmanirbhar Bharat (2022-23)

Correct Answer: (1) Mission Antyodaya

Solution: Mission Antyodaya's objective is to conduct an annual survey at the gram panchayat level.

> Quick Tip
>
> Mission Antyodaya aims to improve rural infrastructure and development.

Question 23: Which one of the following countries is not a member of the "Quadrilateral Security Dialogue", also known as "QUAD"?

(1) China

(2) Japan

(3) India

(4) Australia

Correct Answer: (1) China

Solution: China is not a member of QUAD, which consists of the USA, Japan, India, and Australia.

Question 24: Who has become the first woman chairperson of the Railway Board of Indian Railways in 2023?

(1) Jaya Verma Sinha

(2) Mita Vashishth

(3) Ravneet Kaur

(4) Vasudha Gupta

Correct Answer: (1) Jaya Verma Sinha

Solution: The correct Correct Answer is Jaya Verma Sinha.

Question 25: Match List-I with List-II:

List-I (Country)	**List-II** (Currency)
(A) Myanmar	(I) Ruble
(B) Russia	(II) Ngultrum
(C) Malaysia	(III) Kyat
(D) Bhutan	(IV) Ringgit

Options:

1. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)

2. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

3. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)

4. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)

Correct Answer: (2) (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

Solution:

Myanmar's currency is Kyat (III). It is the official currency used for all monetary transac-

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tions in Myanmar.

Russia uses the Ruble (I). It is one of the world's oldest currencies still in use.

Malaysia's currency is the Ringgit (IV). The word "Ringgit" refers to the jagged edges of Spanish dollars once used in Malaysia.

Bhutan's currency is Ngultrum (II). It is pegged to the Indian Rupee, reflecting close economic ties between Bhutan and India.

Quick Tip

Familiarize yourself with major currencies and their corresponding countries to excel in such matching questions.

Question 26: "Jhulaghat Suspension Bridge" between India and which country has become fully operational now?

(1) Bhutan

(2) Nepal

(3) China

(4) Myanmar

Correct Correct Answer: (2) Nepal

Solution: The Jhulaghat Suspension Bridge connects India and Nepal.

Quick Tip

Knowing international borders and bridges is essential for international relations questions.

Question 27: Due to ocean acidification, when the ocean becomes more acidic, what happens to the pH level of the ocean?

(1) The pH level goes down.

(2) The pH level stays the same.

(3) The pH level goes up.

(4) The pH level becomes zero.

Correct Correct Answer: (1) The pH level goes down

Solution: Ocean acidification refers to the lowering of pH due to increased absorption of carbon dioxide by oceans.

> **Quick Tip**
>
> As the ocean absorbs more,its pH level decreases, making it more acidic.

Question 28: Who is the first para-athlete to receive the Padma Bhushan award in India?

(1) Bhavina Patel

(2) Devendra Jhajharia

(3) Avani Lekhara

(4) Mariyappan Thangavelu

Correct Answer: (2) Devendra Jhajharia

Solution: Devendra Jhajharia is the first para-athlete to receive the prestigious Padma Bhushan award.

> **Quick Tip**
>
> Devendra Jhajharia is known for his accomplishments in javelin throw at the Paralympics.

Question 29: Zemu Glacier is located in which state of India?

(1) Uttarakhand

(2) Himachal Pradesh

(3) Sikkim

(4) Arunachal Pradesh

Correct Answer: (3) Sikkim

Solution: Zemu Glacier is located in Sikkim, in the northeastern part of India.

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Question 30: Who among the following is Chile's first woman President?

(1) Mary Robinson

(2) Michelle Bachelet

(3) Kim Campbell

(4) Jennifer Shipley

Correct Answer: (2) Michelle Bachelet

Solution: Michelle Bachelet was the first woman President of Chile.

Question 31: Which organization developed and launched 'Ugram' Indigenous Assault Rifle for the armed forces?

(1) ISRO

(2) BEL

(3) HAL

(4) DRDO

Correct Correct Answer: (4) DRDO

Solution: The Defense Research and Development Organization (DRDO) developed the Ugram rifle.

Question 32: Which of the following substances is a bad conductor of electricity?

(1) Diamond

(2) Gold

(3) Silver

(4) Graphite

Correct Correct Answer: (1) Diamond

Solution: Diamond is a bad conductor of electricity, despite being a form of carbon like graphite, which is a good conductor.

> Quick Tip
>
> Although both are carbon allotropes, diamond doesn't conduct electricity, unlike graphite.

Question 33: Which of the following diseases is caused due to the deficiency of proteins?

(1) Arthritis

(2) Kwashiorkor

(3) Goitre

(4) Night Blindness

Correct Answer: (2) Kwashiorkor

Solution: Kwashiorkor is a disease caused by severe protein deficiency.

> Quick Tip
>
> Kwashiorkor is a major malnutrition disorder due to protein deficiency, common in areas with famine.

Question 34: Match List-I with List-II:

List-I (Navy Institution)	List-II (Place)
(A) INS Chilka	(I) Goa
(B) INS Hansa	(II) Andhra Pradesh
(C) INS Satavahana	(III) Kerala
(D) INS Garuda	(IV) Odisha

(1) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

(2) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)

(3) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Correct Answer: (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Solution: INS Chilka is in Odisha, INS Hansa is in Goa, INS Satavahana is in Andhra Pradesh, and INS Garuda is in Kerala.

> **Quick Tip**
>
> Familiarize yourself with major naval institutions and their locations.

Question 35: DRDO has conducted the first successful flight test of Agni-5 missile equipped with MIRV technology. What is the full form of MIRV?

(1) Multiple Independently Targetable Re-Entry Vehicle

(2) Mission India Target Re-Entry Vehicle

(3) Multiple Independently Technology Re-Entry Vehicle

(4) Multiple Indirect Targetable Re-Entry Vehicle

Correct Answer: (1) Multiple Independently Targetable Re-Entry Vehicle

Solution: MIRV technology allows multiple warheads to be launched from a single missile and target different locations.

> **Quick Tip**
>
> MIRV technology increases the offensive capabilities of ballistic missiles significantly.

Question 36: Which Indian has won the "Ramon Magsaysay Award-2023"?

(1) Korvi Rakshand

(2) Ashwini Kumar

(3) Dipti Ranjan Sahoo

(4) Dr. Ravi Kannan R.

Correct Answer: (4) Dr. Ravi Kannan R.

Solution: Dr. Ravi Kannan R. won the Ramon Magsaysay Award for his efforts in providing cancer care services in India.

> **Quick Tip**
>
> The Ramon Magsaysay Award is considered one of Asia's highest honors, often referred to as the Asian Nobel Prize.

Question 37: Who has been appointed the Chairman of the 16th Finance Commission of India?

(1) Ajay Narayan Jha

(2) Smt. Annie George Mathew

(3) Pradip Kumar Mohanty

(4) Dr. Arvind Panagariya

Correct Answer: (3) Pradip Kumar Mohanty

Solution: Pradip Kumar Mohanty has been appointed as the Chairman of the 16th Finance Commission of India.

> **Quick Tip**
>
> The Finance Commission of India defines the financial relations between the central and state governments.

Question 38: Sri Ranganathaswamy Temple, situated in Tamil Nadu, is dedicated to which deity?

(1) Lord Shiva

(2) Lord Vishnu

(3) Goddess Durga

(4) Goddess Lakshmi

Correct Answer: (2) Lord Vishnu

Solution: The Sri Ranganathaswamy Temple is dedicated to Lord Vishnu and is one of the largest temples in India.

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Question 39: The Election Commission of India gets the power to conduct elections from which of the following articles?

(1) Article 324

(2) Article 280

(3) Article 264

(4) Article 26

Correct Answer: (1) Article 324

Solution: The Election Commission of India derives its powers from Article 324 of the Indian Constitution, which deals with the superintendence, direction, and control of elections.

Question 40: Match List-I with List-II:

List-I (Centre of Handicraft)	**List-II** (State)
(A) Mon	(I) Arunachal Pradesh
(B) Nalbari	(II) Assam
(C) Pasighat	(III) Meghalaya
(D) Tura	(IV) Nagaland

(1) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

(2) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

(3) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

(4) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

Correct Answer: (1) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

Solution: Mon is in Nagaland, Nalbari is in Assam, Pasighat is in Arunachal Pradesh, and Tura is in Meghalaya.

Question 41: In which state is "Amchang Wildlife Sanctuary" located?

(1) Assam

(2) Rajasthan

(3) Odisha

(4) Manipur

Correct Answer: (1) Assam

Solution: Amchang Wildlife Sanctuary is located in Assam and is known for its rich biodiversity.

Question 42: India's first 3D-printed Post Office has been inaugurated in:

(1) Guwahati

(2) Kolkata

(3) Mumbai

(4) Bengaluru

Correct Answer: (4) Bengaluru

Solution: India's first 3D-printed post office has been inaugurated in Bengaluru, marking a significant technological advancement.

Question 43: What should come in the place of the question mark (?) in the following alphanumeric series? A1X, B4P, E25J, J100F, ?

(1) O289D

(2) O225E

(3) Q289D

(4) Q225E

Correct Answer: (3) Q289D

Solution: The pattern involves a progression in both the letters and numbers. The letters increase alphabetically while the numbers increase as squares.

> **Quick Tip**
>
> Look for progressive patterns in both letters and numbers to solve alphanumeric sequences.

Question 44: In the given analogy, choose the word which will replace the question mark: NEGI : MVTR :: SING : ?

(1) TRNS

(2) TRNT

(3) FRMT

(4) HRMT

Correct Answer: (2) TRNT

Solution: The analogy follows a pattern where letters are shifted in reverse alphabetical order.

> **Quick Tip**
>
> In analogy questions, observe the letter shifts or codes to deduce the missing element.

Question 45: In a certain code language, 'ki ru pi' means 'nobody like cruel', 'ki mi cha' means 'king was cruel' and 'ru pi cha' means 'nobody like king'. What is the code for 'was' in the given code language?

(1) ki

(2) mi

(3) cha

(4) ru

Correct Answer: (2) mi

Solution: By analyzing the common words across the sentences, it becomes clear that "mi" corresponds to "was."

> **Quick Tip**
>
> Eliminate common words to identify unique codes in decoding problems.

Question 46: Read the following information carefully to choose the best option for the question:

'P 'P + Q' means that 'P is the son of Q'

'P × Q' means that 'P is the husband of Q'

'P – Q' means that 'P is the brother of Q'

Which of the following means 'A is the son-in-law of G'?

(1) A × U + S × G

(2) A + S / U × G

(3) A – S + U × G

(4) A × U / S + G

Correct Answer: (1) A × U + S × G

Solution: This statement means A is the husband of U, who is the son of G, making A the son-in-law of G.

> **Quick Tip**
>
> For relational puzzles, carefully follow the relationships based on symbols.

Question 47: If 26th January, 2020 was a Sunday, then what day of the week was it on 16th March of that year?

(1) Sunday

(2) Monday

(3) Tuesday

(4) Wednesday

Correct Answer: (3) Tuesday

Solution: Counting the days between 26th January and 16th March gives a difference of 50 days, which corresponds to a shift of two days forward from Sunday, making it Tuesday.

> **Quick Tip**
>
> To solve calendar problems, divide the number of days by 7 to find the remainder and shift the day accordingly.

Question 48: What will be the measurement of the angle made by the hour and minute hands of a clock when the time is 'quarter past 3'?

(1) $6\frac{1}{2}$

(2) 10

(3) $7\frac{1}{2}$

(4) $8\frac{1}{2}$

Correct Answer: (4) $8\frac{1}{2}$

Solution: At 3:15, the hour hand is slightly ahead of the 3, and the minute hand is at the 3, making the angle $8\frac{1}{2}$.

> **Quick Tip**
>
> Use the formula for clock angles: Angle $= |30H - 5.5M|$.

Question 49: If in a certain code language, 'MERCURY' is coded as 'NGUGZXF', then how will 'ENTANGLE' be coded in the same code language?

(1) FPXFSMSM

(2) FPWESMSM

(3) FPWESNSN

(4) FPWFTNSM

Correct Answer: (2) FPWESMSM

Solution: The coding follows a specific alphabetical shift pattern. After shifting each letter appropriately, 'ENTANGLE' becomes 'FPWESMSM'.

> **Quick Tip**
>
> Look for consistent shifts in letters to solve coding-decoding problems.

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Question 50: The problem given below consists of a question and two statements numbered I and II. You have to decide whether the data provided in the statements are sufficient to answer the question. How many sisters does Sunny have?

I. Sunny is the only son of his parents.

II. Sunny's parents have three children.

(1) Only statement I alone is sufficient to Correct Answer the question.

(2) Only statement II alone is sufficient to Correct Answer the question.

(3) Statements I and II together are sufficient to Correct Answer the question.

(4) Either statement I or II alone is sufficient to Correct Answer the question.

Correct Answer: (3) Statements I and II together are sufficient to Correct Answer the question.

Solution: Since Sunny is the only son and there are three children, the remaining two are his sisters.

> **Quick Tip**
>
> Carefully analyze both statements together to arrive at the solution in such questions.

Question 51: A boy leaves his house. He travels 6 km towards South, then travels 8 km towards West and further travels 9 km towards South. How far and in which direction is he from his house now?

(1) 13 km, South West

(2) 17 km, South West

(3) 17 km, North West

**(4) 13 km, West**
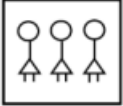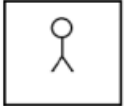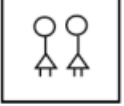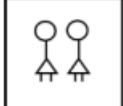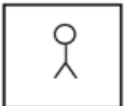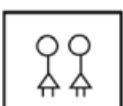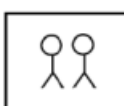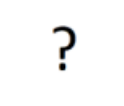
Correct Answer: (2) 17 km, South West

Solution: Using the Pythagorean theorem to calculate the resultant distance, the boy is 17 km away in the South West direction.

> **Quick Tip**
>
> Use the Pythagorean theorem to calculate distances in direction-based problems.

Question 52: Find out which of the Correct Answer figures completes the figure matrix:

1.

2.

3.

4.

Correct Answer: (4)

Solution: The missing piece in the matrix can be determined by looking at the patterns in rows and columns.

> **Quick Tip**
>
> For figure matrices, look for consistent visual patterns across rows and columns.

Question 53: A clock seen through a mirror shows 'quarter to seven'. What is the correct time shown by the clock?

(1) 6:15

(2) 6:17

(3) 5:17

(4) 5:15

Correct Answer: (4) 5:15

Solution: The reflection of 6:45 in a mirror shows the time as 5:15.

> **Quick Tip**
>
> For mirror reflection problems, subtract the time from 12:00 to get the correct time.

Question 54: The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?

1.

2.

3.

4.
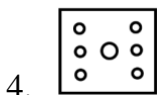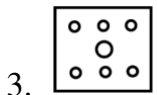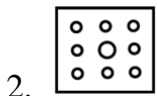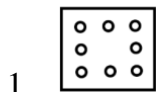
Correct Answer: (3)

Solution: When the paper is unfolded, the cuts appear symmetrically distributed across the paper.

> **Quick Tip**
>
> Visualize the unfolding process carefully to predict the final appearance of the paper.

Question 55: Find out the missing (?) number and letter.

(1) 59 and K

(2) 61 and L

(3) 61 and K

(4) 59 and L

Correct Answer: (3) 61 and K

Solution: The pattern involves a progressive increase in both numbers and letters.

> **Quick Tip**
>
> Observe the progression of numbers and letters for identifying missing elements in sequences.

Question 56: What will be the next number in the series: 3, 6, 10.5, 17, 26, ?

(1) 31

(2) 38

(3) 40

(4) 41

Correct Answer: (2) 38

Solution: The pattern involves adding consecutive numbers with increasing increments. The correct next number in the sequence is 38.

> **Quick Tip**
>
> Identify the difference between consecutive numbers to find the pattern in such series.

Question 57: In a class of 40 students, Anjali's rank is thrice that of Anita. There are 4 students who have ranks worse than that of Anjali. Anita's rank in the class is:

(1) 9th

(2) 10th

(3) 18th

(4) 12th

Correct Answer: (2) 10th

Solution: Anjali's rank is 12th (40 - 4 = 36, divided by 3), so Anita's rank is $\frac{12}{3} = 10th$.

> Quick Tip
>
> Understand the relationships between ranks by applying basic arithmetic.

Question 58: Six people E, H, K, M, S, and U are seated in a circle facing the center. U and H are immediate neighbors of M. E is the only person sitting between K and S. H is to the immediate right of S. Who is to the immediate right of U?

(1) M

(2) E

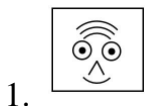**(3) K**

(4) S

Correct Answer: (1) M

Solution: By positioning each person according to the conditions, U's immediate right is M.
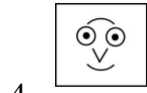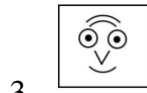
> Quick Tip
>
> For seating arrangement problems, sketch the positions to visualize the solution.

Question 59: Find out which of the Correct Answer figures can be formed using all the pieces given in the problem figure.

Problem figure

1.

2.

3.

4.

Correct Answer: (3)

Solution: The Correct Answer figure fits all pieces together logically.

> **Quick Tip**
>
> Check the fit of all pieces to form the complete figure in such problems.

Question 60: Read the given statements and conclusions carefully, assuming the information given is true. Decide which of the conclusions logically follows from the statements.

Statements: No keyboard is a mouse. All mouses are computers. All computers are laptops.

Conclusions:

I. All mouses are laptops.

II. All computers can never be keyboards.

(1) Only conclusion I follows.

(2) Only conclusion II follows.

(3) Neither conclusion I nor II follows.

(4) Both conclusions I and II follow.

Correct Answer: (4) Both conclusions I and II follow.

Solution: For syllogism questions, the Venn diagrams show that both conclusions logically follow from the statements.

> **Quick Tip**
>
> For syllogism questions, use Venn diagrams to visualize the relationships.

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