



# Rrb Alp CBT - 1 Previous Year Question Paper Overview

Here, you can solve all the questions asked in Rrb Alp CBT - 1 Previous Year Question Paper on 2018-08-09 in the Evening exam. The detailed solutions are also provided for every previous year question and some of these questions can be asked again in your Rrb Alp CBT - 1 exam. There are 75 questions in the exam and 60 minutes are provided for the Rrb Alp CBT - 1 exam. The Cutoff of the exam was 40 marks hence you should try to score at least 50 marks.

## Rrb Alp CBT - 1 Previous Year Question Paper : Questions and Solutions

### Question 1 :

The number of symbols that are preceded by a letter and not followed by a number in the following expression is \_\_\_\_\_ . A\$1%MB#6&NC=3!OD+KP

Difficulty : Moderate

Average Time : 45 Seconds

### Options :

1. 3
2. 4
3. 1
4. 2

### Solution :

The correct answer is **Option 3** i.e. 1.

The logic used here is we need to find the number of symbols that are preceded by a letter and not followed by a number in the given series.

The pairs are:

D + K

Hence, **option 3** is the correct answer.

### Question 2 :

\$M@A#N2B4O&3C5P+D2 Using the above sequence find the characters that do NOT belong to the group: AO+, MB5,

N32, \$2P

Difficulty : Moderate

Average Time : 47 Seconds

Options :

1. N32
2. AO+
3. \$2P
4. MB5

Solution :

The correct answer is **Option 3** i.e. **\$2P**

\$M@A#N2B4O&3C5P+D2

- 1) N32: N + 6 elements = 3, 3 + 6 elements = 2
- 2) AO+: A + 6 elements = O, O + 6 elements = +
- 3) \$2P: \$ + 6 elements = 2, 2 + 8 elements = P
- 4) MB5: M + 6 elements = B, B + 6 elements = 5

Hence, the correct answer is **\$2P**.

Question 3 :

If in a certain code, UNGIMMICKY is written as MIGNUYKCIM, then how will COMPLEXITY be written as in the same code?

Difficulty : Moderate

Average Time : 46 Seconds

Options :

1. LPOMCYTIXE
2. LPMOOCYTIXE
3. LPMOYCTIXE
4. LPMOCYTIXE

Solution :

The correct answer is **Option 4** i.e. **LPMOCYTIXE**



The logic used here is:

UNGIMMICKY is written as MIGNUYKCIM

UNGIM - MIGUN

MICKY - YKCIM

Similarly,

Code for the word COMPLEXITY:

COMPL - LPMOC

EXITY - YTIXE

COMPLEXITY = LPMOCYTIXE

Hence, **option 4** is the correct answer.

#### Question 4 :

If three groups could be formed using the given figures only once, these groups would be \_\_\_\_\_.

**Difficulty : Moderate**

**Average Time : 48 Seconds**

#### Options :

1. (1,5,8), (2,4,7) and (3,6,9)
2. (1,5,7), (2,4,9) and (3,6,8)
3. (1,5,7), (2,6,8) and (3,4,9)
4. (1,5,7), (2,4,8) and (3,6,9)

#### Solution :

The correct answer is **Option 4** i.e. (1,5,7), (2,4,8), and (3,6,9).

In (1, 5, 7):

Both the inner and outer figures in this group's shapes are the same.

In (2, 4, 8):

Both the inner and outer figures in this group's shapes are different.

In (3, 6, 9):

This group's figures have a shaded portion.

Hence the correct answer is (1,5,7), (2,4,8), and (3,6,9).

**Question 5 :**

Choose the correct water image of the given problem figure.

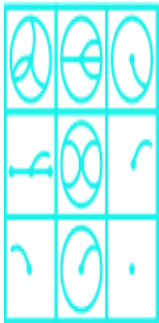
**Difficulty : Moderate****Average Time : 47 Seconds****Options :**

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

**Solution :**

The correct answer is **Option 1** i.e. **B**

The water image of the question figure is shown below:



In the water image of the given figure, the top and bottom of the figure get interchanged i.e. top becomes the bottom and the bottom becomes the top.

Hence, **option 1** is the correct answer.

**Question 6 :**

Select the missing word pair based on the given related pair. Buy: Bought:: \_\_\_\_\_

**Difficulty : Moderate****Average Time : 51 Seconds****Options :**

1. Tore : Tear
2. Ran : Run



Sang : Sing

4. Shut : Shut

**Solution :**

The correct answer is **Option 4** i.e. **Shut: Shut**

The logic used here is:

Buy: Bought

The past tense of the verb buy is bought.

Similarly,

Shut: Shut

The past tense of the verb shut is shut.

Hence, **option 4** is the correct answer.

**Question 7 :**

Consider the given argument and decide which of the given assumptions is (are) implicit. Argument: All girls love reading novels. Assumptions: Novels are the only reading materials. No girl loves to read other materials.

**Difficulty : Moderate**

**Average Time : 52 Seconds**

**Options :**

1. Both assumptions 1 and 2 are implicit.
2. Only assumption 1 is implicit.
3. Neither assumption 1 nor 2 is implicit.
4. Only assumption 2 is implicit.

**Solution :**

The correct answer is **Option 3** i.e. **Neither assumption 1 nor 2 is implicit.**

**Assumptions:**

1. Novels are the only reading materials: **Not implicit** (As there are other reading materials that are also available. For example Books, newspapers, articles, etc.)
2. No girl loves to read other materials. **Not implicit** (As all girls love reading novels but they may like reading other things as well)



Hence, the correct answer is **Neither assumption 1 nor 2 is implicit.**

**Question 8 :**

Complete the Problem Figure with an appropriate option from the Answer Figures.

**Difficulty : Moderate**

**Average Time : 56 Seconds**

**Options :**

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

**Solution :**

The correct answer is **Option 3** i.e. **B**

In each figure there is some difference in shapes:

3 Shapes of Head: Triangular, Circular, and Square

3 Shapes of Hands: Up, Down, and Straight

3 Shapes of Body: Rectangular, Straight line, and Drop

3 Shapes of Legs: Shaded Circular, Curved, Unshaded Circular

So, the missing figure in the third row of the third column will have:

Square-shaped head, downward hands, Straight lined body, and unshaded circular legs which is similar to the shape given in B.

Hence, the correct answer is **B**.

**Question 9 :**

Consider the given statement true and decide which of the given conclusions can definitely be drawn from the given statements. Statement: People complain that bus tickets are not available during festival seasons. Conclusions: People should be advised not to travel during festival seasons. The government should bring in more buses during festival seasons.

**Difficulty : Moderate**

**Average Time : 67 Seconds**

**Options :**



Both 1 and 2 follow.

2. Neither 1 nor 2 follows.

3. Only conclusion 2 follows.

4. Only conclusion 1 follows.

**Solution :**

The correct answer is **Option 3** i.e. **Only conclusion 2 follows.**

**Conclusions:**

1. People should be advised not to travel during festival seasons: **Does not follow** (As people wish to travel during the festive season so, they must not be advised not to do so.)
2. The government should bring in more buses during festival seasons. **Follow** (Looking over demand and the complaints made by the people, the government should bring more buses so, that people can travel without any problem)

Hence, the correct answer is **Only conclusion 2 follows.**

**Question 10 :**

Consider the given question and decide which of the following statements is sufficient to answer the question. How Swathi is related to Namitha? Statements: Swathi's husband is the only son of Namitha's mother. Swathi's brother and Namitha's husband are cousins.

Difficulty : Moderate

Average Time : 67 Seconds

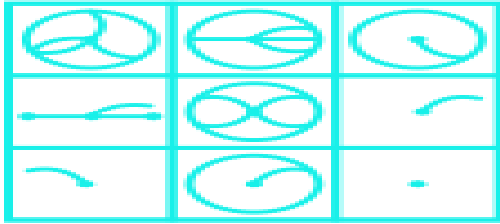
**Options :**

1. Both 1 and 2 are sufficient to answer the question.
2. 2 alone is sufficient while 1 alone is not sufficient to answer the question.
3. Either 1 or 2 is sufficient to answer the question.
4. 1 alone is sufficient while 2 alone is not sufficient to answer the question.

**Solution :**

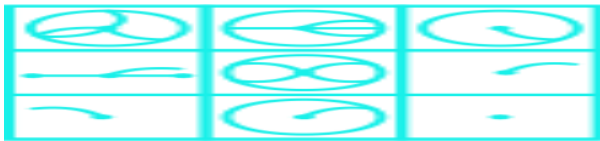
The correct answer is **Option 3** i.e. **Either 1 or 2 is sufficient to answer the question.**

**Statement 1:** Swathi's husband is the only son of Namitha's mother.



Here, Swathi is the sister-in-law of Namita's mother.

**Statement 2:** Swathi's brother and Namitha's husband are cousins.



Here, Swathi is the sister-in-law of Namita's mother.

Hence, the correct answer is **Either 1 or 2 is sufficient to answer the question.**

### Question 11 :

Consider the given statement and decide which of the given assumption(s) is (are) implicit. Statement: Shyam tells Gita, "The way to reach Sri Lanka is through air and water". Assumptions: Gita likes to travel to Sri Lanka. Shyam is fond of advising people.

**Difficulty :** Moderate

**Average Time :** 81 Seconds

### Options :

1. Both assumptions 1 and 2 are implicit.
2. Neither assumption 1 nor 2 is implicit.
3. Only assumption 2 is implicit.
4. Only assumption 1 is implicit.

### Solution :

The correct answer is **Option 2** i.e. **Neither assumption 1 nor 2 is implicit.**

### Assumptions:

1. Gita likes to travel to Sri Lanka: **Not implicit**
2. Shyam is fond of advising people: **Not implicit**

Shyam is telling the path to Sri Lanka because maybe Geeta wanted to know about it just for knowledge purposes.





Hence, the correct answer is **Neither assumption 1 nor 2 is implicit.**

**Question 12 :**

Select the time that would depict the correct mirror image of 9:30 on a clock.

Difficulty : Moderate

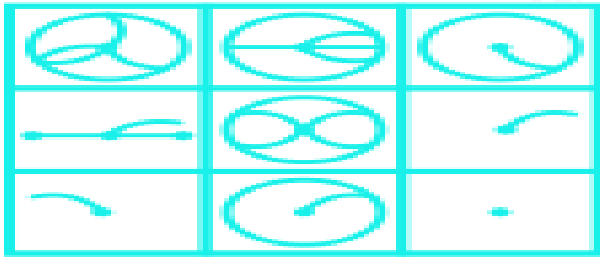
Average Time : 55 Seconds

**Options :**

1. 2:30
2. 6:30
3. 7:30
4. 4:30

**Solution :**

The correct answer is **Option 1** i.e. **2:30**



Hence, the correct answer is **2:30**.

**Question 13 :**

Select the option that would come next in the following figure series.

Difficulty : Moderate

Average Time : 38 Seconds

**Options :**

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

**Solution :**

The correct answer is **Option 1** i.e. **C**.

The figure gets reduced by 1 alternatively.

The first figure gets reduced from the upper group, then the lower group, then again the upper group, and so on.

Hence, the correct answer is **C**.

**Question 14 :**

Complete the series given in the Problem Figure with an appropriate option from the Answer Figures.

**Difficulty : Moderate**

**Average Time : 42 Seconds**

**Options :**

1. 1
2. 4
3. 2
4. 3

**Solution :**

The correct answer is **Option 3** i.e. **2**

In figure 2:

The color of the top and the bottom figure get changed.

The part of the middle figure gets interchanged.

In figure 4:

The top figure becomes shaded.

The bottom figure becomes unshaded.

The middle figure's parts get changed.

Hence, the correct answer is **2**.

**Question 15 :**

Consider the given argument and decide which of the given assumptions is (are) implicit. Argument: Due to the water crisis in the city, the authority had asked all the citizens to reduce their water consumption by 25%. Assumptions: 1. Many citizens may reduce their water consumption. 2. Many activists may protest to this advisory by the authority.

**Difficulty : Moderate**

**Average Time : 59 Seconds**

**Options :**

Neither 1 nor 2 is implicit.

2. Only assumption 1 implicit.

3. Only assumption 2 implicit.

4. Both 1 and 2 are implicit.

**Solution :**

The correct answer is **Option 2** i.e. **Only assumption 1 implicit**

**Assumptions:**

1. Many citizens may reduce their water consumption: **Implicit** (It is implicit as reducing the consumption of water will help to handle the problem of the water crises.)

2. Many activists may protest this advisory by the authority. **Not implicit** (There is no information given that the activist won't be supporting it)

Hence, the correct answer is **Only assumption 1 implicit.**

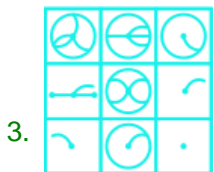
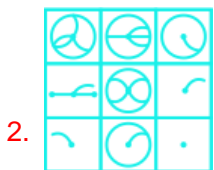
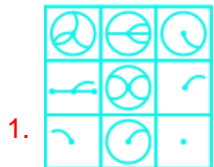
**Question 16 :**

Select the option that will correctly fit in the blank space in the given figure series.

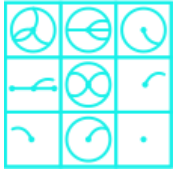
Difficulty : Moderate

Average Time : 56 Seconds

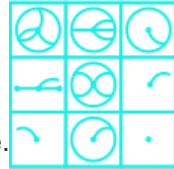
**Options :**



4.



**Solution :**

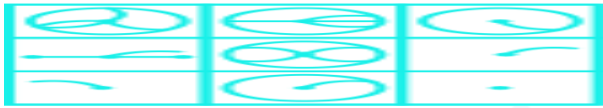


The correct answer is **Option 3** i.e.

The logic used here is:

With each successive figure, one symbol is removed starting from the top row.

The series of figures:



**Question 17 :**

Choose the correct mirror image of the problem figure when the mirror is placed to the right of the figure.

**Difficulty : Moderate**

**Average Time : 68 Seconds**

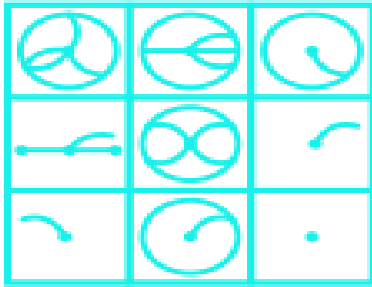
**Options :**

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

**Solution :**

The correct answer is **Option 4** i.e. **A**

The mirror image of the question figure is shown below:



Since the mirror is placed right to the question figure, the right-hand side of the original image will be now the left-hand side of the mirror image.

Hence, **option 4** is the correct answer.

**Question 18 :**

Select the missing term based on the given related pair. MAKING: KGMANI:: CAPETO: \_\_\_\_\_

Difficulty : Moderate

Average Time : 50 Seconds

**Options :**

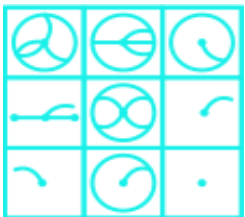
1. POCATE
2. POTECA
3. POCAET
4. POACTE

**Solution :**

The correct answer is **Option 1** i.e. **POCATE**.

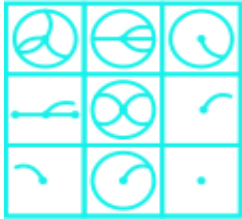
The logic used here is:

MAKING: KGMANI



Similarly,

CAPETO: \_\_\_\_\_



Hence, **option 1** is the correct answer.

**Question 19 :**

Select the option that correctly fits in the blank space in the given figure.

**Difficulty : Moderate**

**Average Time : 50 Seconds**

**Options :**

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

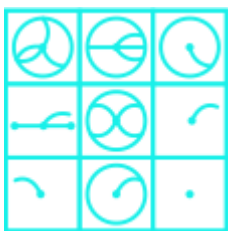
**Solution :**

The correct answer is **Option 3** i.e. **C**.

The logic used here is:

The third figure in each row is the common part in the first two figures in the first row.

The series of figures:



**Question 20 :**

In the following Venn diagram which region represents the coach who is also a player but not a girl?

**Difficulty : Moderate**

**Average Time : 46 Seconds**

**Options :**

- U
- 2. T
- 3. R
- 4. S

### Solution :

The correct answer is **Option 2** i.e. T.

The region which represents the coach who is also a player but not a girl = Letter that is common to circle and the rectangle = T

### DIAGRAM

### Question 21 :

On which dates of December, 2018 will be Wednesdays?

Difficulty : Moderate

Average Time : 39 Seconds

### Options :

- 1. 4, 11, 18 and 25
- 2. 5, 12, 19 and 26
- 3. 3, 10, 17 and 24
- 4. 6, 13, 20 and 27

### Solution :

The correct answer is **Option 2** i.e. 5, 12, 19 and 26.

### Question 22 :

The sum of the present ages of the two cousins is 46 years. Eight years ago, the elder one was twice as old as the younger one. What is the present age of the elder cousin?

Difficulty : Moderate

Average Time : 37 Seconds

### Options :

- 1. 22 years
- 2. 30 years



28 years

4. 26 years

**Solution :**

The correct answer is **Option 3** i.e. **28 years**.

Let the age of the elder one be  $x$  years, and the age of the younger one is  $y$  years.

According to the question;

1.  $x + y = 46$

2.  $(x - 8) = 2(y - 8)$

$x - 8 = 2y - 16$

$x - 2y = -8$

Solving both equations we get;

$y = 18$  years and  $x = 28$  years

**Question 23 :**

In the given equation, LHS = RHS only when we interchange numbers \_\_\_\_\_ on the same side.  $5 + 3 \times 6 - 4 \div 2 = 4 \times 3 - 10 \div 2 + 7$

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

1. 5 and 2

2. 3 and 7

3. 6 and 4

4. 4 and 7

**Solution :**

The correct answer is **Option 3** i.e. **6 and 4**.

**Given equation:**  $5 + 3 \times 6 - 4 \div 2 = 4 \times 3 - 10 \div 2 + 7$

**Option 1: 5 and 2**

After interchanging the expression becomes:



$$= 2 + 3 \times 6 - 4 \div 5 = 4 \times 3 - 10 \div 2 + 7$$

= 19.2 is not equal to 14.

**Option 2: 3 and 7**

After interchanging the expression becomes:

$$= 5 + 3 \times 6 - 4 \div 2 = 4 \times 7 - 10 \div 2 + 3$$

= 21 is not equal to 26.

**Option 3: 6 and 4**

After interchanging the expression becomes:

$$= 5 + 3 \times 4 - 6 \div 2 = 4 \times 3 - 10 \div 2 + 7$$

= 14 is equal to 14.

As we have found our answer, so, there is no need of checking other options.

Hence, **option 3** is the correct answer.

**Question 24 :**

28% of the number is 35. What is the number?

Difficulty : Moderate

Average Time : 67 Seconds

**Options :**

1. 108
2. 120
3. 80
4. 125

**Solution :**

The correct answer is **Option 4** i.e. 125.

Let the required number be x

ATQ

$$28\% \text{ of } x = 35$$

$$\left(\frac{28}{100}\right)x = 35$$



$$28x = 3500$$

$$x = \left(\frac{3500}{28}\right)$$

$$x = 125$$

**Question 25 :**

The given pie chart represents the annual yield of certain crops in tons. If the total production is 9000 tons, then the yield of rice is \_\_\_\_\_ tons.

**Difficulty : Moderate****Average Time : 43 Seconds****Options :**

1. 3000
2. 1000
3. 2000
4. 1500

**Solution :**

The correct answer is **Option 2** i.e. **1000**.

The annual yield of crops-

$$\text{Sugar} = 80^\circ$$

$$\text{Wheat} = 100^\circ$$

$$\text{Rice} = 40^\circ$$

$$\text{Others} = 140^\circ$$

$$\text{Total yield} = 360^\circ$$

$$\text{Total production} = 9000 \text{ tons}$$

$$\text{So yield of rice} = \left(\frac{40^\circ}{360^\circ}\right) \times 9000$$

$$= 1000 \text{ tons}$$

**Question 26 :**

Working together, pipes A and B can fill an empty tank in 10 hours. They worked together for 4 hours and then B stopped and A continued filling the tank till it was full. It took a total of 13 hours to fill the tank. How long would it take A to fill the empty tank alone?



Difficulty : Moderate

Average Time : 54 Seconds

Options :

1. 15 hours
2. 13 hours
3. 16 hours
4. 12 hours

Solution :

The correct answer is **Option 1** i.e. **15 hours**.

A & B can fill the tank together i.e. can complete 100% of the work in = 10 hours

Here, A & B are working together for 4 hours i.e they have completed 40% of the work together

A alone is doing the remaining 60% of the work

Work done by A alone =  $13 - 4$

= 9 hours

This means that A alone is completing 60% of the work in = 9 hours

So if A is working alone 100% of the work would be completed in =  $\left(\frac{9}{60}\right) \times 100$  hours

= 15 hours

**Question 27 :**

A Train leaves Kazipet at 5 a.m. and reaches Bangalore at 3 p.m. Another train leaves Bangalore at 7 a.m. and reaches Kazipet at 5 p.m. When do the two trains meet? Assume that the trains travels at equal uniform speeds.

Difficulty : Moderate

Average Time : 66 Seconds

Options :

1. 1 p.m.
2. 12 noon
3. 11 a.m.
4. 10 a.m.

Solution :

The correct answer is **Option 3** i.e. **11 a.m.**

Let the speed be  $x$  km/h

Time taken by both the trains = 10 hours

So, the Distance between two stations =  $10x$  km

The first train leaves Kazipet at 5 a.m. and the other train leaves Bangalore at 7 a.m.

Distance covered by the first train in 2 hours =  $2x$

Remaining distance =  $10x - 2x$

=  $8x$

Meeting time =  $\left(\frac{8x}{2x}\right)$

= 4 hours

So the two trains would meet after 4 hours i.e. at 11 a.m.

**Question 28 :**

The square root of 3249 is:

**Difficulty : Moderate**

**Average Time : 57 Seconds**

**Options :**

1. 63

2. 59

3. 57

4. 67

**Solution :**

The correct answer is **Option 3** i.e. **57**.

$$\begin{array}{r} 57 \\ 5 \overline{) 3249} \\ \underline{25} \phantom{00} \\ 749 \\ 107 \overline{) 749} \\ \underline{749} \\ x \end{array}$$

**Question 29 :**



The ratio of sand to gravel in a mixture is 17 : 8 while that between gravel and cement is 6 : 17. What is the ratio of sand to cement in the mixture?

**Difficulty : Moderate**

**Average Time : 39 Seconds**

**Options :**

1. 17 : 17
2. 289 : 48
3. 8 : 6
4. 3 : 4

**Solution :**

The correct answer is **Option 4** i.e. **3 : 4**.

Sand : Gravel = 17 : 8

Gravel : Cement = 6 : 17

On multiplying these

$$\left(\frac{S}{G}\right) \times \left(\frac{G}{C}\right) = \left(\frac{17}{8}\right) \times \left(\frac{6}{17}\right)$$

$$\left(\frac{S}{C}\right) = \left(\frac{3}{4}\right)$$

So the ratio of sand to cement in the mixture is 3 : 4

**Question 30 :**

Four numbers, when arranged in ascending order, are w, x, y and z. The average of the smallest three numbers is 18, while the average of the largest three was 22. What is the range of the data?

**Difficulty : Moderate**

**Average Time : 56 Seconds**

**Options :**

1. 10
2. 12
3. 13
4. 11

**Solution :**

The correct answer is **Option 2** i.e.12.

$$\sqrt[3]{w+x+y} = 18$$

$$w + x + y = 54 \quad \dots(1)$$

$$\sqrt[3]{x+y+z} = 22$$

$$x + y + z = 66 \quad \dots(2)$$

subtracting (1) from (2)

$$x + y + z - w - x - y = 66 - 54$$

$$z - w = 12$$

z & w are the last and first numbers here. So the difference between these two numbers is the range.

**Question 31 :**

If  $123 \times 356 = 43788$ , then  $1.23 \times 0.356 = ?$

Difficulty : Moderate

Average Time : 54 Seconds

**Options :**

1. 437.88
2. 4.3788
3. 0.43788
4. 0.043788

**Solution :**

The correct answer is **Option 3** i.e. **0.43788**.

We put the decimal sign before the number of digits we get by counting the values after the decimal in the question or given values

Here its given that  $123 \times 356 = 43788$

and we have to tell  $1.23 \times 0.356$

Here in 1.23 there are two digits after the decimal & in 0.356 there are three digits after the decimal. So in the answer there would be five digits after the decimal

The answer would be 0.43788

**Question 32 :**

Dipali bought a set of cups for ₹ 375, but then had to sell it later to clear old stocks for ₹ 345. What is the percentage of



loss that she incurred?

**Difficulty : Moderate**

**Average Time : 57 Seconds**

**Options :**

1. 14
2. 7
3. 16
4. 8

**Solution :**

The correct answer is **Option 4** i.e. **8**.

Cost price(C.P) = Rs. 375

Selling Price(S.P) = Rs. 345

Loss = Selling Price - Cost Price

= 375 - 345

= 30

$$\text{loss\%} = \left(\frac{\text{loss} \times 100}{\text{C.P}}\right)$$
$$= \left(\frac{30 \times 100}{375}\right)$$

= 8

**Question 33 :**

Traveling at  $\frac{4}{5}$ th of his usual speed, a man is 15 minutes late. What is his usual time to cover the same distance?

**Difficulty : Moderate**

**Average Time : 45 Seconds**

**Options :**

1. 15 minutes
2. 1 hour
3. 75 minutes
4. 45 minutes

**Solution :**

The correct answer is **Option 2** i.e. **1 hour**.

Let the speed be S and the distance be D

$$\text{Usual Time} = \left(\frac{D}{S}\right)$$

$$\text{Time with } \left(\frac{4}{5}\right)\text{th of speed} = \left(\frac{D}{\frac{4S}{5}}\right)$$

$$= \left(\frac{5D}{4S}\right)$$

ATQ

$$\left(\frac{5D}{4S}\right) - \left(\frac{D}{S}\right) = 15 \text{ minutes}$$

$$\left(\frac{D}{S}\right) \left(\frac{5}{4} - 1\right) = 15$$

$$T \left(\frac{1}{4}\right) = 15 \quad \left(\text{Time} = \left(\frac{\text{Distance}}{\text{Speed}}\right)\right)$$

$$T = 15 \times 4$$

$$T = 60 \text{ minutes or } 1 \text{ hour}$$

#### Question 34 :

Find the L.C.M of  $\left(\frac{4}{5}\right)$ ,  $\left(\frac{2}{3}\right)$  and  $\left(\frac{5}{7}\right)$

Difficulty : Moderate

Average Time : 72 Seconds

#### Options :

1. 25

2. 20

3. 40

4. 30

#### Solution :

The correct answer is **Option 2** i.e. **20**.

In the case of fractions

$$\text{LCM} = \left(\frac{\text{LCM of Numerators}}{\text{HCF of denominators}}\right)$$

Here

$$\text{LCM} = \left(\frac{\text{LCM of } 4, 2, 5}{\text{HCF of } 5, 3, 7}\right)$$

$$\text{LCM} = \left(\frac{20}{1}\right)$$





LCM = 20

**Question 35 :**If  $(a - \frac{1}{a}) = 1$ , then  $(a^2 + \frac{1}{a^2}) = ?$ **Difficulty : Moderate****Average Time : 43 Seconds****Options :**

1. 1
2. 3
3. 2
4. 4

**Solution :**The correct answer is **Option 2** i.e. **3**.

$$(a - \frac{1}{a}) = 1$$

Squaring on both sides

$$(a - \frac{1}{a})^2 = 1^2$$

$$a^2 + (\frac{1}{a})^2 - 2 \times a \times \frac{1}{a} = 1$$

$$\text{{Using } (a - b)^2 = a^2 + b^2 - 2ab}}$$

$$a^2 + (\frac{1}{a})^2 = 1 + 2$$

$$a^2 + (\frac{1}{a})^2 = 3$$

**Question 36 :**When  $x^2 + ax + b$  is divided by  $(x - 1)$ , the remainder is 15 and when  $x^2 + bx + a$  is divided by  $(x + 1)$ , the remainder is -1, then the value of  $a^2 + b^2$  is:**Difficulty : Moderate****Average Time : 73 Seconds****Options :**

1. 100
2. 20
3. 8



16

**Solution :**

The correct answer is **Option 1** i.e. **100**.

When  $x^2 + ax + b$  is divided by  $(x - 1)$ , the remainder is 15. So let us put  $x = 1$  in the equation

$$1^2 + a(1) + b = 15$$

$$a + b = 14 \quad \dots(1)$$

When  $x^2 + bx + a$  is divided by  $(x + 1)$ , the remainder is -1. So let us put  $x = -1$  in the equation

$$(-1)^2 + b(-1) + a = -1$$

$$1 - b + a = -1$$

$$a - b = -2 \quad \dots(2)$$

On solving (1) & (2)

$$a + b + a - b = 14 - 2$$

$$2a = 12$$

$$a = 6$$

Putting  $a = 6$  in 1

$$6 + b = 14$$

$$b = 8$$

$$\text{Now } a^2 + b^2 = 6^2 + 8^2$$

$$= 36 + 64$$

$$= 100$$

**Question 37 :**

A copper wire when bent in the form of a square encloses an area of  $121 \text{ cm}^2$ . If the same wire is bent into the form of a circle, find the area of the circle: (Use  $\pi = \frac{22}{7}$ )

**Difficulty : Moderate****Average Time : 78 Seconds****Options :**

1.  $154 \text{ cm}^2$



153 cm<sup>2</sup>

3. 155 cm<sup>2</sup>

4. 150 cm<sup>2</sup>

**Solution :**

The correct answer is **Option 1** i.e. **154 cm<sup>2</sup>**.

Area of square = 121 cm<sup>2</sup>

(side)<sup>2</sup> = 121

side = 11 cm

The perimeter of wire in the square & Circumference of the circle is the same

4 × 11 = 2r

44 = 2 ×  $\left(\frac{22}{7}\right) \times r$

r = 7

Now

Area of circle = r<sup>2</sup>

=  $\left(\frac{22}{7}\right) \times 7 \times 7$

= 154 cm<sup>2</sup>

**Question 38 :**

The difference between the place values of 9 and 5 in the number 428693745 is:

**Difficulty : Moderate**

**Average Time : 56 Seconds**

**Options :**

1. 90995

2. 99995

3. 89995

4. 8995

**Solution :**

The correct answer is **Option 3** i.e. **89995**.



Given number = 428693745

Place value of 9 =  $9 \times 10000$

= 90000

Place value of 5 = 5

Difference =  $90000 - 5$

= 89995

**Question 39 :**

The fraction from the ones listed below that will NOT lead to a recurring decimal is:

**Difficulty : Moderate**

**Average Time : 37 Seconds**

**Options :**

1.  $\frac{8}{56}$

2.  $\frac{6}{56}$

3.  $\frac{4}{56}$

4.  $\frac{7}{56}$

**Solution :**

The correct answer is **Option 4** i.e.  $\frac{7}{56}$

We'll have to check each option here

$$\frac{8}{56} = \frac{1}{7}$$

$$= 0.\overline{142857\dots}$$

$$\frac{6}{56} = \frac{3}{28}$$

$$= 0.\overline{10714285\dots}$$

$$\frac{4}{56} = \frac{1}{14}$$

$$= 0.\overline{0714285\dots}$$

$$\frac{7}{56} = \frac{1}{8}$$

$$= 0.125$$

Hence  $\frac{7}{56}$  is not leading to recurring decimal

**Question 40 :**

If  $\tan = (7/24)$  then find the value of  $p$  such that  $(\tan - \sec / \sin) = (-p/28)$

**Difficulty : Moderate****Average Time : 67 Seconds****Options :**

1. 25
2. 75
3. 50
4. 100

**Solution :**

The correct answer is **Option 2** i.e. **75**.

$$\tan = \left(\frac{7}{24}\right)$$

$$\tan = \left(\frac{\text{Perpendicular}(p)}{\text{Base}(b)}\right)$$

$$\text{Hypotenuse}^2(h) = \text{perpendicular}^2(p) + \text{base}^2(b)$$

$$h^2 = 7^2 + 24^2$$

$$h^2 = 49 + 576$$

$$h^2 = 625$$

$$h = 25$$

$$\sec = \left(\frac{\text{Hypotenuse}(h)}{\text{Base}(b)}\right)$$

$$\sec = \left(\frac{25}{24}\right)$$

$$\sin = \left(\frac{\text{perpendicular}(p)}{\text{hypotenuse}(h)}\right)$$

$$\sin = \left(\frac{7}{25}\right)$$

Now,

$$\left(\frac{\tan}{\sin} - \sec\right) = \left(\frac{-p}{28}\right)$$

$$\left(\frac{\frac{7}{24}}{\frac{7}{25}} - \frac{25}{24}\right) = \left(\frac{-p}{28}\right)$$

$$\left(\frac{18 \cancel{7} - (-25)}{7 \cancel{7} - 24}\right) = \left(\frac{-p}{28}\right)$$

$$\left(\frac{-75}{28}\right) = \left(\frac{-p}{28}\right)$$



p = 75

**Question 41 :**

Solve the following:  $22 - \left(\frac{1}{4}\right) \{-5 - (-48) \div (-16)\}$

**Difficulty : Moderate**

**Average Time : 85 Seconds**

**Options :**

1. 0
2. 24
3. 22
4. 21

**Solution :**

The correct answer is **Option 2** i.e. **24**.

$$\begin{aligned} & 22 - \left(\frac{1}{4}\right) \{-5 - (-48) \div (-16)\} \\ &= 22 - \left(\frac{1}{4}\right) \{-5 - (3)\} \\ &= 22 - \left(\frac{1}{4}\right) \times (-8) \\ &= 22 - (-2) \\ &= 22 + 2 \\ &= 24 \end{aligned}$$

**Question 42 :**

To dispose of the old stocks, a person sold a tea-set for ₹ 3,420, which was 43% below the cost price. In order to make a profit of 10% the seller should have sold the set for ₹ \_\_\_\_\_ more.

**Difficulty : Moderate**

**Average Time : 47 Seconds**

**Options :**

1. ₹ 3,180
2. ₹ 2,580
3. ₹ 1,812.60
4. ₹ 2,664.42

**Solution :**

Page No: 30

Follow us on



Address : 1997, Mukherjee Nagar, 110009

Email : [online@kdcampus.org](mailto:online@kdcampus.org)

Call : +91 95551 08888

Download the App





The correct answer is **Option 1** i.e. **3,180**.

SP of the tea set = Rs. 3420

Let the cost price be Rs.  $x$

SP was 43% less than the CP which means that SP was 57% of the CP i.e.

$57\%$  of  $x = 3420$

$\left(\frac{57}{100}\right) \times x = 3420$

$x = 6000$

To make a profit of 10%, the seller should have sold the set for =  $6000 \times \left(\frac{100+10}{100}\right)$

= Rs. 6600

The seller should have sold the tea set more by =  $6600 - 3420$

= Rs. 3180

#### Question 43 :

Find the missing digit if it has 11 and 13 as factors?

Difficulty : Moderate

Average Time : 53 Seconds

#### Options :

1. 2

2. 6

3. 8

4. 4

#### Solution :

The correct answer is **Option 4** i.e. **4**.

We can eliminate options here to get the answer

If we put 2, 6, 8 then the values would be 123, 163, 183 but neither 11 nor 13 is the factor of any of these values. We have to find the digit so that the value has both 11 & 13 as factors.

We don't have to check for both 11 & 13 as both 11 & 13 should be the factors, we can check for any one of these and can eliminate the options.

When we put 4, the value becomes 143, and both 11 & 13 are its factors

**Question 44 :**

Consider the given question and decide which of the following statements is sufficient to answer the question. Which of these natural numbers X, Y, Z, U, and V are even numbers? Statements: X, Y, Z, U, and V are consecutive numbers. Z is an odd number.

Difficulty : Moderate

Average Time : 63 Seconds

**Options :**

1. Both statement 1 and 2 together are sufficient
2. Statement 2 alone is sufficient while statement 1 alone is insufficient
3. Statement 1 alone is sufficient while statement 2 alone is insufficient
4. Neither statement 1 nor 2 is sufficient

**Solution :**

The correct answer is **Option 1** i.e. **Both statement 1 and 2 together are sufficient.**

Statement I tells us that they are consecutive numbers that is alternate number in them would be even but we do not know which set of alternate numbers would be even or odd in them.

Statement II tells us that Z is an odd number, hence number alternative to Z would be odd numbers and the rest would be even numbers.

i.e. Y and U would be even numbers.

Hence, both statements 1 and 2 together are sufficient to answer the question.

**Question 45 :**

Consider the given question and decide which of the following statements is sufficient to answer the question. What is the average daily wage of X, Y and Z? Statements: Y's salary is half of (X+Z) X and Y together earn Rs. 40 more than Z and Z earns Rs. 500

Difficulty : Moderate

Average Time : 72 Seconds

**Options :**

1. Both statement 1 and 2 together are sufficient
2. Neither statement 1 nor 2 is sufficient
3. Statement 1 alone is sufficient while statement 2 alone is insufficient
4. Statement 2 alone is sufficient while statement 1 alone is insufficient



**Solution :**

The correct answer is **Option 4** i.e. **2 alone is sufficient while 1 alone is insufficient.**

Average wage of X, Y and Z =  $(X + Y + Z)/3$

Statement I gives the relation between the wage of X, Y and Z.

Statement II gives the salary of Z i.e. Rs. 500 and salary of X and Y i.e. Rs. 500 + 40 = Rs. 540 which gives the average wage of X, Y and Z i.e.  $(540 + 500)/3 = \text{Rs. } 346.66$

Hence, Statement 2 alone is sufficient while 1 is insufficient.

**Question 46 :**

The maximum number of electrons that can be accommodated in M shell is:

Difficulty : Moderate

Average Time : 59 Seconds

**Options :**

1. 8
2. 2
3. 18
4. 32

**Solution :**

The correct answer is **Option 3** i.e. **18.**

- The maximum number of electrons that can be accommodated in M shell is **18.**
- It is given by the formula  $2n^2$
- M shell=3, hence, M can accommodate 18 electron

**Question 47 :**

Who is the current director of Research and Analysis Wing (RAW), India's foreign intelligence service?

Difficulty : Moderate

Average Time : 40 Seconds

**Options :**

1. Kiran Bedi
2. Anil Kumar Dhasmana
3. Dineshwar Sharma



Ajit Doval

**Solution :**

The correct answer is **Option 2** i.e. **Anil Kumar Dhasmana**.

- **Anil Kumar Dhasmana** is the current director of RAW (Research and Analysis Wing)
- The RAW is an external intelligence organisation that monitors dangers from abroad. It collects secret information about the activities of neighbouring countries.
- RAW has been placed directly under the Indian Prime Minister's office. It was formed in 21 September 1968 and is headquartered in New Delhi.

**Question 48 :**

What are the receptors for detecting taste called?

Difficulty : Moderate

Average Time : 55 Seconds

**Options :**

1. Sensory receptors
2. Chemical receptors
3. Olfactory receptors
4. Gustatory receptors

**Solution :**

The correct answer is **Option 4** i.e. **Gustatory receptors**.

- **Gustatory receptors** are the nerve cells sensitive to the taste or gustation. They are cells on the tongue specialized to sense the taste.
- Our tongue consists of bumps called papillae. Within the papillae, taste buds occur, which contains the gustatory receptor cells. These cells are sensitive to the chemicals in the food.
- Our tongue is sensitive to four types of tastes. They are salty taste, sweet taste, bitter taste and the sour taste.

**Question 49 :**

The value of universal gravitation constant (G) was determined by:

Difficulty : Moderate

Average Time : 54 Seconds

**Options :**

1. Henry Cavendish
2. Antoine L Lavoisier

Isaac Newton

#### 4. John Dalton

**Solution :**

The correct answer is **Option 1** i.e. **Henry Cavendish**.

- The value of universal gravitation constant (G) was determined by **Henry Cavendish** through an experiment known as Cavendish experiment.
- The Cavendish experiment gave an accurate value of Gravitational constant and measured the force of gravity between masses.

**Question 50 :**

Which of the following is NOT a property of acids?

Difficulty : Moderate

Average Time : 44 Seconds

**Options :**

1. Acids have sour taste
2. Acids have bitter taste
3. Acids form salts with bases
4. Acids turn blue litmus red

**Solution :**

The correct answer is **Option 2** i.e. **Acids have bitter taste**.

- Acidic solutions have a high concentration of hydrogen ions. This makes acids taste tart or sour.
- Acids also react with carbonates, in which case produce salt, water and carbon dioxide. They turn the blue litmus to red.
- On the other hand, bases tend to taste bitter. An example of this would be if one has ever tasted a bubble of soap.

**Question 51 :**

The Arjuna Awards given by the Government of India is for public achievement in which of the following fields?

Difficulty : Moderate

Average Time : 55 Seconds

**Options :**

1. Literature
2. Poverty Eradication

**Sports****4. Economics****Solution :**

The correct answer is **Option 3** i.e. **Sports**.

- The Arjuna Awards was instituted in 1961 as the highest national recognition for outstanding performance in the field of Sports and Games in Olympics, Asian Games, Commonwealth Games, World Cup, World Championship disciplines and Cricket.

**Question 52 :**

In the process of \_\_\_\_\_, the iron is protected by a coating of zinc.

**Difficulty : Moderate****Average Time : 41 Seconds****Options :**

1. greasing
2. alloying
3. galvanisation
4. anodising

**Solution :**

The correct answer is **Option 3** i.e. **galvanisation**.

- **Galvanisation** is the process of protecting iron by coating with zinc, to prevent corrosion (rusting).
- It is basically a surface treatment process to coat metal surfaces by submerging the metals into a molten Zn metal bath. Hot dip galvanisation is the most well known method in which the steel part is submerged in a bath of molten zinc.
- In the bath, the iron of the steel metallurgically reacts with the molten zinc to yield a tightly bonded uniform alloy coating, which provides superior corrosion protection to steel.

**Question 53 :**

If a body takes 't' seconds to go once round the circular path of radius 'r', the velocity 'v' is given by:

**Difficulty : Moderate****Average Time : 59 Seconds****Options :**

1.  $v = \frac{2\pi r}{t}$

$$v = \frac{2\pi r}{t}$$

3.  $v = \frac{2\pi r^2}{t}$

4.  $v = \frac{r}{2t}$

**Solution :**

The correct answer is **Option 2** i.e.  $v = \frac{2\pi r}{t}$ .

- Here, Velocity( $v$ ) = displacement/time
- For a circular motion, Velocity ( $v$ )= circumference of a circular path/time
- As, Circumference of the circle =  $2\pi r$
- Where  $r$  = radius of the circular path
- $v = \frac{2\pi r}{t}$
- Therefore, the velocity of an object moving in circular motion of radius  $r$  is given by  $v = \frac{2\pi r}{t}$

**Question 54 :**

Who is the only Indian economist to have won the Nobel prize?

Difficulty : Moderate

Average Time : 59 Seconds

**Options :**

1. Avinash Dixit
2. Amit Mishra
3. Amartya Sen
4. Abhijit Banerjee

**Solution :**

The correct answer is **Option 3** i.e. **Amartya Sen**.

- Amartya Sen was the first Indian to have won the Nobel Prize in Economics in 1998.
- He has made several key contributions to the research on fundamental problems in welfare Economics and his contributions range from axiomatic theory of social choice, over definitions of welfare and poverty.

**Question 55 :**

What happens as we go down the group in the periodic table?

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

The number of shells decreases

2. Valence electrons decreases
3. The number of shells increases
4. Atomic size decreases

**Solution :**

The correct answer is **Option 3** i.e. **The number of shells increases**

- As per the Modern Periodic Law, the physical and chemical properties of the elements are Periodic functions of their atomic numbers.
- As we move down the group in the Periodic table, there is an addition of shell and hence, the atomic size increases down the group.

**Question 56 :**

\_\_\_\_\_ forms a common passage for both urine and sperms in human males.

Difficulty : Moderate

Average Time : 49 Seconds

**Options :**

1. Oviduct
2. Ureter
3. Urethra
4. Vas deferens

**Solution :**

The correct answer is **Option 3** i.e. **Urethra**.

- The urethra is a thin, fibromuscular tube that begins at the lower opening of the bladder and extends through the pelvic and urogenital diaphragms to the outside of the body, called the external urethral orifice.
- The urethra also connects to the ducts deferens in males, for the ejaculation of sperm and urine.

**Question 57 :**

Tooth decay starts when the pH of the mouth is lower than:

Difficulty : Moderate

Average Time : 46 Seconds

**Options :**

1. 5.7

5.5

3. 5.6

4. 5.4

**Solution :**

The correct answer is **Option 2** i.e. **5.5**.

- Tooth decay takes place when the pH of the mouth is lower than **5.5**.
- Tooth decay is damage to a tooth's surface or enamel. It happens when the bacteria in our mouth makes acids that attack the enamel.
- Tooth decay can lead to cavities which are holes in our teeth. If it is not treated, it can cause pain, infection and even tooth loss.

**Question 58 :**

Who is the famous Indian actress who stars in the 'Quantico' TV series on American Broadcasting Corporation?

Difficulty : Moderate

Average Time : 50 Seconds

**Options :**

1. Alia Bhatt
2. Deepika Padukone
3. Priyanka Chopra
4. Malaika Arora

**Solution :**

The correct answer is **Option 3** i.e. **Priyanka Chopra**.

- **Priyanka Chopra** is a famous Indian actress, best known for her role as Alex Parrish on the ABC show "Quantico" which aired between 2015 to 2018.
- She was one of the first South Asian actress to lead an American series.

**Question 59 :**

Which of the following is an amphoteric oxide?

Difficulty : Moderate

Average Time : 44 Seconds

**Options :**

1. Aluminium oxide

Iron (II) oxide

3. Magnesium oxide

4. Carbon dioxide

**Solution :**

The correct answer is **Option 1** i.e. **Aluminium oxide**.

Amphoteric oxides are those oxides that can react both with acids and bases and they possess both acidic and basic properties.

Out of the given oxides, only Aluminium oxide possesses such property.

**Question 60 :**

A current  $I$  flows through a resistor. A source maintains a potential difference of  $V$  across the resistor. The energy supplied by the source in time  $t$  is:

Difficulty : Moderate

Average Time : 47 Seconds

**Options :**

1.  $V I t^2$

2.  $V I$

3.  $V I t$

4.  $V I/t$

**Solution :**

The correct answer is **Option 3** i.e.  $V I t$ .

- According to Ohm's Law, power is given as the product of voltage ( $V$ ) and current ( $I$ ) of a circuit.
- Here,
- $P = V I$
- $P = E/t$
- $V I = E/t$
- $E = V I t$
- Therefore, the energy supplied in a circuit is given by  $E = V I t$

**Question 61 :**

As of February 2018, who is the Chief Minister of Telangana, who is also the first Chief Minister of Telangana?

Difficulty : Moderate

Average Time : 52 Seconds



**Options :**

1. K Chandrasekhar Rao
2. Kadiyam Srihari
3. T Rajaiah
4. Chandrababu Naidu

**Solution :**

The correct answer is **Option 1** i.e. **K Chandrasekhar Rao**.

- As of February 2018, K Chandrasekhar Rao is the Chief Minister of Telangana and also the first chief minister of the state.
- Rao belongs to the Telangana Rashtra Samithi party and their symbol is a 'CAR.'

**Question 62 :**

According to an early Indian philosopher everything is made up of \_\_\_\_\_ basic elements.

**Difficulty : Moderate****Average Time : 44 Seconds****Options :**

1. 2
2. 4
3. 3
4. 5

**Solution :**

The correct answer is **Option 4** i.e. **5**.

- According to an early Indian philosopher, everything, living or non-living is made up of **5 basic elements**.
- Early Indian philosophers classified matter in the form of five basic elements namely air, earth, fire, sky and water.

**Question 63 :**

Find the position of the image formed by a concave mirror when the object is placed between P and F?

**Difficulty : Moderate****Average Time : 43 Seconds****Options :**

1. At infinity



Between F and C

3. Behind the mirror

4. Beyond C

**Solution :**

The correct answer is **Option 3** i.e. **Behind the mirror**.

- When the object is placed between the pole (P) and focus (F) of the mirror, the image will form **behind the mirror**.
- Concave mirror forms enlarged image. That is why it is used as reflectors for headlights of a vehicle and by doctors to examine eyes, nose and ear.

**Question 64 :**

The boiling point of an alcohol is 78°C. What is the temperature in Kelvin scale?

Difficulty : Moderate

Average Time : 49 Seconds

**Options :**

1. 78 K
2. 341 K
3. 373 K
4. 351 K

**Solution :**

The correct answer is **Option 4** i.e. **351 K**.

- The unit of thermodynamic temperature scale is called the Kelvin.
- In order to convert from Kelvin to degree celsius, add 273 to convert from degrees Celsius to kelvin subtract 273 as follows.
- $K = ^\circ C + 273$
- or.  $^\circ C = K - 273$
- So,  $78^\circ C = 273 + 78 = 351 K$
- Hence, temperature of 78 °C on Celsius scale is equal to 351 K on the Kelvin scale.

**Question 65 :**

What is a tissue?

Difficulty : Moderate

Average Time : 50 Seconds

**Options :**

- Cells which are similar in origin, but dissimilar in form and function
- Cells which are dissimilar in origin, but are similar in form and function
- Cells which are dissimilar in origin, form and function
- Cells which are similar in origin, form and function

**Solution :**

The correct answer is **Option 4** i.e. **Cells which are similar in origin, form and function.**

- Tissues are groups of **cells that have a similar structure, origin, form and function.**
- There are four different types of tissues in animals- connective, muscle, nervous and epithelial. In plants, tissues are divided into three types- vascular, ground and epidermal.
- Groups of tissues make up organs in the body such as the brain and heart.

**Question 66 :**

As of February 2018, who owns the Hyderabad-based IPL team 'Sun Risers Hyderabad'?

Difficulty : Moderate

Average Time : 61 Seconds

**Options :**

- Deccan Chronicle Newspaper
- Kalanidhi Maran
- Chandrababu Naidu
- Chiranjeevi

**Solution :**

The correct answer is **Option 2** i.e. **Kalanidhi Maran.**

- Kalanidhi Maran** is the owner of Sunrisers Hyderabad.
- At present, Telangana based SUN Group Company is the largest shareholder of the Sunrisers Hyderabad team.
- Before buying the SRH franchise, Kalanidhi created and grew his SUN Group in 1993 to a billion dollar company.

**Question 67 :**

The first Partition of Bengal took place in the year \_\_\_\_\_.

Difficulty : Moderate

Average Time : 46 Seconds

**Options :**

- 1906 AD



1903 AD

3. 1904 AD

4. 1905 AD

### Solution :

The correct answer is **Option 4** i.e. **1905 AD**.

- The Partition of Bengal took place in the year **1905**.
- The partition was a territorial reorganization of the Bengal Presidency carried out by the British Raj authorities. The reorganization divided the predominantly Muslim eastern areas from the predominantly Hindu western areas.
- Lord Curzon, the then Viceroy of India, announced it on 20 July 1905, and it went into effect on 16 October 1905.

### Question 68 :

Identify a type of asexual reproduction which involves reproduction through parts of a plant such as roots, stem and leaves?

Difficulty : Moderate

Average Time : 51 Seconds

### Options :

1. Budding
2. Vegetative Propagation
3. Fragmentation
4. Fission

### Solution :

The correct answer is **Option 2** i.e. **Vegetative Propagation**.

- Vegetative reproduction, also known as **vegetative propagation** or **vegetative cloning** is any form of asexual reproduction occurring in plants in which a new plant grows from a fragment or cutting of the parent plant or specialized reproductive structures, which are sometimes called vegetative propagules.
- Asexual method of plant reproduction occurs in its leaves, roots and stem.

### Question 69 :

Which Indian author has chronicled the life in the Kumaon hills in the book 'Things to Leave Behind'?

Difficulty : Moderate

Average Time : 50 Seconds

### Options :



Shashi Tharoor

2. Anosh Irani

3. Namita Gokhale

4. Vikram Seth

**Solution :**

The correct answer is **Option 3** i.e. **Namita Gokhale**.

- **Namita Gokhale**, a seasoned author of 14 books, has come up with a historical novel that she calls he "big book"- Things to Leave Behind.
- It is set in the rich cultural and social backdrop of Kumaon of 1840-1912, when the so called franghee Raj was experiencing a golden era on the Indian soil.

**Question 70 :**

A person holding a pen in his left hand sees his reflection in the mirror holding the pen in his right hand. This is due to which of the following phenomena?

Difficulty : Moderate

Average Time : 54 Seconds

**Options :**

1. Diffused reflection
2. Total internal reflection
3. Lateral inversion
4. Refraction

**Solution :**

The correct answer is **Option 3** i.e. **Lateral inversion**.

- The interchange of left side and right side in image of the object when reflected by a plane mirror is called **lateral inversion**.
- Therefore, if a person who holds a pen in left hand appears to hold the pen in right hand, this phenomenon is due to lateral inversion.

**Question 71 :**

What will be the value of the kinetic energy (EK) of a moving body with mass m, if its speed is doubled from v to 2v?

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

$\frac{1}{2}E_k$

2.  $4E_k$

3. There will be no change in  $E_k$

4.  $2E_k$

**Solution :**

The correct answer is **Option 2** i.e.  $4E_k$ .

- Kinetic energy refers to the energy possessed due to the motion of the body.
- Kinetic energy is given by
- $K.E = E_k = \frac{1}{2} \times m \times v^2$
- Here K.E = Kinetic Energy
- M= Mass of the object
- V= Velocity of an object
- Given,  $v' = 2v$
- Therefore,  $K.E = \frac{1}{2} \times m \times (2v)^2$
- $K.E = \frac{1}{2} \times m \times 4 v^2 = 4 \left( \frac{1}{2} m v^2 \right)$
- **$K.E = 4 E_k$**
- Therefore, the Kinetic energy of the object will become 4 times when the speed turns twice.

**Question 72 :**

If the resistance of a conductor is doubled, the current gets halved. This is because:

Difficulty : Moderate

Average Time : 70 Seconds

**Options :**

1.  $I = V - R$

2.  $I = \sqrt{V \over R}$

3.  $I = \sqrt{R \over V} n$

4.  $I = VR$

**Solution :**

The correct answer is **Option 2** i.e.  $I = \sqrt{V/R}$

- Here,  $V = I R$
- Where R = Resistance of the conductor.
- $I = \sqrt{V/R}$





So, if the Resistance becomes doubled then the current becomes half because current is inversely proportional to Resistance.

### Question 73 :

Which north-eastern state of India has signed up to host the 39th National Games in the year 2022?

Difficulty : Moderate

Average Time : 54 Seconds

### Options :

1. Meghalaya
2. Mizoram
3. Manipur
4. Tripura

### Solution :

The correct answer is **Option 1** i.e. **Meghalaya**.

- **Meghalaya** was granted to host the 39th National Games in 2022, the year when the state will also celebrate its golden jubilee of statehood.
- The tripartite contract was signed between the IOA, the Meghalaya State Olympic Association, and the state government.

### Question 74 :

In which city is St. Peter's Basilica, one of the most famous churches in Christianity, located?

Difficulty : Moderate

Average Time : 45 Seconds

### Options :

1. Madrid
2. Lisbon
3. Pisa
4. Vatican

### Solution :

The correct answer is **Option 4** i.e. **Vatican**.

- The famous St. Peter's Basilica is a Renaissance style church located in **Vatican city**.
- The largest church in the world, St. Peter's Basilica is a jewel within Vatican city from where Popes have spread the

word of God throughout the world.

- Basilica is also a cultural, historical and architectural landmark, which holds within itself treasures from millenia including paintings, sculptures, artefacts and more.

**Question 75 :**

A raised hammer possesses:

**Difficulty : Moderate**

**Average Time : 48 Seconds**

**Options :**

1. Kinetic energy
2. Mechanical energy
3. Muscular energy
4. Potential energy

**Solution :**

The correct answer is **Option 4** i.e. **Potential energy**.

- A raised hammer posses **potential energy** due to the height of the hammer.
- The enrgy possessed by a body by virtue of its position is called Potential energy.
- Potential energy is given by  $mgh$
- Where  $m$  = mass of the body,  $g$  = acceleration due to gravity and  $h$ = height of the body

## Rrb Alp CBT - 1 Previous Year Question Paper Analysis

The analysis of Rrb Alp CBT - 1 Previous Year Question Paper held on 2018-08-09 in the Evening exam is as follows:

1. 75 questions were moderate.
2. The safe score is 40 marks.
3. 75 questions were asked from CBT -1 and 75 questions were asked from CBT -1
4. 0 questions should have been skipped if you were short of time.

## Rrb Alp CBT - 1 Previous Year Question Paper Topic Wise Weightage

### CBT -1



GK - 1

## Rrb Alp CBT - 1 Previous Year Question Paper Tips and Tricks



1. Try to solve Rrb Alp CBT - 1 Previous Year Question Paper without taking any help from the solutions.
2. Rrb Alp CBT - 1 Previous Year Question Paper require proper usage of concept so firstly read the question thoroughly and then use the right concept.
3. In case you're not able to solve the question in less than 30 seconds in the exam then you should skip the question and move to the next question.

## Daily Current Affairs



Page No: 49

Follow us on



Address : 1997, Mukherjee Nagar, 110009

Email : [online@kdcampus.org](mailto:online@kdcampus.org)

Call : +91 95551 08888

Download the App



KD Live is providing [Current Affairs](#) on a daily basis for Railways and a [Current Affairs Quiz](#) too for the practice.

## KD Live Free Offerings



KD Live is Offering Every Information and Study Material required for the self study. Please click on the following links for accessing those.

- [Study Plan](#)
- [General Science](#)
- [General Awareness](#)
- [General Knowledge](#)
- [Quantitative Aptitude](#)
- [Logical Reasoning](#)
- [English Language](#)
- [Today In History](#)
- [Syllabus](#)
- [Know Your State](#)
- [Know Your Country](#)
- [Know Your City](#)
- [Know Your Leader](#)
- [Books And Authors](#)
- [Daily Vocabulary](#)
- [Daily Editorial](#)
- [Latest Notifications](#)
- [Exam Dates](#)
- [Admit Card](#)



[Exam Results](#)  
[Exam Cutoff](#)  
[Exam Eligibility](#)  
[Exam Pattern](#)  
[Answer Key](#)  
[Important Days](#)

## Further Guidance on Rrb Alp CBT - 1 Previous Year Question Paper

For Asking any query on Rrb Alp CBT - 1 Previous Year Question Paper please mail [Send Email](#) or you can fill the form at [KD Live](#).

### About KD Live

KD live has an expertise in providing apt explanations for the Rrb Alp CBT - 1 Previous Year Question Paper since 2008. More than 10 lakh aspirants have cleared competitive exams under the guidance of Neetu Mam. Study.kdcampus.live is providing free information on various topics and for the Rrb Alp Exam you can refer the following link [Click Here](#) however if you want to practice more questions then please refer the following link [Click Here](#).

### About Neetu Mam

Neetu Mam is primarily passionate for the English language and teaching from the last 20 years however for the Rrb Alp CBT - 1 Previous Year Question Paper. She has guided her team to provide the best explanation for the question.