



# Ssc Cgl Tier I Previous Year Question Paper Overview

Here, you can solve all the questions asked in Ssc Cgl Tier I Previous Year Question Paper on 2022-04-13 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 Ssc Cgl Tier I exam. There are 100 questions in the exam and 60 minutes are provided for the Ssc Cgl Tier I exam. The Cutoff of the exam was 140 marks hence you should try to score at least 150 marks.

## Ssc Cgl Tier I Previous Year Question Paper : Questions and Solutions

### Question 1 :

Study the given histogram that shows the marks obtained by students in an examination and answer the question that follows. The number of students who obtained less than 200 marks is what percentage less than the number of students who obtained 400 or more marks (correct to one decimal place)?

Difficulty : Moderate

Average Time : 51 Seconds

### Options :

1. 11.9%
2. 17.8%
3. 21.6%
4. 14.3%

### Solution :

The correct answer is **option 4** i.e. **14.3%**

Solution:

According to the given question,

The number of students who obtained less than 200 marks = 30

The number of students who obtained 400 or more marks = 35

Difference =  $35 - 30 = 5$

so, the required percentage =  $(5/35) \times 100 = 100/7 = 14.285 \approx 14.3$ .

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Hence the required value is 14.3 %.

**Question 2 :**

Select the letter cluster from among the given options that can replace the question mark (?) in the following series. CAF, HEJ, SIQ, XMU, CQF, ?

Difficulty : Moderate

Average Time : 47 Seconds

**Options :**

1. MUU
2. HUJ
3. TUK
4. MUJ

**Solution :**

The correct answer is **option 2** i.e. **HUJ**.

Given series: CAF, HEJ, SIQ, XMU, CQF, ?

The series follows this pattern:

$$C + 5 = H$$

$$A + 4 = E$$

$$F + 4 = J$$

$$\text{Opposite of H} = S$$

$$E + 4 = I$$

$$\text{Opposite of J} = Q$$

$$S + 5 = X$$

$$I + 4 = M$$

$$Q + 4 = U$$

$$\text{Opposite of X} = C$$

$$M + 4 = Q$$

$$\text{Opposite of U} = F$$



$$C + 5 = H$$

$$Q + 4 = U$$

$$F + 4 = J$$

So, the next term in the series is **HUJ**.

**Question 3 :**

Select the option that is related to the third letter cluster in the same way as the second letter cluster is related to the first letter cluster. RJB: TGF:: QPG:?

Difficulty : Moderate

Average Time : 62 Seconds

**Options :**

1. SMK
2. SOJ
3. TNJ
4. RMK

**Solution :**

The correct answer is **option 1** i.e. **SMK**.

The logic used here is:

RJB: TGF

$$R + 2 = T$$

$$J - 3 = G$$

$$B + 3 = F$$

Similarly,

QPG:?

$$Q + 2 = S$$

$$P - 3 = M$$

$$G + 3 = K$$

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

**Question 4 :**



Person A can do one-fifth of the work in 3 days, while B's efficiency is half of that of A. In how many days A and B working together can do half of the work?

**Difficulty : Moderate**

**Average Time : 52 Seconds**

**Options :**

1. 4

2. 7

3. 6

4. 5

**Solution :**

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

Solution:

The total work done by A is in 15 days.

Efficiency of A = 2 × efficiency of B

Hence the time taken by B to complete the work = 2 × 15 = 30 days.

Let the total work done by A and B be 30 units (LCM of 15 and 30)

Hence efficiency of A = 30/15 = 2 units/day

And efficiency of B = 30/30 = 1 unit/day

So, the time taken by both A and B working together and completing half of the work

$[(30/2) \text{ units}] / (\text{efficiency of A} + \text{B})$

$15/3 = 5$  days.

Hence, A and B working together can do half of the work in 5 days.

**Question 5 :**

Five years ago, the ratio of the ages of Tarun and Saurabh was 4: 1. After five years, the ratio of their ages will be 2: 1. What is the present age (in years) of Saurabh?

**Difficulty : Moderate**

**Average Time : 67 Seconds**

**Options :**

14

2. 10

3. 8

4. 12

**Solution :**

The correct answer is **option 2** i.e. **10**.

Let the present age of Tarun = x years

And the present age of Saurabh = y years

According to the question;

Five years ago, the ratio of the ages of Tarun and Saurabh was 4: 1

$$(x - 5)/(y - 5) = 4/1$$

After five years, the ratio of their ages will be 2: 1

$$(x + 5)/(y + 5) = 2/1$$

Solving both equations;

The present age of Tarun = 25 years

And the present age of Saurabh = 10 years

**Question 6 :**

Seven friends, E, F, G, H, I, J, and K, are sitting along a circular table facing towards the centre. F and I are sitting to the immediate left and right of G, respectively. H is sitting third to the left of G. E and I are the neighbours of J. Who is sitting on the immediate right of H?

**Difficulty : Moderate****Average Time : 65 Seconds****Options :**

1. H

2. F

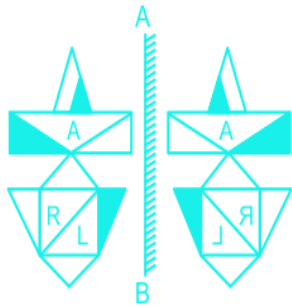
3. K

4. E

**Solution :**

The correct answer is **option 3** i.e. **K**.

According to the question, the arrangement is as follows:



From the above arrangement, K is sitting on the immediate right of H.

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

**Question 7 :**

In a certain code language, 'ONION' is coded as 201 and 'POTATO' is coded as 261. How will 'MANGO' be coded in that language?

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

1. 208
2. 178
3. 150
4. 228

**Solution :**

The correct answer is **option 3** i.e. **150**.

The logic used here is:

'ONION' is coded as 201 and 'POTATO' is coded as 261

$$\text{ONION} = (15 + 14 + 9 + 15 + 14) \times 3 = 201$$

$$\text{POTATO} = (16 + 15 + 20 + 1 + 20 + 15) \times 3 = 261$$

Similarly;

Code for the word MANGO:

$$\text{MANGO} = (13 + 1 + 14 + 7 + 15) \times 3 = 150$$

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

**Question 8 :**

Mahesh is the father of Riva and the paternal grandfather of Vansh. Aakash is the brother of Riva and the father of Vansh and Ritu. Ritu is the only daughter of Aakash and Maya. How is Maya related to Mahesh?

**Difficulty : Moderate**

**Average Time : 52 Seconds**

**Options :**

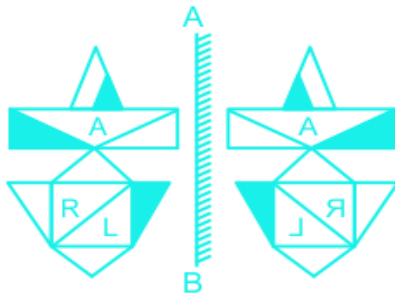
1. Daughter-in-law
2. Aunt
3. Sister
4. Daughter

**Solution :**

The correct answer is **option 1** i.e. **Daughter-in-law**.

In the diagram shown;

Square shows males, the circle shows females, vertical lines show generations, a single horizontal line shows brothers or sisters, and double lines show a couple.



From the above figure, Maya is the daughter-in-law of Mahesh.

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

**Question 9 :**

Which two numbers need to be interchanged to make the following equation correct?  $7 + 56 \div 8 \times 2 - 13 = 11$

**Difficulty : Moderate**

**Average Time : 54 Seconds**

**Options :**



7 and 13

2. 7 and 2

3. 8 and 2

4. 7 and 8

### Solution :

The correct answer is **option 4** i.e. **7 and 8**.

**Given equation:**  $7 + 56 \div 8 \times 2 - 13 = 11$

Let us check all the options:

#### Option 1: 7 and 13

The expression becomes:

$$= 13 + 56 \div 8 \times 2 - 7 = 11$$

= 20 is not equal to 11.

#### Option 2: 7 and 2

The expression becomes:

$$= 2 + 56 \div 8 \times 7 - 13 = 11$$

= 38 is not equal to 11.

#### Option 3: 8 and 2

The expression becomes:

$$= 7 + 56 \div 2 \times 8 - 13 = 11$$

= 218 is not equal to 11.

#### Option 4: 7 and 8

The expression becomes:

$$= 8 + 56 \div 7 \times 2 - 13 = 11$$

= 11 is equal to 11.

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

**Question 10 :**





Study the given pattern carefully and select the number that can replace the question mark (?) in it. 15 9 144 18 12 ? 22 17 195

Difficulty : Moderate

Average Time : 66 Seconds

Options :

1. 188
2. 255
3. 180
4. 224

Solution :

The correct answer is **option 3** i.e. **180**.

The logic used here is:

**Row 1:**  $(15 - 9) \times (15 + 9) = 6 \times 24 = 144$

**Row 3:**  $(22 - 17) \times (22 + 17) = 5 \times 39 = 195$

**Row 2:**  $(18 - 12) \times (18 + 12) = 6 \times 30 = 180$

**Question 11 :**

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements. Statements: Some pencils are pens. All pens are papers. All pencils are colours. Conclusions: I. All colours are pens. II. Some colours are pencils. III. Some papers are pens.

Difficulty : Moderate

Average Time : 56 Seconds

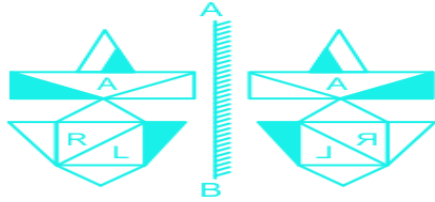
Options :

1. Only conclusion II follows.
2. All conclusions I, II and III follow
3. Only conclusions II and III follow
4. Only conclusions I and II follow.

Solution :

The correct answer is **option 3** i.e. **Only conclusions II and III follow**.

The least possible Venn Diagram for the given statements is drawn below:



### Conclusions:

- I. All colours are pens **False** (It is possible, but no definite conclusion can be drawn.)
- II. Some colours are pencils **True** (As pencils are colours, so, some colours are pencils.)
- III. Some papers are pens **True** (As all pens are papers, so some papers are pens.)

Hence, **Only conclusions II and III follow.**

### Question 12 :

A cube of sides 49 cm is painted purple on all the faces and then cut into smaller cubes of sides 7 cm each. Find the number of smaller cubes having only one face painted.

Difficulty : Moderate

Average Time : 76 Seconds

### Options :

- 1. 100
- 2. 25
- 3. 50
- 4. 150

### Solution :

The correct answer is **option 4** i.e. **150**.

A cube of sides 49 cm is painted purple on all the faces and then cut into smaller cubes of sides 7 cm each.

So, the number of smaller cubes having only one face painted =  $6(\text{Smaller cube length} - 2)^2 = 6(7 - 2)^2 = 6(25) = 150$

### Question 13 :

In a certain code language, 'first of all' is written as 'kan dan san', 'who is first' is written as 'zan kan ven', and 'this is pale' is written as 'ven gen len'. How will 'who' be written in that language?

Difficulty : Moderate

Average Time : 54 Seconds

### Options :

1. zan
2. yen
3. kan
4. gen

### Solution :

The correct answer is **option 1** i.e. **zan**.

**first** of all - **kan** dan san

who **is** **first** - zan **kan** ven

this **is** pale - ven gen len

Code for the word first = kan

Code for the word is = ven

Code for the word who = zan

So, the code for the word 'who' is 'zan'.

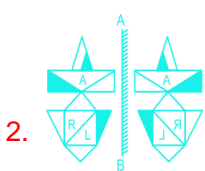
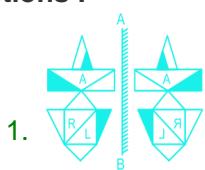
### Question 14 :

Select the figure from among the given options that can replace the question mark (?) in the following series.

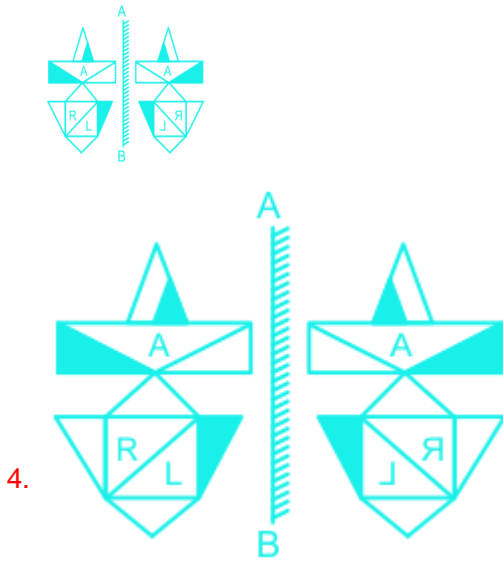
Difficulty : Moderate

Average Time : 54 Seconds

### Options :



3.



**Solution :**

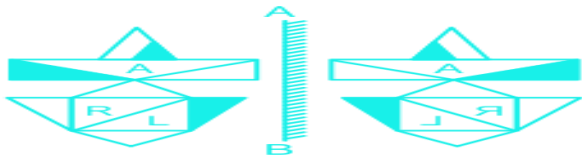


The correct answer is **option 1**.

The logic used here is:

The figure is rotated by 45 degrees in the clockwise direction.

The series of figures:



**Question 15 :**

Select the option that is related to the third number in the same way as the second number is related to the first number.  
68: 19:: 164:?

**Difficulty : Moderate**

**Average Time : 72 Seconds**

**Options :**

1. 41

2. 43

39

4. 45

**Solution :**

The correct answer is **option 2** i.e. **43**.

The logic used here is:

68: 19

$$(68 + 8) \div 4 = 72 \div 4 = 19$$

Similarly,

164:?

$$(164 + 8) \div 4 = 172 \div 4 = 43$$

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

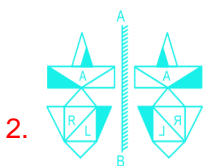
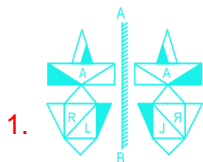
**Question 16 :**

The sequence of folding a piece of paper (figures i and ii) and the manner in which the folded paper has been cut (figure iii) is shown in the following figures. Select the option that would most closely resemble the unfolded form figure (iii).

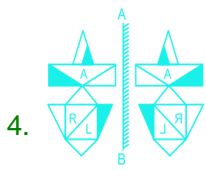
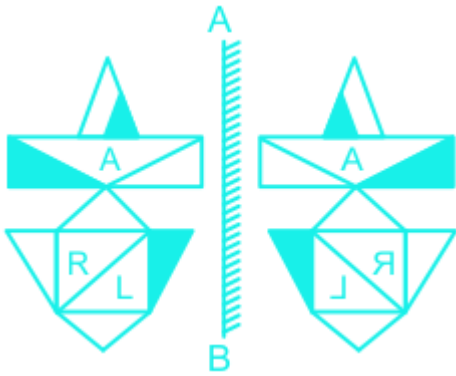
Difficulty : Moderate

Average Time : 48 Seconds

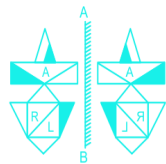
**Options :**



3.

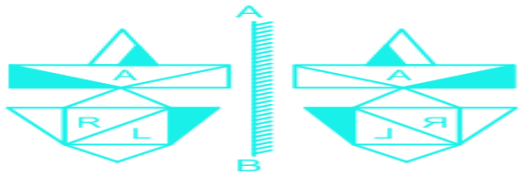


**Solution :**



The correct answer is **option 4**.

After unfolding, the paper will appear as follows:



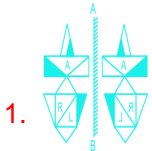
**Question 17 :**

Select the option that is NOT embedded in the given from (X) (rotation is NOT allowed)

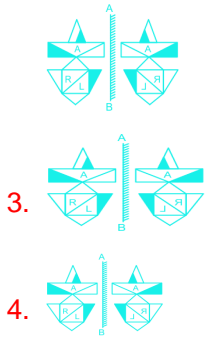
**Difficulty : Moderate**

**Average Time : 66 Seconds**

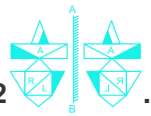
**Options :**



2.  and or type unknown



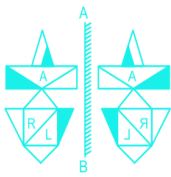
**Solution :**



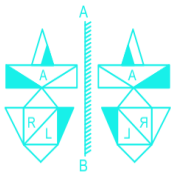
The correct answer is **option 2**.

The figure in option 2 is not embedded in the given figure.

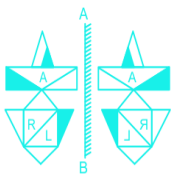
The figure in option 1 is embedded in the given figure, as shown below:



The figure in option 3 is embedded in the given figure, as shown below:



The figure in option 4 is embedded in the given figure, as shown below:



**Question 18 :**

Select the correct combination of mathematical signs that can sequentially replace the \* signs and make the given equation correct.  $88 * 120 * 42 * 240 * 48 * 2$

**Difficulty : Moderate**

**Average Time : 98 Seconds**

**Options :**

1. +, ÷, -, =, ×

2. ×, ÷, =, -, +

3. =, ×, +, ÷, -

4. =, -, +, ÷, ×

**Solution :**

The correct answer is **option 4** i.e. =, -, +, ÷, ×.

**Given equation:**  $88 \times 120 \div 42 \times 240 \div 48 \times 2$ 

Let us check all the options:

**Option 1: +, ÷, -, =, ×**

The expression becomes:

$$= 88 + 120 \div 42 - 240 = 48 \times 2$$

$$= -149.14 \text{ is not equal to } 96.$$

**Option 2: ×, ÷, =, -, +**

The expression becomes:

$$= 88 \times 120 \div 42 = 240 - 48 + 2$$

$$= 251.42 \text{ is not equal to } 194.$$

**Option 3: =, ×, +, ÷, -**

The expression becomes:

$$= 88 = 120 \times 42 + 240 \div 48 - 2$$

$$= 5043 \text{ is not equal to } 88.$$

**Option 4: =, -, +, ÷, ×**

The expression becomes:

$$= 88 = 120 - 42 + 240 \div 48 \times 2$$

$$= 88 \text{ is equal to } 88.$$

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

**Question 19 :**





Select the number from among the given options that can replace the question mark (?) in the following series. 298, 217, 168, 143, ?

**Difficulty : Moderate**

**Average Time : 70 Seconds**

**Options :**

1. 138
2. 134
3. 112
4. 128

**Solution :**

The correct answer is **option 2** i.e. **134**.

Given series: 298, 217, 168, 143, ?

The series follows this pattern:

$$298 - 81 = 217$$

$$217 - 49 = 168$$

$$168 - 25 = 143$$

$$143 - 9 = 134$$

So, the next term in the series is **134**.

**Question 20 :**

Select the correct option that indicates the arrangement of the given words in a logical and meaningful order. 1. Treatment 2. Recovery 3. Virus 4. Symptoms 5. Infection

**Difficulty : Moderate**

**Average Time : 43 Seconds**

**Options :**

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

**Solution :**



The correct answer is **option 2** i.e. **3, 5, 4, 1, 2**.

In this question, you need to arrange the words in a logical and meaningful order. So, the arrangement is how an individual gets affected by a disease and gets recovered.

1. Virus
2. Infection
3. Symptoms
4. Treatment
5. Recovery

**Question 21 :**

In a certain code language, 'FLASK' is written as 'IPFYR'. How will 'TOURS' be written in that language?

**Difficulty : Moderate**

**Average Time : 46 Seconds**

**Options :**

1. **WSZXZ**
2. **WSYYZ**
3. **WTZXZ**
4. **WRZXY**

**Solution :**

The correct answer is **option 1** i.e. **WSZXZ**.

The logic used here is:

'FLASK' is written as 'IPFYR'

$$F + 3 = I$$

$$L + 4 = P$$

$$A + 5 = F$$

$$S + 6 = Y$$

$$K + 7 = R$$

Similarly;



Code for the word TOURS:

$$T + 3 = W$$

$$O + 4 = S$$

$$U + 5 = Z$$

$$R + 6 = X$$

$$S + 7 = Z$$

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

**Question 22 :**

Four letter clusters have been given, out of which three are alike in some manner and one is different. Select the letter cluster that is different.

**Difficulty : Moderate**

**Average Time : 56 Seconds**

**Options :**

1. VZDHN
2. KOSWA
3. BFJNR
4. QUYCG

**Solution :**

The correct answer is **option 1** i.e. **VZDHN**.

The logic used here is:

$$1\text{st letter} + 4 = 2\text{nd letter}$$

$$2\text{nd letter} + 4 = 3\text{rd letter}$$

$$3\text{rd letter} + 4 = 4\text{th letter}$$

$$4\text{th letter} + 4 = 5\text{th letter}$$

**Option 1: VZDHN**

$$V + 4 = Z$$

$$Z + 4 = D$$

$D + 4 = H$

$H + 4 = L$

This does not follow the logic.

Hence, **option 1** is the odd one out.

**Question 23 :**

Select the Venn Diagram that best represents the relationship between the following Noncommunicable diseases, Cataract, Diabetes, Measles

**Difficulty : Moderate**

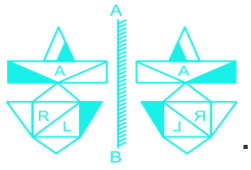
**Average Time : 52 Seconds**

**Options :**

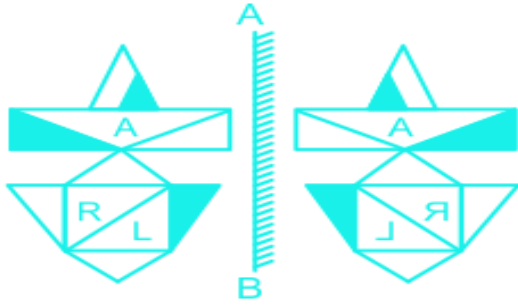
- 1.
- 2.
- 3.
- 4.

**Solution :**

The correct answer is **option 2**



The possible Venn diagram is:



All cataracts and diabetes are non-communicable diseases and measles is a different class.

Hence, the diagram given above shows the best relationship between them.

**Question 24 :**

Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series. r \_ k n \_ c \_ \_ h \_ \_ b c b t \_ k \_ b c b

**Difficulty : Moderate**

**Average Time : 78 Seconds**

**Options :**

1. h b b s k n h c
2. h c b s k n b n
3. h b b s k n h n
4. h b c q k n h n

**Solution :**

The correct answer is **option 3** i.e. **h b b s k n h n**.

The sequence is – **K R Q T S Q T**

Given sequence: r \_ k n \_ c \_ \_ h \_ \_ b c b t \_ k \_ b c b

**Option 1:** h b b s k n h c

r h k n **b c b s h k n** b c b t h k c b c b



Option 1 does not form a particular pattern.

**Option 2:** h c b s k n b n

r h k n c c b s h k n b c b t b k n b c b

Option 2 does not form a particular pattern.

**Option 3:** h b b s k n h n

r h k n b c b s h k n b c b t h k n b c b

Option 3 forms a particular pattern.

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

**Question 25 :**

Sahasra started meaning from her house towards the north After 40 meters she turned left and run 75 meters. She then turned right and run for 30 meters, and again turned right to run 75 meters. In which direction was she running finally?

**Difficulty :** Moderate

**Average Time :** 105 Seconds

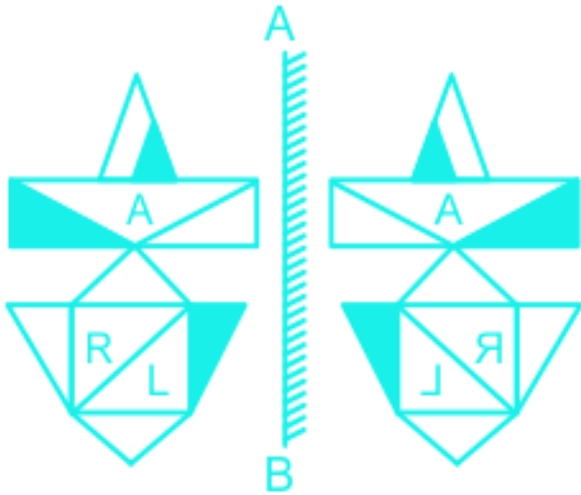
**Options :**

1. South
2. North
3. West
4. East

**Solution :**

The correct answer is **option 4** i.e. **East**.

Using the above information we can draw the following diagram:



From the figure, Sahasra was running in the East direction.

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

### Question 26 :

Select the number from among the given options that can replace the question mark (?) in the following series. 61, 99, 152, 222, 312, ?

Difficulty : Moderate

Average Time : 49 Seconds

### Options :

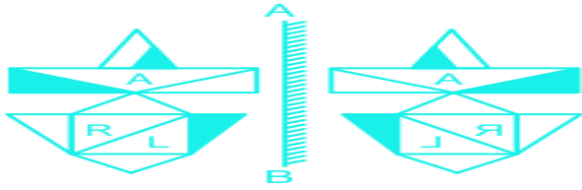
1. 452
2. 426
3. 398
4. 412

### Solution :

The correct answer is **option 2** i.e. **426**.

Given series: 61, 99, 152, 222, 312, ?

The series follows this pattern:



So, the next term in the series is **426**.

**Question 27 :**

During the rule of which dynasty were Nalanda and Vikramashila universities founded?

Difficulty : Moderate

Average Time : 42 Seconds

**Options :**

1. The Palas
2. The Senas
3. The Pratihara
4. The Rashtrakutas

**Solution :**

The correct answer is **option 1** i.e. **The Palas**.

- The Pala dynasty ruled the regions of Bengal and Bihar for about 400 years, from the 8th century until the end of the 11th century, with about 20 leaders on the throne during the period.
- Gopala, the first Pala king, was a Buddhist and so all of his descendants also were.
- Vikramashila was founded by the Pala emperor Dharmapala.

**Question 28 :**

Which of the following is commonly referred to as 'Ozone Hole'?

Difficulty : Moderate

Average Time : 49 Seconds

**Options :**

1. Lithosphere
2. Troposphere
3. Biosphere
4. Stratosphere

**Solution :**





The correct answer is **option 4** i.e. **Stratosphere**.

- Ozone hole is a thinning of the protective ozone layer in the stratosphere above Antarctica that begins every September.
- The ozone hole has developed because people have polluted the atmosphere with chemicals containing chlorine and bromine.
- The ozone layer is very important for life on Earth because it has the property of absorbing the most damaging form of UV radiation.

**Question 29 :**

In which of the following years was the Citizenship Act passed for the first time in India?

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

1. 1962
2. 1959
3. 1955
4. 1947

**Solution :**

The correct answer is **option 3** i.e. **1955**.

- The Citizenship Act was passed on 30th December, 1955 for the first time in India.
- The Bill amends the Citizenship Act, 1955, and seeks to make foreign illegal migrants of certain religious communities coming from Afghanistan, Bangladesh, and Pakistan eligible for Indian citizenship.
- The Act specifies that citizenship may be acquired in India through five methods – by birth in India, by descent, through registration, by naturalisation (extended residence in India), and by incorporation of territory into India.

**Question 30 :**

Which of the following is not a percussion or percussion instrument?

Difficulty : Moderate

Average Time : 52 Seconds

**Options :**

1. Ghatam
2. Tabla
3. Mridangam



### Sarod

**Solution :**

The correct answer is **option 4** i.e. **Sarod**

Apart from the sarod, all other instruments are percussion or percussion instruments.

**Question 31 :**

The Mesopotamians wrote on tablets made of:

**Difficulty : Moderate**

**Average Time : 33 Seconds**

**Options :**

1. Clay
2. sandstone
3. limestone
4. slate

**Solution :**

The correct answer is **option 1** i.e. **Clay**.

- Writing from ancient Mesopotamia is on clay tablets.
- Scribes would take a stylus (a stick made from a reed) and press the lines and symbols into soft, moist clay.
- Once they were done, they would let the clay harden and they had a permanent record.
- These tablets contained the signs/symbols of fish, bread, leaves and were written around 3200 BCE.

**Question 32 :**

For Rabi marketing season 2021-22, the Cabinet Committee on Economic Affairs (CCEA) announced highest increase in Minimum Support Price (MSP) for \_\_\_\_\_.

**Difficulty : Moderate**

**Average Time : 52 Seconds**

**Options :**

1. lentil
2. gram
3. barley
4. wheat

**Solution :**

The correct answer is **option 1** i.e. **lentil**.

- The Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister Shri Narendra Modi has approved the increase in the Minimum Support Prices (MSPs) for all mandated Rabi crops for marketing season 2021-22.
- It was done to encourage the farmers to shift to larger area under these crops and adopt best technologies and farm practices to correct demand-supply imbalance.
- The expected returns to farmers over their cost of production are estimated to be highest in case of wheat and rapeseed and mustard (100 per cent each), followed by lentil (79 per cent), gram (74 per cent), barley (60 per cent) and safflower (50 per cent).

### Question 33 :

Who among the following is the author of the book 'Myth = Mithya : Decoding Hindu Mythology'?

Difficulty : Moderate

Average Time : 61 Seconds

### Options :

1. Shashi Tharoor
2. Devdutt Pattanaik
3. Vikram Seth
4. Amitav Ghosh

### Solution :

The correct answer is **option 2** i.e. **Devdutt Pattanaik**.

- Devdutt Pattanaik is an "Author, Speaker, Illustrator, Mythologist".
- He has written over 30 books, his latest book being 'Pilgrim Nation: The Making of Bharatvarsh'.
- He has also written 600 columns on relevance of mythology in modern time over the past 20 years.
- He had trained in medicine and worked in the pharma industry for 15 years.

### Question 34 :

Who among the following won the 'Crossword Book Award 2020' for a debut novel?

Difficulty : Moderate

Average Time : 50 Seconds

### Options :

1. Siddhartha Sarma
2. Twinkle Khanna



Madhuri Vijay

4. Shals Mahajan

**Solution :**

The correct answer is **option 3** i.e. **Madhuri Vijay**.

- Madhuri Vijay, the author of 'The Far Field' is an Indian author living in Hawaii.
- She is the recipient of a Pushcart Prize, and her writing has appeared in Best American Non-Required Reading, Narrative Magazine and Salon, among other publications.
- Her book, The Far Field, was just announced the winner of the literary honour by a panel of five judges: Pradip Krishen, filmmaker and environmentalist (Chair); Anjum Hasan, author and critic; K.R. Meera, author; Parvati Sharma, author; and Arvind Subramanian, economist and former Chief Economic Adviser to the Government of India.

**Question 35 :**

Which of the following mountains is located near the river Dhauliganga?

Difficulty : Moderate

Average Time : 59 Seconds

**Options :**

1. Kamet
2. Nanda Devi
3. Anamudi
4. Hathi Parvat

**Solution :**

The correct answer is **option 2** i.e. **Nanda Devi**.

- Dhauliganga river originates from Vasudhara Tal, perhaps the largest glacial lake in Uttarakhand and joined by the Rishiganga river at Raini.
- Dhauliganga is one of the important tributaries of Alaknanda, the other being the Nandakini, Pindar, Mandakini and Bhagirathi.
- After subsuming Mandakini, the Alaknanda carries on past Srinagar, before joining the Ganga at Devprayag.

**Question 36 :**

A typical adult human body contains about \_\_\_\_\_ of magnesium.

Difficulty : Moderate

Average Time : 50 Seconds

**Options :**

1. 20 g
2. 10 g
3. 15 g
4. 25 g

**Solution :**

The correct answer is **option 4** i.e. **25 g**.

- An adult body contains approximately 25 g magnesium.
- Magnesium is a component of bone; in fact 60% of the body's magnesium is stored in bone.
- Less than 1% of total magnesium is in blood serum, and these levels are kept under tight control.
- It is also involved with the activity of bone-building cells and the parathyroid hormone, which regulates calcium levels.

**Question 37 :**

Which of the following two teams played against each other in the first match of IPL 2021?

**Difficulty : Moderate**

**Average Time : 51 Seconds**

**Options :**

1. Chennai Super Kings and Sunrisers Hyderabad
2. Punjab Kings and Delhi Capitals
3. Kolkata Knight Riders and Rajasthan Royals
4. Mumbai Indians and Royal Challengers Bangalore

**Solution :**

The correct answer is **option 4** i.e. **Mumbai Indians and Royal Challengers Bangalore**.

- Mumbai Indians and Royal Challengers Bangalore were the two teams which played against each other in the first match of IPL 2021.
- Matches will be held at six venues across the country – Mumbai, Chennai, Bengaluru, Kolkata, New Delhi and Ahmedabad.
- The following eight franchises are part of the IPL 2021 — Chennai Super Kings (CSK), Delhi Capitals (DC), Kolkata Knight Riders (KKR), Punjab Kings (PBKS), Mumbai Indians (MI), Royal Challengers Bangalore (RCB), Rajasthan Royals (RR) and Sunrisers Hyderabad (SRH).

**Question 38 :**



In which of the following years did the Ramsar convention to promote conservation and wise use of all wetlands through regional actions and international cooperation come to force in India?

Difficulty : Moderate

Average Time : 65 Seconds

Options :

1. 1989
2. 1990
3. 1980
4. 1982

Solution :

The correct answer is **option 4** i.e. **1982**.

- The Convention came into force in India on 1 February 1982.
- The Wetlands, or "Ramsar", Convention is the oldest of the global nature conservation treaties, and the only one to deal with a particular ecosystem type.
- The Convention covers a very wide variety of wetland habitats including rivers, lakes, ponds, marshes, coastal areas, estuaries, bogs and even coral reefs.

Question 39 :

Which of the following is correctly paired?

Difficulty : Moderate

Average Time : 46 Seconds

Options :

1. Cyanide ion -  $\text{CN}^-$
2. Ammonia -  $\text{OH}^-$
3. Bromide ion -  $\text{F}^-$
4. Fluoride ion -  $\text{Cl}^-$

Solution :

The correct answer is **option 1** i.e. **Cyanide ion -  $\text{CN}^-$**

- Cyanide is a pseudohalide anion that is the conjugate base of hydrogen cyanide.
- Cyanide ion is a chemical compound made up of one Carbon atom and one nitrogen atom with the chemical formula of  $\text{CN}^-$ .
- It occurs in the form of white powder or crystals in its aqueous form, Cyanide smells like bitter almonds.

**Question 40 :**

In which year was the Immunization Programme introduced in India as 'Expanded Programme of Immunization' (EPI) by the Ministry of Health and Family Welfare?

**Difficulty : Moderate****Average Time : 57 Seconds****Options :**

1. 1982
2. 1974
3. 1978
4. 1980

**Solution :**

The correct answer is **option 3** i.e. **1978**.

- Expanded Programme on Immunization was launched in 1978. It was renamed as Universal Immunization Programme in 1985 when its reach was expanded beyond urban areas.
- Universal Immunization Programme (UIP) is one of the largest public health programmes targeting close of 2.67 crore newborns and 2.9 crore pregnant women annually.
- It is one of the most cost-effective public health interventions and largely responsible for reduction of vaccine preventable under-5 mortality rate.

**Question 41 :**

Select the option that can be used as a one-word substitute for the given group of words. An image of a God used for worship

**Difficulty : Moderate****Average Time : 52 Seconds****Options :**

1. Model
2. Idol
3. Icon
4. Temple

**Solution :**

The correct answer is **option 2** i.e. **Idol**

One Word Substitution means using a specific word to replace a wordy phrase or sentence and making it shorter, concise,

and clearer to understand.

An image of a God used for worship is known as an idol.

A thing used as an example to follow or imitate is known as a model.

A person or thing regarded as a representative symbol or as worthy of veneration is known as an icon.

A temple is a building devoted to the worship of a god or gods.

**Question 42 :**

What is the value of  $p$ , if  $25(3 + 4p) \div 12$  of  $5 - 3 \times 8 = 6$ ?

**Difficulty : Moderate****Average Time : 57 Seconds****Options :**

1. 72
2. 69
3.  $15\left(\frac{1}{3}\right)$
4.  $17\left(\frac{1}{4}\right)$

**Solution :**

The correct answer is **option 4** i.e.  $17\left(\frac{1}{4}\right)$

**Given :**

$$25(3 + 4p) \div 12 \text{ of } 5 - 3 \times 8 = 6$$

**Solution :**

$$25(3 + 4p) \div 12 \text{ of } 5 - 3 \times 8 = 6$$

$$25(3 + 4p) \div 60 - 3 \times 8 = 6$$

$$\left(\frac{25(3 + 4p)}{60} - 24 = 6\right)$$

$$\left(\left(\frac{15}{12} + \frac{20p}{12}\right) - 24 = 6\right)$$

$$\left(\left(\frac{15 + 20p}{12} - 24 = 6\right)\right)$$

$$\left(\left(\frac{15 + 20p - 288}{12} = 6\right)\right)$$

$$20p - 273 = 72$$

$$20p = 72 + 273$$





$$20p = 345$$

$$p = \left(\frac{345}{20}\right)$$

$$p = \left(17\frac{1}{4}\right)$$

Hence the value of p is  $\left(17\frac{1}{4}\right)$ .

**Question 43 :**

Study the given bar graph and answer the questions that follows. The bar graph shows the exports of cars type A and B (in Rs millions) from 2014 to 2018. What is the ratio of the total exports of cars of type A in 2016 and 2018 to the total exports of cars of Type B in 2015 and 2017?

Difficulty : Moderate

Average Time : 78 Seconds

**Options :**

1. 13 : 12
2. 10 : 9
3. 5 : 4
4. 23 : 21

**Solution :**

The correct answer is **option 4** i.e. **23 : 21**

Solution :

The number of cars of type A in 2016 and 2018 =  $(275 + 300) = 575$

The number of cars of Type B in 2015 and 2017 =  $(250 + 275) = 525$

Now, the required ratio =  $575/525$

Hence the ratio of the total exports of cars of type A in 2016 and 2018 to the total exports of cars of Type B in 2015 and 2017 = **23 : 21**.

**Question 44 :**

A person travels  $5x$  distance at a speed of 5 km/h,  $x$  distance at a speed of 5 km/h, and  $4x$  distance at a speed of 6 km/h, and takes a total of 112 minutes. What is the total distance (in km) travelled by the person?

Difficulty : Moderate

Average Time : 55 Seconds

**Options :**



8

2. 10

3. 9

4. 12

**Solution :**

The correct answer is **option 2** i.e. **10**

**Concept Used:**

Distance = Speed × time    Distance/Speed = time    ... (i)

**Solution :**

According to the given question, using equation (i), we get

$$5x/5 + x/5 + 4x/6 = 112/60$$

$$x + x/5 + 2x/3 = 28/15$$

$$28x/15 = 28/15$$

$$x = 1$$

Hence, The required total distance  $(5x + x + 4x) = 10x = 10 \times 1 = 10$  Km.

**Question 45 :**

Let  $x$  cm<sup>2</sup> be the surface area and  $y$  cm<sup>3</sup> be the volume of a sphere such that  $y = 14x$ . What is the radius (in cm) of the sphere?

**Difficulty : Moderate****Average Time : 53 Seconds****Options :**

1. 102

2. 42

3. 51

4. 68

**Solution :**

The correct answer is **option 2** i.e. **42**



Concept Used :

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

2. Volume of sphere =  $\frac{4}{3} \pi r^3$

Given :

1. Surface area of the sphere =  $x$

2. Volume of sphere =  $y$

3.  $y = 14x$

Solution :

According to the question,

Surface area of sphere =  $x$

$$4 \pi r^2 = x \dots\dots(i)$$

Also, Volume of the sphere =  $y$

$$\frac{4}{3} \pi r^3 = y$$

Given that  $y = 14x$

$$\frac{4}{3} \pi r^3 = 14x$$

$$\frac{2}{21} \pi r^3 = x \dots\dots(ii)$$

From equation (i) and equation (ii)

$$4 \pi r^2 = \frac{2}{21} \pi r^3$$

$$r = 2 \times 21$$

$$r = 42$$

Hence the radius of the sphere is 42 cm.

**Question 46 :**

The average of 46 numbers is 50.5. The average of the first 25 numbers is 45 and that of the last 18 numbers is 56. The 28th number is 67. If the 26th and 27th numbers are excluded, then what is the average of the remaining numbers?

Difficulty : Moderate

Average Time : 93 Seconds

Options :

51.5

2. 50.4

3. 50

4. 51

**Solution :**

The correct answer is **option 3** i.e. **50**

**Concept Used:**

Average of  $n$  numbers = (sum of  $n$  numbers)/ $n$

Sum of  $n$  numbers = Average of  $n$  numbers  $\times n$

**Solution:**

According to the given question,

The sum of 46 numbers =  $50.5 \times 46 = 2323 = s_1$  (let)

The sum of first 25 numbers =  $45 \times 25 = 1125$

And, the sum of last 18 numbers =  $56 \times 18 = 1008$

Now, the sum of the numbers excluding 26th, 27th and 28th terms =  $s_2 = 1125 + 1008 = 2133$

Given that, 28th term = 67

Therefore, Sum of the terms excluding 26th and 27th term =  $2133 + 67 = 2200$

If the 26th and 27th terms are excluded, then remaining terms = 44

Average =  $(2200)/44 = 50$ .

The average of the remaining numbers is 50.

**Question 47 :**

What is the least number which when decreased by 7 is divisible by 15, 24, 28 and 32?

**Difficulty :** Moderate

**Average Time :** 65 Seconds

**Options :**

1. 10097

2. 10087



10067

4. 10077

**Solution :**

The correct answer is **option 2** i.e. **10087**

Solution :

The LCM of (15, 24, 28, 32) = 3360

Now, the required number =  $(3360 \times n) + 7$

Now putting the value of n according to the options,

$n = 3$

Required number =  $(3360 \times 3) + 7 = 10087$

the required number = 10087.

**Question 48 :**

If  $x+y+z = 2$ ,  $xy+yz+zx = -11$ , and  $xyz = -12$ , then what is the value of  $x^3 + y^3 + z^3$ ?

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

1. 36

2. 38

3. 40

4. 42

**Solution :**

The correct answer is **option 2** i.e. **38**

Concept Used :

$$x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx). \quad \dots(i)$$

Given :

1.  $x + y + z = 2$

2.  $xy + yz + zx = -11$

3.  $xyz = -12$

Solution :

$$(x + y + z)^2 = x^2 + y^2 + z^2 + 2(xy + yz + zx)$$

From the given values

$$(2)^2 = x^2 + y^2 + z^2 + 2(-11)$$

$$x^2 + y^2 + z^2 = 22 + 4 = 26 \quad \dots\dots(ii)$$

Now, putting the given values in equation (i)

$$x^3 + y^3 + z^3 - 3(-12) = (2)(26 + 11)$$

$$x^3 + y^3 + z^3 = 74 - 36 = 38$$

The required value =  $x^3 + y^3 + z^3 = 38$ .**Question 49 :**

The base of a triangle is increased by 40%. By what percentage (correct to two decimal places) should its height be increased so that the area increases by 60%?

**Difficulty : Moderate****Average Time : 87 Seconds****Options :**

1. 14.29%
2. 20.01%
3. 15.54%
4. 18.62%

**Solution :**The correct answer is **option 1** i.e. **14.29%****Concept Used :**Area of triangle =  $\frac{1}{2} \times b \times h$ **Solution:**Let the base of the triangle be  $x$  cm, so the new base will be  $140x/100 = 7x/5$ Let the height of the triangle be  $h$  cm and the height of new triangle is  $h_1$  cm

It is given that increase in area of triangle is 60%

$$\frac{\left(\frac{1}{2} \times \frac{7x}{5} \times h_1\right)}{\left(\frac{1}{2} \times x \times h\right)} = \frac{160}{100}$$

$$\left(\frac{h_1}{h}\right) = \frac{8}{7}$$

$$\text{So increase in the height} = \left(\frac{8-7}{7} \times 100\right) = \frac{100}{7} = 14.2857.. \approx 14.29$$

Hence percentage increase in the height of the triangle is 14.29%.

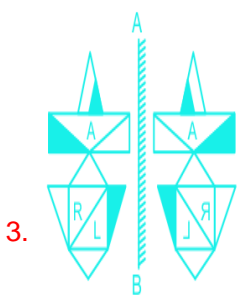
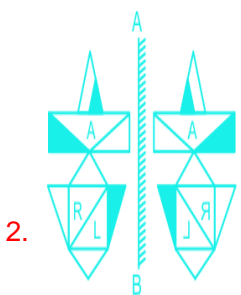
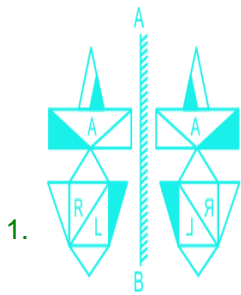
**Question 50 :**

Select the correct mirror image of the given figure when the mirror is placed at 'AB' as shown.

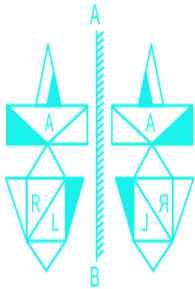
**Difficulty : Moderate**

**Average Time : 66 Seconds**

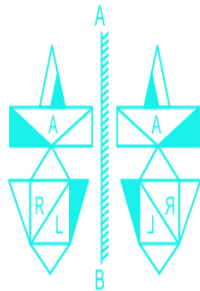
**Options :**



4.

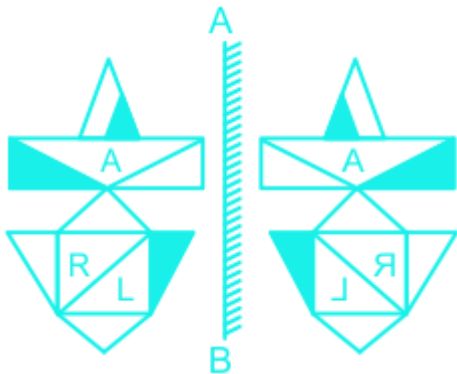


**Solution :**



The correct answer is **option 1**.

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 1** is the correct answer.

**Question 51 :**

On 21 October 1943, Subhash Chandra Bose proclaimed the formation of the Provisional Government of Free India in \_\_\_\_\_.

**Difficulty :** Moderate

**Average Time :** 79 Seconds

**Options :**





Russia

2. Singapore

3. Japan

4. Germany

### Solution :

The correct answer is **option 2** i.e. **Singapore**.

- On 21 October 1943, in a dramatic moment in India's freedom struggle, Congressman-turned anti-British warrior, Subhas Chandra Bose—'Netaji' to his followers—announced the establishment of the Provisional Government of Free India.
- Bose was convinced that an armed struggle against the mighty British was the only way to throw them out.
- He was born on 23 January 1897 in Cuttack, then a part of Bengal Province's Orissa Division.

### Question 52 :

According to the Output Method, GDP is calculated as:

Difficulty : Moderate

Average Time : 51 Seconds

### Options :

1. GDP at Constant Prices – Taxes + Subsidies
2. GDP at Constant Prices + Subsidies
3. GDP at Constant Prices – Taxes
4. GDP at Constant Prices + Taxes – Subsidies

### Solution :

The correct answer is **option 1** i.e. **GDP at Constant Prices – Taxes + Subsidies**.

- GDP (as per output method) = Real GDP (GDP at constant prices) – Taxes + Subsidies.
- The GDP Output Method measures the monetary or market value of all the goods and services produced within the borders of the country.
- GDP growth rate is an important indicator of the economic performance of a country. It is the percentage increase in GDP from year to year.

### Question 53 :

South Asian leaders signed the SAARC Charter at the first summit in \_\_\_\_\_ in the year 1985.

Difficulty : Moderate

Average Time : 57 Seconds



### Options :

1. Colombo
2. Dhaka
3. Delhi
4. Thimphu

### Solution :

The correct answer is **option 2** i.e. **Dhaka**.

- South Asian leaders signed the SAARC Charter at the first summit in Dhaka on 7 and 8 in the year 1985.
- It was signed by the President of Bangladesh, the King of Bhutan, the Prime Minister of India, the President of Maldives, the King of Nepal, the President of Pakistan and the President of Sri Lanka.
- The idea of forming a regional bloc consisting of the seven South Asian countries was initiated by the then President of Bangladesh in 1980.

### Question 54 :

In which of the following Indian states will you find the Tibetan Buddhist Golden Temple?

Difficulty : Moderate

Average Time : 54 Seconds

### Options :

1. Sikkim
2. Karnataka
3. Himachal Pradesh
4. Tamil Nadu

### Solution :

The correct answer is **option 2** i.e. **Karnataka**.

- The Namdroling Monastery, popularly referred to as 'The Golden Temple' is one of the largest Tibetan settlements in India.
- The main attractions inside the temple are the statues of Lord Buddha in the centre with statues of Lord Amitayus and Lord Padmasambhava on either sides.
- It is located in Bylakuppe, about 5 kms from Kushalanagara in Kodagu district.

### Question 55 :

Who among the following was selected for the inaugural Chhattisgarh Veer Award in April 2021?



Difficulty : Moderate

Average Time : 50 Seconds

Options :

1. Trimbak Sharma
2. Teejan Bai
3. Dutee Chand
4. Kishore Sahu

Solution :

The correct answer is **option 3** i.e. **Dutee Chand**.

- The Indian sportsperson 'Dutee Chand' has been chosen for the inaugural edition of the Chhattisgarh Veerni Award.
- Dutee Chand, the Jakarta Asian Games silver-medalist in 100 and 200 metres will receive Chhattisgarh Veerni Award.
- Dutee holds the national record of 11.22 secs in 100m.

Question 56 :

With which bank have Dena Bank and Vijaya Bank been merged?

Difficulty : Moderate

Average Time : 46 Seconds

Options :

1. Punjab National Bank
2. United Bank of India
3. Corporation Bank
4. Bank of Baroda

Solution :

The correct answer is **option 4** i.e. **Bank of Baroda**.

- Vijaya Bank and Dena Bank were merged with Bank of Baroda from April 1, 2019.
- The tripartite amalgamation reflects the government's focus towards consolidation and strengthening of public-sector banking and also to deal with the raising problematic issues like non-performing assets (NPAs) and default of loans.
- As per the share exchange ratio approved in relation to the merger, the Bank of Baroda will issue 110 shares of Rs 2 each for every 1000 shares of Dena Bank and 402 shares of Rs 2 each for every 1000 shares of Vijaya Bank.

Question 57 :

Fouaad Mirza is an Indian \_\_\_\_\_.

**Difficulty : Moderate**

**Average Time : 56 Seconds**

**Options :**

1. golfer
2. boxer
3. cricketer
4. equestrian

**Solution :**

The correct answer is **option 4** i.e. **equestrian**.

- Fouaad Mirza, the third Indian equestrian to compete at the Olympics, is a torchbearer for the still-fledgling sport in the country.
- He became the first Indian to reach the final of eventing and wrote a new chapter for equestrian sport in India at Tokyo 2020.
- He is the first Indian since 1982 to win two silvers at an individual event in the sport at the Asian Games 2018.

**Question 58 :**

The \_\_\_\_\_ Scheme, which is an initiative of the Ministry of Drinking Water and Sanitation, seeks to provide water to 115 Indian districts to help them in meeting their basic needs such as drinking, cooking and other domestic essentials.

**Difficulty : Moderate**

**Average Time : 59 Seconds**

**Options :**

1. PRAJWAL
2. NEER
3. NIRMAL
4. SWAJAL

**Solution :**

The correct answer is **option 4** i.e. **SWAJAL**.

- The SWAJAL Scheme, which is an initiative of the Ministry of Drinking Water and Sanitation, seeks to provide water to 115 Indian districts to help them in meeting their basic needs such as drinking, cooking and other domestic



essentials.

- The project is expected to incur a cost of INR 700 crores through flexi-funds under the existing National Rural Drinking Water Programme (NRDWP) budget.
- The project has been launched with the vision of providing sustainable and adequate drinking water in an integrated manner to the rural populous on a pilot basis.

### Question 59 :

Which amendment to the Constitution of India changed the description of India from a 'sovereign democratic republic' to a 'sovereign, socialist secular democratic republic' and also changed the words 'unity of the nation' to 'unity and integrity of the nation'?

Difficulty : Moderate

Average Time : 66 Seconds

### Options :

1. 44th
2. 40th
3. 42nd
4. 47th

### Solution :

The correct answer is **option 3** i.e. **42nd**.

- The 42nd Amendment of Indian Constitution was enacted in 1976 in the midst of the National Emergency (25 June 1975 – 21 March 1977) by the government led by Indira Gandhi.
- This Act is also known as the "**Mini Constitution**" because of the large number of revisions it made to the Constitution of India.
- It tried to limit the ability of the Supreme Court and High Court to rule on the constitutionality of laws. It also presented the fundamental responsibilities of Indian citizens to the country.

### Question 60 :

As per the Census of 2011, which of the following states/UT has literacy rate of more than 90%?

Difficulty : Moderate

Average Time : 57 Seconds

### Options :

1. Rajasthan
2. Mizoram
3. Goa



## Tripura

### Solution :

The correct answer is **option 2** i.e. **Mizoram**.

- Mizoram has the highest literacy rate i.e. 91.6 percent.
- As per the data published by the 2011 census India has managed to achieve an effective literacy rate of 74.04 per cent in 2011.
- Some of the States and Union Territories like Mizoram, Tripura, Goa, like Kerala, Puducherry, Chandigarh, Lakshadweep Daman and Diu, National Capital Territory of Delhi and the Andaman and Nicobar Islands, in the last one decade have done extremely well for themselves by attaining a literacy rate of almost 85.

### Question 61 :

In which of the following Indian states is the Gorichen peak located?

Difficulty : Moderate

Average Time : 54 Seconds

### Options :

1. Madhya Pradesh
2. Arunachal Pradesh
3. Himachal Pradesh
4. Nagaland

### Solution :

The correct answer is **option 2** i.e. **Arunachal Pradesh**.

- Gorichen, the highest scalable peak is located in **Arunachal Pradesh**.
- It is situated on the border with China in Tawang District at a distance of 164 kilometres from Tawang township.
- The height of the peak is over 21,300 ft above sea level.
- The peak is locally known as Tsa-Nga-Phu, which translates into kingdom of the deity.

### Question 62 :

Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. When Sirisha knock at the door someone peeped through the window.

Difficulty : Moderate

Average Time : 58 Seconds

### Options :

1. knocked door



knocked at the door

3. knocked on door

4. No substitution required

**Solution :**

The correct answer is **option 2** i.e. **knocked at the door**.

Statement: When Sirisha knock at the door someone peeped through the window.

The given sentence is in the simple past tense. So, the verb knock should be used in the past tense. Hence, knocked should be used instead of knock.

Correct statement: When Sirisha knocked at the door someone peeped through the window.

**Question 63 :**

Select the option that gives the most appropriate meaning of the underlined idiom. You have put me in a tight corner by telling me to keep quiet.

Difficulty : Moderate

Average Time : 55 Seconds

**Options :**

1. An embarrassing situation

2. A comfortable situation

3. A difficult situation

4. A secret place

**Solution :**

The correct answer is **option 3** i.e. **A difficult situation**.

Idioms: A group of words established by usage as having a meaning not deducible from those of the individual words.

"A tight corner" means in a difficult situation.

Example: The city is in a tight corner financially.

**Question 64 :**

Select the most appropriate ANTONYM of the given word. Ransack

Difficulty : Moderate

Average Time : 46 Seconds

**Options :**



Seize

2. Raid

3. Protect

4. Pilfer

**Solution :**

The correct answer is **option 3** i.e. **Protect**.

**Antonym:** a word opposite in meaning to another.

Ransack means going through (a place) stealing things and causing damage.

Protect is the correct antonym that means to keep safe from harm or injury.

**Meaning of other words:**

Seize: take hold of suddenly and forcibly.

Raid: a rapid surprise attack on an enemy by troops

Pilfer: steal.

**Question 65 :**

Select the most appropriate ANTONYM of the given word. CENTRE

Difficulty : Moderate

Average Time : 51 Seconds

**Options :**

1. Periphery

2. Clear

3. Mainstream

4. Definite

**Solution :**

The correct answer is **option 1** i.e. **Periphery**.

**Antonym:** a word opposite in meaning to another.

Centre means a place in the middle.

Periphery is the correct antonym that means the outer limits or edge of an area or object.



**Meaning of other words:**

Clear: easy to understand.

Mainstream: prevailing current or direction of activity or influence.

Definite: having certain or distinct limits.

**Question 66 :**

Select the most appropriate option to fill in the blank. Now after the COVID-19 situation has \_\_\_\_\_, Bangladesh has started air travel services for other countries including India.

Difficulty : Moderate

Average Time : 55 Seconds

**Options :**

1. improved
2. progressed
3. advanced
4. enriched

**Solution :**

The correct answer is **option 1** i.e. **improved**.

The second part of the sentence, tells about the resumption of travel services. So, the most appropriate word for the blank is 'improved' which means having become or been made better. It

**Question 67 :**

Select the most appropriate synonym of the given word. Eventually

Difficulty : Moderate

Average Time : 40 Seconds

**Options :**

1. Initially
2. Primarily
3. Originally
4. Ultimately

**Solution :**

The correct answer is **option 3** i.e. **Ultimately**.



**Synonym:** Words that have the same or nearly the same meaning.

**Given word:** Eventually

Meaning: in the end.

The word that seems to be its synonym is 'Ultimately' as it means finally; in the end.

**Meaning of other words:**

Initially: at first.

Primarily: mainly.

Originally: from or in the beginning.

**Question 68 :**

Select the option that can be used as a one-word substitute for the given group of words. A tank for fish or water plants

**Difficulty :** Moderate

**Average Time :** 54 Seconds

**Options :**

1. Reservoir
2. Aviary
3. Aquarium
4. Museum

**Solution :**

The correct answer is **option 3** i.e. **Aquarium**.

One Word Substitution means using a specific word to replace a wordy phrase or sentence and making it shorter, concise, and clearer to understand.

A tank for fish or water plants is known as an aquarium.

A large natural or artificial lake used as a source of water supply is known as a reservoir.

An aviary is a large enclosure for confining birds for display.

A museum is a building in which objects of historical, scientific, artistic, or cultural interest are stored and exhibited.

**Question 69 :**

Given below are four jumbled sentences. Select the option that gives their correct order. A. Finally, it can be termed as the channel for all trade, and what is more important, of all ideas. B. It also provides a framework for all economic



development. C. It is the road that determines the site of many cities and the growth and nourishment of all. D. The road is one of the great fundamental institutions of mankind.

**Difficulty : Moderate**

**Average Time : 73 Seconds**

**Options :**

1. CABD
2. DCBA
3. BDAC
4. DBAC

**Solution :**

The correct answer is **option 2** i.e. **DCBA**.

The given question is an example of para jumbles.

Sentence D will be the first sentence as it is an independent line.

Sentence C further gives more information about the road that is mentioned.

Sentence B will be following sentence C as it tells about the economic development related to it.

Sentence A will be the last sentence as it concludes the para.

The correct sequence is:

D. The road is one of the great fundamental institutions of mankind.

C. It is the road that determines the site of many cities and the growth and nourishment of all.

B. It also provides a framework for all economic development.

A. Finally, it can be termed as the channel for all trade, and what is more important, of all ideas.

**Question 70 :**

The following sentence has been split into four segments. Identify the segment that contains a grammatical error. Athens was / a most luminous / of all city-states / of ancient Greece.

**Difficulty : Moderate**

**Average Time : 75 Seconds**

**Options :**

1. Athens was



of all city-states

3. of ancient Greece

4. a most luminous

### Solution :

The correct answer is **option 4** i.e. **a most luminous**.

Given sentence: Athens was / a most luminous / of all city-states / of ancient Greece.

The article 'the' should be used before the superlative adjective 'most luminous.'

Correct sentence: Athens was / **the most luminous** / of all city-states / of ancient Greece.

### Question 71 :

Select the option that expresses the given sentence in passive voice. They catch whale sharks commercially in some places around the world.

Difficulty : Moderate

Average Time : 49 Seconds

### Options :

1. Whale sharks were caught commercially in some places around the world.
2. Whale sharks are being caught commercially in some places around the world.
3. Whale sharks have been caught commercially in some places around the world.
4. Whale sharks are caught commercially in some places around the world.

### Solution :

The correct answer is **option 4** i.e. **Whale sharks are caught commercially in some places around the world**.

Given sentence: They catch whale sharks commercially in some places around the world. (Active voice)

Active voice: Subject + V1 + Object

Passive voice: Objective case of subject + is/am/are + V3 + Subjective case of object

Sentence in passive voice: Whale sharks are caught commercially in some places around the world.

### Question 72 :

Select the correct active voice form of the given sentence A cartoon film is being watched by Praveen.

Difficulty : Moderate

Average Time : 62 Seconds

### Options :



1. Praveen would like to watch a cartoon film.
2. Praveen had been watching a cartoon film.
3. Praveen is watched a cartoon film.
4. Praveen is watching a cartoon film.

**Solution :**

The correct answer is **option 4** i.e. **Praveen is watching a cartoon film.**

Given sentence: A cartoon film is being watched by Praveen. (Passive voice)

Structure of passive voice: Objective case of subject + is/am/are + being + V3 + by + Subjective case of object

Structure of active voice: Subject + is/am/are + V1 + ing + Object

Sentence in active voice: Praveen is watching a cartoon film.

**Question 73 :**

Select the option that expresses the given sentence in indirect speech. She said to her, "Will you ready my suit tomorrow?"

Difficulty : Moderate

Average Time : 60 Seconds

**Options :**

1. She asked her if she would ready her suit tomorrow.
2. She asked her if she would ready her suit the next day.
3. She asked her that if she would ready her suit tomorrow.
4. She said her if she would ready her suit tomorrow.

**Solution :**

The correct answer is **option 2** i.e. **She asked her if she would ready her suit the next day.**

Given sentence: She said to her, "Will you ready my suit tomorrow?"

In indirect speech, we need to remove commas and inverted commas and the conjunction 'if' is added.

As the second person pronouns are changed according to the object of the reporting verb, thus, you is changed to she.

"Will" is changed to "would", and 'tomorrow' is changed to 'the next day.'

So, the final sentence is:

She asked her if she would ready her suit the next day.

**Question 74 :**

The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer. We ordered a Pizza / which are one of / my favourite foods.

Difficulty : Moderate

Average Time : 80 Seconds

**Options :**

1. which are one of
2. No error.
3. my favourite foods
4. We ordered a Pizza

**Solution :**

The correct answer is **option 1** i.e. **which are one of**.

Given sentence: We ordered a Pizza / which are one of / my favourite foods.

A singular subject should follow a singular verb. So, 'is' should be used instead of 'are' as pizza is singular.

Correct sentence: We ordered a Pizza / which is one of / my favourite foods.

**Question 75 :**

The following sentence has been split into four segments. Identify the segment that contains a grammatical error. We thought / there was a good idea / to wear snow boots / before we stepped out.

Difficulty : Moderate

Average Time : 53 Seconds

**Options :**

1. We thought
2. before we stepped out
3. to wear snow boots
4. there was a good idea

**Solution :**

The correct answer is **option 4** i.e. **there was a good idea**.

Given sentence: We thought / there was a good idea / to wear snow boots / before we stepped out.



As 'idea' is a singular object so the pronoun used should also be singular, so it should be used instead of there.

Correct sentence: We thought / **it was a good idea** / to wear snow boots / before we stepped out.

**Question 76 :**

Select the INCORRECTLY spelled word.

Difficulty : Moderate

Average Time : 50 Seconds

**Options :**

1. Deceive
2. Leisure
3. Believe
4. Welfare

**Solution :**

The correct answer is **option 4** i.e. **Welfare**.

The incorrectly spelled word is "Welfare".

Correctly spelled word: Welfare

Meaning: help given, especially by the state or an organization, to people who need it.

Example: She donates to organizations concerned about animal welfare.

**Question 77 :**

Select the most appropriate synonym of the given word. Trendy

Difficulty : Moderate

Average Time : 43 Seconds

**Options :**

1. Common
2. Foreign
3. Popular
4. Familiar

**Solution :**

The correct answer is **option 3** i.e. **Popular**.



**Synonym:** Words that have the same or nearly the same meaning.

**Given word:** Trendy

Meaning: something that's stylish or popular.

The word that seems to be its synonym is 'Popular' as it means liked or admired by many people or by a particular person or group.

**Meaning of other words:**

Common: prevalent.

Foreign: strange and unfamiliar.

Familiar: well-known from long or close association

**Question 78 :**

Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. None of the boys was willing to admit that he was in the wrong.

**Difficulty :** Moderate

**Average Time :** 63 Seconds

**Options :**

1. No substitution required
2. willing to admitting
3. ready to admitting
4. admit

**Solution :**

The correct answer is **option 1** i.e. **No substitution required**.

Statement: None of the boys was willing to admit that he was in the wrong.

The given sentence is correct contextually and grammatically. Hence, no improvement is required.

**Question 79 :**

Select the most appropriate meaning of the following idiom. Nip in the bud

**Difficulty :** Moderate

**Average Time :** 43 Seconds

**Options :**

1. To destroy early



To cut the buds

3. To destroy late

4. Not to destroy

**Solution :**

The correct answer is **option 1** i.e. **To destroy early.**

Idioms: A group of words established by usage as having a meaning not deducible from those of the individual words.

"Nip in the bud" means having to stop something at an early stage.

**Example:** We have to nip these money problems in the bud before we get into real trouble.

**Question 80 :**

Select the option that will improve the underlined part of the given sentence. In case no improvement is needed, select 'No improvement required'. You are welcome to partake this light refreshment.

**Difficulty :** Moderate

**Average Time :** 56 Seconds

**Options :**

1. No improvement required
2. To partake of
3. for partaking
4. in partaken

**Solution :**

The correct answer is **option 2** i.e. **To partake of.**

Statement: You are welcome to partake this light refreshment.

The phrase 'partake of' means to take part in or experience something along with others.

Correct statement: You are welcome to partake of this light refreshment.

**Comprehension :**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. There is always something so fascinating about trains and journeys. There (1) \_\_\_\_\_ certain symbols and signages inside and outside of the train. The (2) \_\_\_\_\_ of most of them might not be known to everyone. (3) \_\_\_\_\_ you are a frequent traveler or not, you may have (4) \_\_\_\_\_ the letter X or a cross mark on the back of the last (5) \_\_\_\_\_ of the train.

**Question 81 :**

Select the most appropriate option to fill in blank number 1.

Difficulty : Moderate

Average Time : 68 Seconds

**Options :**

1. were
2. are
3. had been
4. will be

**Solution :**

The correct answer is **option 2** i.e. **are**.

The passage talks about the trains and their journey. As the passage is in the simple present tense so, the verb used should be also in the simple present tense. So, 'are' is appropriate for blank 1.

**Comprehension :**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. There is always something so fascinating about trains and journeys. There (1) \_\_\_\_\_ certain symbols and signages inside and outside of the train. The (2) \_\_\_\_\_ of most of them might not be known to everyone. (3) \_\_\_\_\_ you are a frequent traveler or not, you may have (4) \_\_\_\_\_ the letter X or a cross mark on the back of the last (5) \_\_\_\_\_ of the train.

**Question 82 :**

Select the most appropriate option to fill in blank number 2.

Difficulty : Moderate

Average Time : 64 Seconds

**Options :**

1. senses
2. charge
3. worth
4. meanings

**Solution :**

The correct answer is **option 4** i.e. **meanings**.



The passage talks about the trains and their journey. As the second sentence talks about some information shared by that signage, so the appropriate word for filler 2 is 'meanings.'

**Comprehension :**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. There is always something so fascinating about trains and journeys. There (1) \_\_\_\_\_ certain symbols and signages inside and outside of the train. The (2) \_\_\_\_\_ of most of them might not be known to everyone. (3) \_\_\_\_\_ you are a frequent traveler or not, you may have (4) \_\_\_\_\_ the letter X or a cross mark on the back of the last (5) \_\_\_\_\_ of the train.

**Question 83 :**

Select the most appropriate option to fill in blank number 3.

Difficulty : Moderate

Average Time : 61 Seconds

**Options :**

1. Whether
2. Whichever
3. Whatever
4. However

**Solution :**

The correct answer is **option 1** i.e. **Whether**.

The passage talks about the trains and their journey. The conjunction 'whether' is the appropriate word for blank 3 which is used to express an indirect question involving two stated or implied possibilities or alternatives.

**Comprehension :**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. There is always something so fascinating about trains and journeys. There (1) \_\_\_\_\_ certain symbols and signages inside and outside of the train. The (2) \_\_\_\_\_ of most of them might not be known to everyone. (3) \_\_\_\_\_ you are a frequent traveler or not, you may have (4) \_\_\_\_\_ the letter X or a cross mark on the back of the last (5) \_\_\_\_\_ of the train.

**Question 84 :**

Select the most appropriate option to fill in blank number 4.

Difficulty : Moderate

Average Time : 63 Seconds

**Options :**



distinguished

2. recognised

3. noticed

4. known

**Solution :**

The correct answer is **option 3** i.e. **noticed**.

The passage talks about the trains and their journey. The most appropriate word for filler 4 is 'noticed' which means become aware of.

**Comprehension :**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. There is always something so fascinating about trains and journeys. There (1) \_\_\_\_\_ certain symbols and signages inside and outside of the train. The (2) \_\_\_\_\_ of most of them might not be known to everyone. (3) \_\_\_\_\_ you are a frequent traveler or not, you may have (4) \_\_\_\_\_ the letter X or a cross mark on the back of the last (5) \_\_\_\_\_ of the train.

**Question 85 :**

Select the most appropriate option to fill in blank number 5.

**Difficulty :** Moderate

**Average Time :** 60 Seconds

**Options :**

1. booth

2. coach

3. bus

4. rail

**Solution :**

The correct answer is **option 2** i.e. **coach**.

The passage talks about the trains and their journey. As the last sentence talks about symbols and signs that are present in the train, so the appropriate word for filler 5 is 'coach' as it means a railway carriage.

**Question 86 :**

Let  $\triangle ABC \sim \triangle PQR$  and  $(\text{ar}(\triangle ABC)) : (\text{ar}(\triangle PQR)) = (64) : (169)$ , If  $AB = 10\text{cm}$ ,  $BC = 7\text{cm}$  and  $AC = 16\text{cm}$ , then  $PR$  (in cm) is equal to:

**Difficulty : Moderate****Average Time : 46 Seconds****Options :**

1. 21
2. 13
3. 26
4. 15

**Solution :**The correct answer is **option 13** i.e. **26**

Solution :

Since the  $\triangle ABC \sim \triangle PQR$ 

Then according to similarity of triangles,

Ratio of the area of triangles = ratio of the squares of the sides of the triangles

$$64/169 = AC^2/QR^2$$

$$AC/QR = 8/13$$

$$16/QR = 8/13$$

$$QR = 13 \times 2$$

$$QR = 26 \text{ cm}$$

**Question 87 :**If  $\sin^2 \theta - \cos^2 \theta - 3\sin \theta + 2 = 0$ ,  $0^\circ < \theta < 90^\circ$ , then what is the value of  $1 + \sec \theta + \tan \theta$ ?**Difficulty : Moderate****Average Time : 50 Seconds****Options :**

1.  $-1 + \sqrt{3}$
2.  $-1 - \sqrt{3}$
3.  $1 + \sqrt{3}$
4.  $1 - \sqrt{3}$

**Solution :**



The correct answer is **option 3** i.e.  $1 + \sqrt{3}$

Concept Used :

- $\sin^2 + \cos^2 = 1$
- $\sin 30^\circ = 1/2$
- $\sec 30^\circ = 2\sqrt{3}$
- $\tan 30^\circ = 1/\sqrt{3}$

Solution :

$$\sin^2 - \cos^2 - 3\sin + 2 = 0 \quad (\cos^2 = 1 - \sin^2)$$

$$\sin^2 - (1 - \sin^2) - 3\sin + 2 = 0$$

$$2\sin^2 - 3\sin + 1 = 0$$

$$2\sin^2 - 2\sin - \sin + 1 = 0$$

$$2\sin(\sin - 1) - 1(\sin - 1) = 0$$

$$(2\sin - 1)(\sin - 1) = 0$$

$$\sin = 1/2, 1$$

$$= 30^\circ \quad (\text{cannot be } 90^\circ)$$

Now, the required value is  $1 + \sec + \tan = 1 + \sec 30^\circ + \tan 30^\circ$

$$1 + 2\sqrt{3} + 1/\sqrt{3}$$

$$(3 + \sqrt{3})/\sqrt{3}$$

$$1 + \sqrt{3}$$

**Question 88 :**

A, B and C start a business. A invests  $33\frac{1}{3}\%$  of the total capital, B invests 25% of the remaining, and C invests the rest. If the total profit at the end of the year is Rs 186000, then A's share of the profit (in Rs) is:

**Difficulty :** Moderate

**Average Time :** 109 Seconds

**Options :**

- 62000



64000

3. 61000

4. 59000

**Solution :**

The correct answer is **option 1** i.e. **62000**

**Solution :**

Let the total amount invested by A, B and C be  $6x$ .

So, the investment of A =  $33\left(\frac{1}{3}\right)\%$  of  $6x = \left(\frac{1}{3}\right)$  of  $6x = 2x$

the investment of B =  $25\%$  of  $(6x - 2x) = \left(\frac{1}{4}\right) \times 4x = x$

the investment of C =  $6x - (2x + x) = 3x$

The ratio of the investment of A, B, C = the ratio of profit share of A, B, C =  $2x : x : 3x$

Given that, total profit = 186000

i.e.,  $2x + x + 3x = 186000$

$$6x = 186000$$

$$x = 31000$$

Now, A's share of the profit =  $2x = 2 \times 31000 = 62000$

Hence the share of A is Rs. 62000.

**Question 89 :**

The sides PQ and PR of  $\triangle PQR$  are produced to points S and T, respectively. The bisectors of  $\angle SQR$  and  $\angle TRQ$  meet at point U. If  $\angle QUR = 69^\circ$ , then the measure of  $\angle P$  is:

Difficulty : Moderate

Average Time : 74 Seconds

**Options :**

1.  $31^\circ$

2.  $69^\circ$

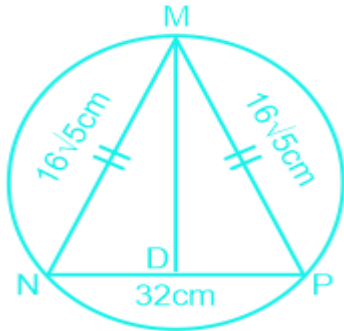
3.  $21^\circ$

4.  $42^\circ$

**Solution :**

The correct answer is **option 4** i.e. **42°**

Solution:



Given that QU and RU are the bisectors of SQR and TRQ respectively

Hence it is known that

$$QUR = 90^\circ - P/2$$

$$69^\circ = 90^\circ - P/2$$

$$P/2 = 21^\circ$$

$$P = 42^\circ$$

Hence the measure of P is 42°.

**Question 90 :**

The length of the shadow on the ground of a tall tree of height 45m is  $15\sqrt{3}$ m. What is the angle (in degree) of elevation of the sun?

**Difficulty : Moderate**

**Average Time : 58 Seconds**

**Options :**

1. 60°
2. 45°
3. 90°
4. 30°

**Solution :**

The correct answer is **option 1** i.e. **60°**

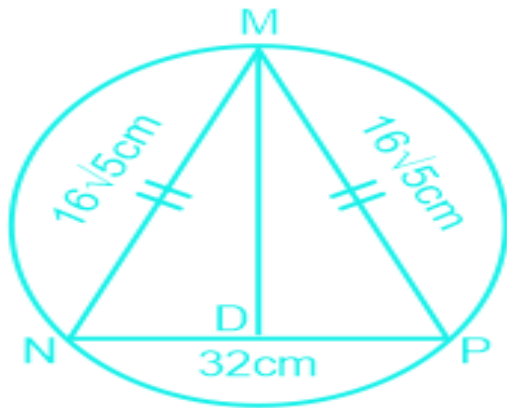


Concept used:

$\tan(\theta) = \frac{\text{perpendicular}}{\text{base}}$

Solution :

According to the question



The height of the tree (BC) = 45 m

The length of the shadow (AB) =  $15\sqrt{3}$  m

The angle of elevation is CAB

So,  $\tan(\text{CAB}) = \frac{BC}{AB}$

$\tan(\text{CAB}) = \frac{45}{15\sqrt{3}}$

$\tan(\text{CAB}) = \sqrt{3}$

Therefore  $\text{CAB} = 60^\circ \dots (\tan 60^\circ = \sqrt{3})$

Hence the angle of elevation is  $60^\circ$ .

**Question 91 :**

Find the value of  $(1.6)^3 - (0.9)^3 - (0.7)^3$ .

**Difficulty : Moderate**

**Average Time : 67 Seconds**

**Options :**

1. 3.024

2. -3.024



-3.24

4. 3.24

**Solution :**

The correct answer is **option 1** i.e. **3.024**

**Concept Used :**

If  $a + b + c = 0$  then  $a^3 + b^3 + c^3 = 3abc$

**Solution :**

In the given question

$a = 1.6$ ,  $b = (-0.9)$  and  $c = (-0.7)$

So,  $a + b + c = 1.6 + (-0.9) + (-0.7) = 0$

Then,  $(1.6)^3 - (0.9)^3 - (0.7)^3 = 3(1.6)(-0.9)(-0.7) = 3.024$ .

Hence the value of  $(1.6)^3 - (0.9)^3 - (0.7)^3$  is 3.024.

**Question 92 :**

The curved surface area of a right circular cylinder is 616 cm<sup>2</sup> and the area of its base is 38.5 cm<sup>2</sup>. What is the volume (in cm<sup>3</sup>) of the cylinder? (take  $\pi = \frac{22}{7}$ )

**Difficulty : Moderate**

**Average Time : 60 Seconds**

**Options :**

1. 1155

2. 1408

3. 1243

4. 1078

**Solution :**

The correct answer is **option 4** i.e. **1078**

**Concept Used :**

1. CSA of right circular cylinder =  $(2\pi rh)$



2. Area of base =  $\pi r^2$

3. Volume of cylinder =  $\pi r^2 h$

Solution:

Given that the CSA of cylinder =  $616 \text{ cm}^2$ ,

The area of the base =  $38.5 \text{ cm}^2$

Now,

Area of the base =  $\pi r^2$

$$38.5 = \frac{22}{7} \times r^2$$

$$r^2 = \frac{49}{4}$$

$$r = \frac{7}{2} \text{ cm}$$

Also, CSA of cylinder =  $2\pi rh$

$$616 = 2 \times \frac{22}{7} \times \frac{7}{2} \times h$$

$$h = 28 \text{ cm}$$

Now, volume of cylinder =  $\pi r^2 h$

$$\frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 28$$

$$49 \times 22 = 1078.$$

Hence the required volume of cylinder is  $1078 \text{ cm}^3$ .

**Question 93 :**

$$(\sec\theta - \tan\theta)^2 (1 + \sin\theta)^2 \div \cos^2 \theta = ?$$

**Difficulty : Moderate**

**Average Time : 81 Seconds**

**Options :**

1.  $\cos^2\theta$

2. 1

3.  $\cot^2\theta$

4. -1

**Solution :**



The correct answer is **option 2** i.e. **1**

Concept Used :

1.  $(1 - \sin^2 \theta) = \cos^2 \theta$

2.  $\sec \theta = 1/\cos \theta$

3.  $\tan \theta = \sin \theta / \cos \theta$

Solution :

$$(\sec \theta - \tan \theta)^2 (1 + \sin \theta)^2 \div \cos^2 \theta$$

$$(1/\cos \theta - \sin \theta / \cos \theta)^2 (1 + \sin \theta)^2 \div \cos^2 \theta$$

$$[(1 - \sin \theta) / \cos \theta]^2 (1 + \sin \theta)^2 \div \cos^2 \theta$$

$$(1 - \sin^2 \theta) / \cos^2 \theta \div \cos^2 \theta$$

$$(\cos^2 \theta) / \cos^2 \theta \div \cos^2 \theta$$

1

Hence the value  $(\sec \theta - \tan \theta)^2 (1 + \sin \theta)^2 \div \cos^2 \theta = 1$

#### Question 94 :

A shopkeeper allows 28% discount on the marked price of an article and still makes a profit of 30%. If he gains Rs30.90 on the sale of one article, then what is the marked price (to the nearest Rs) of the article?

Difficulty : Moderate

Average Time : 87 Seconds

Options :

1. 103

2. 134

3. 194

4. 186

Solution :

The correct answer is **option 4** i.e. **186**

Concept Used :



1.  $CP = SP \times (100/100+\text{profit})$
2.  $SP = MP \times (100-\text{discount})/100$
3.  $SP - CP = \text{Profit}$

Solution:

Let the marked price of the article be Rs.  $x$

Now, the  $SP = 72x/100 = 36x/50$

So, the  $CP = 36x/50 \times 100/130$

$$CP = 36x/65$$

Given that profit = Rs. 30.90

Then,  $SP - CP = 30.90$

$$36x/50 - 36x/65 = 30.90$$

$$(468x - 360x)/650 = 30.90$$

$$108x = 309 \times 65$$

$$x = 185.9722\dots \approx 186$$

Hence the marked price of the article is Rs. 186.

### Question 95 :

Study the given pie-chart and answer the question that follows. The chart represents the percentage-wise distribution of total number of vanilla cakes and chocolate cake sold every day in a week. Total number of cakes sold in a week = 10500. The ratio of vanilla cakes sold to chocolate cakes sold on Friday is 4 : 3. If the selling price of one vanilla cake is Rs 9 and that of one chocolate cake is Rs 10, then the total amount earned (in Rs) by selling all the vanilla cakes and chocolate cakes on Friday is:

Difficulty : Moderate

Average Time : 84 Seconds

Options :

1. 11,000
2. 8,900
3. 10,000



9,900

**Solution :**

The correct answer is **option 4** i.e. **9,900**

Solution :

The total cakes sold on Friday =  $(10/100) \times 10500 = 1050$

The ratio of vanilla cake to chocolate cake on Friday = 4 : 3

Hence the number of chocolate cakes sold on Friday =  $(3/7) \times 1050 = 450$

And the number of vanilla cakes sold on Friday =  $1050 - 450 = 600$

The total amount earned (in Rs) by selling all the vanilla cakes and chocolate cakes on Friday =  $(9 \times 600) + (10 \times 450) = 5400 + 4500 = \text{Rs. } 9900$ .

**Question 96 :**

The following bar graph shows the total number of youth (in lakhs) and the number of employed youth (in lakhs) in 5 states A, B, C, D and E. What is the percentage of employed youth in states A and E taken together?

Difficulty : Moderate

Average Time : 57 Seconds

**Options :**

1.  $88\frac{2}{21}$
2.  $88\frac{8}{21}$
3.  $82\frac{8}{21}$
4.  $88\frac{1}{21}$

**Solution :**

The correct answer is **option 1** i.e.  $88\frac{2}{21}$

Total number of employed youth in A and E together =  $10.5 + 8 = 18.5$

Total number of youth in A and E together =  $12 + 9 = 21$

Required percentage =  $18.5/21 \times 100 = 88\frac{2}{21}\%$

**Question 97 :**

A shopkeeper bought 40 pieces of an article at a rate of Rs 50 per item. He sold 35 pieces with 20% profit. The remaining 5 pieces were found to be damaged and he sold them with 10% loss. Find is overall profit percentage.

Difficulty : Moderate

Average Time : 53 Seconds

Options :

1. 30%
2. 32.5%
3. 16.25%
4. 10%

Solution :

The correct answer is **option 3** i.e. **16.25%**

Concept used :

$$s.p. = (100 \pm \text{Profit/Loss})/100$$

Solution :

$$\text{The total c.p.} = 40 \times 50 = \text{Rs. } 2000$$

$$\text{The c.p. of 35 pieces} = 35 \times 50 = \text{Rs. } 1750$$

$$s.p. = [(100 + 20)/100] \times 1750$$

$$s.p. = \text{Rs. } 2100$$

$$\text{c.p. of 5 pieces} = 5 \times 50 = \text{Rs. } 250$$

$$s.p. = [(100 - 10)/100] \times 250$$

$$s.p. = \text{Rs. } 225$$

$$\text{Now, total s.p.} = \text{Rs. } 2100 + \text{Rs. } 225 = \text{Rs. } 2325$$

$$\text{Profit} = 2325 - 2000 = \text{Rs. } 325$$

$$\text{The required profit percentage} = (325/2000) \times 100 = 16.25 \%$$

**Question 98 :**

If a nine-digit number  $9m2365n48$  is completely divisible by 88, what is the value of  $(m^2 \times n^2)$ , for the smallest value of  $n$ , where  $m$  and  $n$  are natural numbers?

Difficulty : Moderate

Average Time : 59 Seconds

Options :



36

2. 64

3. 32

4. 20

**Solution :**

The correct answer is **option 2** i.e. **64**

Concept used :

Divisibility of 8 : If the last three digits of a number is divisible by 8, the number is divisible by 8.

Divisibility of 11 : If the difference of the sum of alternative digits of a number is equal to 0 or divisible by 11, then that number is divisible by 11 completely.

Solution :

The number  $9m2365n48$  is divisible by 88, i.e., 8 and 11

So,  $n48$  is divisible by 8.

Put  $n = 2$ , 248 is divisible by 8

Hence  $n = 2$  (smallest value)

Now  $9m2365248$  should be divisible by 11

$(9 + 2 + 6 + 2 + 8) - (m + 3 + 5 + 4)$  should be divisible by 11

$27 - m - 12$  should be divisible by 11

$15 - m$  should be divisible by 11

Putting  $m = 4$ ,  $15 - 4 = 11$  is divisible by 11

Hence  $m = 4$  and  $n = 2$

Now the required result  $(m^2 \times n^2) = (16 \times 4) = 64$ .

**Question 99 :**

An isosceles  $\triangle MNP$  is inscribed in a circle. If  $MN = MP = 16(\sqrt{5})$ cm, and  $NP = 32$ cm, what is the radius (in cm) of the circle?

Difficulty : Moderate

Average Time : 75 Seconds

Options :



20

2.  $18\sqrt{5}$

3. 18

4.  $20\sqrt{5}$

**Solution :**

The correct answer is **option 1** i.e. **20**

Concept Used :

Area of a triangle =  $\frac{1}{2} \times \text{base} \times \text{height}$

Circumradius,  $R = \frac{ABC}{4}$

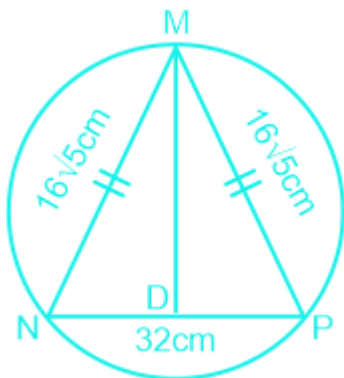
where **A, B, C** are the sides of the triangle and **is** area of triangle.

Given :

Equal sides of isosceles triangle =  $16\sqrt{5}$  cm

Length of unequal side = 32 cm

Solution :



Let MD be the perpendicular on side NP of the triangle,

Hence  $ND = DP = \frac{32}{2} = 16$  cm

Applying Pythagoras theorem in  $\triangle MND$ ,

$$(MD)^2 = (MN)^2 - (ND)^2$$

$$(MD)^2 = (16\sqrt{5})^2 - (16)^2$$

$$(MD)^2 = 32 \text{ cm}$$

$$\text{Now area of } \triangle MNP = \frac{1}{2} \times NP \times MD$$

$$= \frac{1}{2} \times 32 \times 32$$

$$= 512 \text{ cm}^2$$

$$\text{Now the circumradius } R \text{ of } \triangle MNP = \frac{ABC}{4\triangle}$$

$$= \frac{(16\sqrt{5}) \times 16\sqrt{5} \times 32}{(4 \times 512)}$$

$$= 20 \text{ cm}$$

Hence the radius of the circle circumscribing  $\triangle MNP$  is 20 cm

**Question 100 :**

If Seema invests Rs 17,650 in an account that yields 8.5% p.a. simple interest, then how much (to nearest Rs) will she have after 5 years?

**Difficulty :** Moderate

**Average Time :** 125 Seconds

**Options :**

1. 25,151
2. 21,155
3. 21,551
4. 25,115

**Solution :**

The correct answer is **option 1** i.e. **25,151**

Concept used :  $(P \times R \times T)/100$

Given :

$$P = \text{Rs. } 17650$$

$$R = 8.5 \%$$

$$T = 5 \text{ years}$$

Solution :

$$\text{The interest earned by Seema in 5 years} = (17650 \times 8.5 \times 5)/100 = \text{Rs. } 7,501.25$$



The total money with Seema after 5 years =  $17650 + 7501.25 = 25151.25$

The money owned by Seema after 5 years (nearly) = Rs. 25,151.

## Ssc Cgl Tier I Previous Year Question Paper Analysis

The analysis of Ssc Cgl Tier I Previous Year Question Paper held on 2022-04-13 in the Evening exam is as follows:

1. 100 questions were moderate.
2. The safe score is 140 marks.
3. 25 questions were asked from Quantitative Aptitude, 25 questions were asked from Logical Reasoning, 25 questions were asked from General Awareness and 25 questions were asked from English Language
4. 19 questions should have been skipped if you were short of time.

## Ssc Cgl Tier I Previous Year Question Paper Topic Wise Weightage

### Quantitative Aptitude

1. Data Interpretation - 2
2. Comparison Of Quantities - 23

### Logical Reasoning

1. Coding Decoding - 3
2. Analogy - 2
3. Classification - 1
4. Seating Arrangement - 1
5. Blood Relations - 1
6. Distance And Direction - 1
7. Syllogism - 1
8. Venn Diagrams - 1
9. Dictionary Based - 1
10. Figure Based - 4
11. Matrix - 1
12. Series - 4
13. Mathematical Reasoning - 3

Cubes And Dice - 1

## General Awareness

1. GK Misc - 25

## English Language

1. Cloze Test - 5
2. Spotting Error - 3
3. Parajumbles - 1
4. Idioms - 2
5. One Word Substitution - 2
6. Fillers - 1
7. Voice - 2
8. Transformation Of Sentence - 1
9. Sentence Improvement - 2
10. Synonym - 2
11. Antonym - 2
12. Correctly Spelt - 1
13. Incorrectly Spelt - 1
14. Incorrectly Spelt - 1

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2. Ssc Cgl Tier I 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.

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