

Sample Paper

General Test

- Q1** What will be the meaningful order for the following?
1. Classroom 2. Desk 3. School 4. Community 5. Drawer
(A) 4, 2, 3, 1, 5 (B) 3, 2, 4, 5, 1
(C) 4, 3, 1, 2, 5 (D) 1, 2, 3, 4, 5
- Q2** If $a = 2b$, then the value of $\frac{a+b}{a-b}$ is
(A) 5 (B) 4
(C) 3 (D) 6
- Q3** What is celebrated on 10th December?
(A) Human Rights Day
(B) World Malaria Day
(C) Mother's Day
(D) World Hindi Day
- Q4** Who is the first Indian woman grandmaster in chess?
(A) Saheli Dhar
(B) Bhagyashree Thipsay
(C) S. Vijayalakshmi
(D) Taina Sachdev
- Q5** If $x + \frac{1}{x} = 3$, what is $x^2 + \frac{1}{x^2}$?
(A) 7 (B) 8
(C) 9 (D) 10
- Q6** Sponge is to porous as rubber is to
(A) Massive (B) Solid
(C) Elastic (D) Inflexible
- Q7**
- | | | |
|----------|--------|-------|
| daisy | flower | plant |
| bungalow | house | ? |
- (A) building (B) cottage
(C) apartment (D) city
- Q8** In a certain code language, 'He is my nephew' is coded as 'Co Pv Zs Mn', 'That is my car' is coded as 'Zs Pt Pv Ga', 'He is your uncle' is coded as 'Co Pv Ex Yz'.
What is the code for 'nephew' in this code language?
(A) Co (B) Mn
(C) Zs (D) Pv
- Q9** Raghu bought an article for Rs. 6800 and spent Rs. 700 on its repairs. He marked this article at 8% above the overall cost price. He sold the article for Rs. 6,480 after giving x% discount. The value of x is:
(A) 18% (B) 20%
(C) 25% (D) 15%
- Q10** A man makes his onward journey at 16 km/hr and backward journey at 28 km/hr. What is his average speed during the entire journey (correct to 2 decimal places)?
(A) 22 km/hr (B) 20.36 km/hr
(C) 32.15 km/hr (D) 30.56 km/hr
- Q11** Lok Sabha Secretariat comes under the direct control of
(A) Ministry of Home Affairs
(B) Ministry of Parliamentary Affairs
(C) Speaker of Lok Sabha
(D) President
- Q12** Five persons, F, J, N, R and V, are sitting around a circular table facing towards the centre (not necessarily in the same order). J is to the immediate left of F. N is second to the left to F, V is second to the left of J. Who is sitting second to the right of J?
(A) N (B) F
(C) V (D) R



Q13 Find the missing number?

3	4	9
2	5	2
6	7	?
36	140	18

- (A) 1 (B) 2
(C) 4 (D) 3

Q14 Mahesh purchased a radio at $\frac{9}{10}$ of its selling price and sold it at 8% more than its original selling price. His gain per cent is:

- (A) 20% (B) 18%
(C) 10% (D) 8%

Q15 The sum of three consecutive even numbers is 42. Find the middle number of the three?

- (A) 14 (B) 16
(C) 18 (D) 24

Q16 What was the main reason for the defeat of Sirajuddaulah at the Battle of Plassey?

- (A) Britishers cut the food supplies of Sirajuddaulah forces compelling them to surrender.
(B) Forces led by commander Mir Jafar never fought the battle.
(C) Sirajuddaulah's prime minister misinformed the locations of Britishers.
(D) Britishers knew the secret way to enter Sirajuddaulah's palace.

Q17 Pen is to poet as needle is to

- (A) Thread (B) Button
(C) Sewing (D) Tailor

Q18 A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his sale was of Rs. 392, what was his profit?

- (A) Rs. 18.20 (B) Rs. 70
(C) Rs. 72 (D) Rs. 88.25

Q19 A mobile phone bought for Rs. 25000. The value of that mobile phone depreciates by 5%

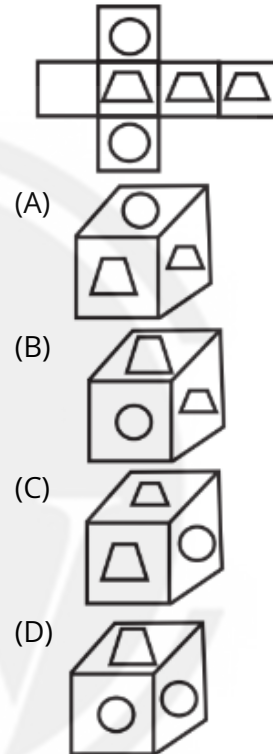
per annum due to its use. The value of the mobile phone after 2 years is:

- (A) Rs. 22562.50 (B) Rs. 23842.50
(C) Rs. 24800.50 (D) Rs. 21546.50

Q20 Human : Brain : Computer : ?

- (A) Hard disc
(B) Software
(C) RAM
(D) Central Processing Unit

Q21 Find the odd one out :



Q22 Select the option that is related to the fourth term in the same way as the first term is related to the second term.

DFIM : CEHL :: ? : KMPT

- (A) LNUQ (B) LNQU
(C) JLOS (D) UVWL

Q23 In which year Indian Space Research Organization (ISRO) has successfully established "CHANDRAYAAN-1"?

- (A) 22nd October 2009
(B) 22nd October 2010
(C) 22nd October 2008
(D) 22nd July 2019



Q24 Match List-I with List-II

List-I	List-II
a. First country to use glass	I. New Zealand
b. First country to make written constitution	II. Russia
c. First country to do Artificial Satellite Experiment	III. USA
d. First Country to impose Carbon Tax	IV. Egypt

Choose the correct answer from the options given below

- (A) a-IV, b-III, c-II, d-I
 (B) a-III, b-IV, c-I, d-II
 (C) a-II, b-I, c-III, d-IV
 (D) a-I, b-II, c-IV, d-III

Q25 In a row of 31 girls, when Ruchi was shifted by four places towards the right, she became 12th from the left end. What was her earlier positions from the right end of the row?

- (A) 8th
 (B) 20th
 (C) 11th
 (D) 24th

Q26 In a certain code language, if the word 'CLASSIFY' is coded as 'XOZHHRUB', then how is the Word 'MODIFY' coded in that language?

- (A) RUBNLW (B) NLRUBW
 (C) NLWRUB (D) RUBNWL

Q27 The value of $\frac{\sec^2 60^\circ \cos^2 45^\circ + \operatorname{cosec}^2 30^\circ}{\cot 30^\circ \sec^2 45^\circ - \operatorname{cosec}^2 30^\circ \tan 45^\circ}$ is:

- (A) $3(2 - \sqrt{3})$
 (B) $-3(2 - \sqrt{3})$
 (C) $3(2 + \sqrt{3})$
 (D) $-3(2 + \sqrt{3})$

Q28 Select the option that is related to the third term in the same way as the second term is





related to the first term.

HJLN : ILOR :: DFHJ : _____

- (A) EHJL (B) EHKH
 (C) CGJM (D) EHLO

Q29 Choose the Venn diagram which best illustrates the relationship between three given classes in each of the following questions:

Flowers, Leaves, Fruits

- (A) 
 (B) 
 (C) 
 (D) 

Q30 Find the missing number in the series:

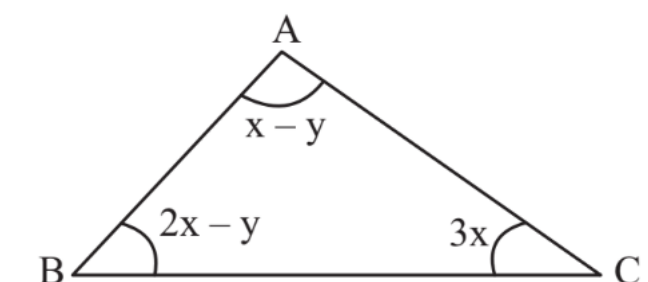
219, 211, 204, 198, ?, 189

- (A) 189 (B) 192
 (C) 193 (D) 196

Q31 If EARTH is written as FCUXM in a certain code. How is MOON written in that code?

- (A) NQRS (B) NQRR
 (C) MRQP (D) NSQS

Q32 Which of the following relation between x and y is correct?







- (A) $x + y = 45^\circ$ (B) $x - y = 180^\circ$
 (C) $3x + y = 90^\circ$ (D) $3x - y = 90^\circ$



- Q33** A man said to a lady. "Your mother's husband's only sibling is my aunt." How is the lady related to the man?
 (A) Daughter (B) Grand daughter
 (C) Mother (D) Sister
- Q34** In which year was Rahul born?
 I. Rahul at present is 25 years younger to his mother.
 II. Rahul's brother, who was born in 1964, is 35 years younger to his mother.
 (A) I alone is sufficient while II alone is not sufficient
 (B) II alone is sufficient while I alone is not sufficient
 (C) Either I or II is sufficient
 (D) Both I and II are needed to answer this question.
- Q35** X can do a work alone in 15 days. Y can do the same work in 30 days alone. X, Y and Z together can do that work in 9 days. In how many days Z alone can do that work?
 (A) 120 (B) 90
 (C) 45 (D) 60
- Q36** Kiya drives her car 20 km west from her home, then turns left and goes 20 km more, then, she turns right and goes 10 km and then she turns right and goes 15 km, finally she goes 30 km more after turning right again. At what distance is she from the starting point?
 (A) 05 km (B) 10 km
 (C) 15 km (D) 25 km
- Q37** A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?
 (A) 12 days (B) 15 days
 (C) 16 days (D) 18 days
- Q38** If 29 January 2003 is a Wednesday, then what day of the week will be 26 February 2005?

- (A) Saturday (B) Sunday
 (C) Thursday (D) Friday

- Q39** A clock seen through a mirror shows 'quarter to seven'. What is the correct time shown by the clock?
 (A) 6: 15 (B) 6: 17
 (C) 5: 17 (D) 5: 15
- Q40** Sudheesh ranks seventh from the top and 28th from the bottom. How many students are there in the class?
 (A) 34 (B) 35
 (C) 28 (D) 21
- Q41** Find the Odd One Out.
 (A) 
 (B) 
 (C) 
 (D) 
- Q42** If $a^2 + b^2 + 2b + 4a + 5 = 0$, then the value of $\frac{2a-3b}{2a+3b}$ is equal to:
 (A) $1/7$ (B) $2/7$
 (C) $3/7$ (D) $2/5$
- Q43** The product of HCF and LCM of two numbers is 3321. If one of the numbers is 369. The HCF of the number is
 (A) 21 (B) 9
 (C) 3 (D) 27
- Q44** If $A : B = 2 : 3$ and $B : C = 4 : 5$ then $A : B : C$ is:
 (A) $2 : 3 : 5$ (B) $5 : 4 : 6$



(C) 8 : 12 : 15 (D) 6 : 4 : 5

Q45 If the third day of month is Monday. Which of the following will be the 29th day of week?

- (A) Friday (B) Saturday
(C) Sunday (D) Monday

Q46 Find the next number in the series
4, 4, 8, 12, 16, 36, 32, ?

- (A) 96 (B) 108
(C) 114 (D) 128

Q47 What is the value of $\sqrt{1500 + \sqrt{441}}$?

- (A) 37 (B) 39
(C) 49 (D) 47

Q48 The value of $\frac{(793+232)^2 - (793-232)^2}{793 \times 232}$ is

- (A) 7930 (B) 4
(C) 14 (D) 2420

Q49 In the following question, two statements are given each followed by two conclusions I and II. You have to consider the statement to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement:

- (I) All horses are bullocks.
(II) All bullocks are goats.

Conclusions:

- (I) All horses are goats.
(II) All goats are horses.
(A) Conclusion I follows
(B) Conclusion II follows
(C) Neither I nor II follows
(D) Both I and II follows

Q50 Varun drove his car for 80 kms due North. Then he turned left and drove for 100 kms. Again he turned left & drove yet another 80 kms. Again he turned left and drove his car 120 kms. How far do you think he actually drove his car from the initial position?

- (A) 20 km (B) 100 km
(C) 60 km (D) None of these

Q51 The value of $14 \div \{(5 \text{ of } 2 - 3)\} \times 4(7 - 2)$ is

- (A) 40 (B) 10
(C) $\frac{1}{10}$ (D) $\frac{14}{19}$

Q52 Arrange the given words in the sequence in which they occur in the dictionary.

1. Mango 2. Mind 3. Master 4. Minty 5. Muted
(A) 1,3,4,2,5 (B) 3,1,4,2,5
(C) 3,1,2,4,5 (D) 1,3,2,4,5

Q53 The pH of pure water (H_2O) is _____ at 25 degree Celsius.

- (A) 7 (B) 6
(C) 8 (D) 9

Q54 When does the entire earth experience equal days and nights?

- (A) Day of winter solstice
(B) Day of summer solstice
(C) At orbital plane
(D) Day of equinox

Q55 "One Nation One FasTag Scheme" implemented in which year?

- (A) 1 December 2020
(B) 1 December 2019
(C) 1 December 2021
(D) 1 December 2022

Q56 Which of the following chemical compounds is used as a preservative in pickle?

- (A) Calcium Metabisulphite
(B) Sodium Nitrate
(C) Sodium Benzoate
(D) Calcium Benzoate

Q57 Koraga Tribal Community is primarily found in which states?

- (A) Maharashtra and Tamil Nadu
(B) Kerala and Karnataka



- (C) Rajasthan and Gujarat
- (D) Jharkhand and Bihar

Q58 Indian Council of Social Science Research (ICSSR), which was seen in the news, works under which ministry?

- (A) Ministry of Science and Technology
- (B) Ministry of Agriculture
- (C) Ministry of Urban Development
- (D) Ministry of Education

Q59 Which ministry recently launched Humsafar Policy in New Delhi?

- (A) Ministry of Urban Development
- (B) Ministry of Road Transport and Highways
- (C) Ministry of Defence
- (D) Ministry of Home Affairs

Q60 Recently, which armed force launched the first-of-its-kind skin bank for the treatment of severe burn injuries in defence?

- (A) Indian Air Force
- (B) Indian Navy
- (C) Indian Army
- (D) National Security Guard



Answer Key

Q1 C
Q2 C
Q3 A
Q4 C
Q5 A
Q6 C
Q7 A
Q8 B
Q9 B
Q10 B
Q11 C
Q12 D
Q13 A
Q14 A
Q15 A
Q16 B
Q17 D
Q18 C
Q19 A
Q20 C
Q21 D
Q22 B
Q23 C
Q24 A
Q25 D
Q26 C
Q27 D
Q28 B
Q29 D
Q30 C

Q31 B
Q32 D
Q33 D
Q34 D
Q35 B
Q36 A
Q37 B
Q38 A
Q39 D
Q40 A
Q41 A
Q42 A
Q43 B
Q44 C
Q45 B
Q46 B
Q47 B
Q48 B
Q49 A
Q50 A
Q51 A
Q52 D
Q53 A
Q54 D
Q55 B
Q56 C
Q57 B
Q58 D
Q59 B
Q60 C



Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

Meaningful Order will be

Community School Classroom Desk
Drawer

(4) (3) (1) (2)
(5)

Video Solution:



Q2 Text Solution:

$$a = 2b$$

$$\frac{a+b}{a-b} = \frac{2b+b}{2b-b} = \frac{3b}{b} = 3$$

Video Solution:



Q3 Text Solution:

The Universal Declaration of Human Rights was adopted in 1948 by the United Nations General Assembly. This day is observed to protect the fundamental human rights of all people and their basic human freedom

Q4 Text Solution:

The correct answer is S Vijayalakshmi. Subbaraman Vijayalakshmi is the first female Indian Grandmaster in Chess. In 2001, she became the first Indian to achieve the title of Woman Grandmaster (WGM).

Q5 Text Solution:

$$\left(x + \frac{1}{x}\right)^2 = x^2 + 2 + \frac{1}{x^2} = 9, \text{ so}$$

$$x^2 + \frac{1}{x^2} = 7.$$

Q6 Text Solution:

A sponge is a porous material. Rubber is an elastic material. Since Rubber is not a Massive or solid and not an inflexible thing, it is elastic.

Q7 Text Solution:

Daisy is name of flower grown on plant in same way bungalow is kind of house and combination of houses is building.

Q8 Text Solution:

'He is my nephew' is coded as 'Co Pv Zs Mn'

'That is my car' is coded as 'Zs Pt Pv Ga'

'He is your uncle' is coded as 'Co Pv Ex Yz'

He	is	my	nephew	→	Co	Pv	Zs	Mn
that	is	my	car	→	Zs	Pt	Pv	Ga
He	is	your	uncle	→	Co	Pv	Ex	Yz

Here,

'Mn' is the code for 'Nephew'.

'Zs' is the code for 'my'.

'Pv' is the code for 'is'.

'Co' is the code for 'He'.

So, **'nephew' will be coded as 'Mn'.**

Q9 Text Solution:

Given :

Raghu bought an article for Rs. 6800 and spent Rs. 700 on its repairs.

He marked this article at 8% above the overall cost price.

SP = Rs. 6,480

Formula used :

Discount = MP – SP

Discount% = Discount/MP × 100

Calculation :

Total CP = Rs. (6800 + 700) = Rs. 7500

He marked this article at 8% above the overall cost price.



[Android App](#)

[iOS App](#)

[PW Website](#)

$$(7,500 \times 108/100)$$

$$\text{MP} = \text{Rs. } 8,100$$

Now,

$$\text{Discount} = \text{MP} - \text{SP}$$

$$\text{Rs. } (8100 - 6480)$$

$$\text{Rs. } 1620$$

$$\text{Discount \%} = \text{Discount/MP} \times 100$$

$$(1620/8100 \times 100)$$

$$20\%$$

The value of x is 20%.

Q10 Text Solution:

$$\text{Average speed} = \frac{2s_1s_2}{s_1+s_2}$$

$$= \frac{2 \times 16 \times 28}{16 + 28} = \frac{2 \times 16 \times 28}{44}$$

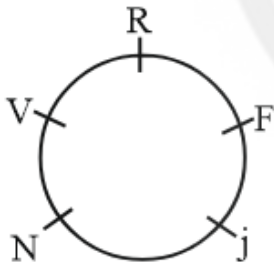
$$= \frac{224}{11} = 20.36 \text{ km/hr}$$

Q11 Text Solution:

Speaker of Lok Sabha

Q12 Text Solution:

As per given data, following circular sitting arrangement is obtained :



Hence, R is sitting second to the right of J.

Video Solution:



Q13 Text Solution:

(a) The pattern is

$$3 \times 2 \times 6 = 36$$

$$4 \times 5 \times 7 = 140$$

$$9 \times 2 \times 1 = 18$$

Q14 Text Solution:

Using Rule 1,

Let the original selling price of radio = ₹ 100

$$\text{C.P. of radio} = 90$$

$$\text{New selling price} = 108$$

$$\text{Gain per cent} = 18/90 \times 100 = 20\%$$

Q15 Text Solution:

Let the smallest even number = x

So, other two consecutive even numbers are

$$x + 2 \text{ and } x + 4.$$

$$x + (x + 2) + (x + 4) = 42$$

$$3x + 6 = 42$$

$$3x = 36$$

$$x = 12$$

So, three consecutive even numbers are 12, 14

, and 16 and middle number is 14

Q16 Text Solution:

The correct answer is Forces led by commander Mir Jafar never fought the battle.

Key Points

The Battle of Plassey :

- When Alivardi Khan died in 1756, Siraj Ud-Daulah became the Nawab of Bengal.
- The Company was worried about his power and keen on a puppet ruler who would willingly give trade concessions and other privileges.
- So it tried, though without success, to help one of Siraj Ud-Daulah's rivals become the nawab.
- An infuriated Siraj Ud-Daulah asked the Company to stop meddling in the political affairs of his dominion, stop fortification, and pay the revenues.
- After negotiations failed, the Nawab marched with 30,000 soldiers to the English factory at Kassimbazar, captured the Company officials, locked the



warehouse, disarmed all Englishmen, and blockaded English ships.

- Then he marched to Calcutta to establish control over the Company's fort there.
- On hearing the news of the fall of Calcutta, Company officials in Madras sent forces under the command of Robert Clive, reinforced by naval fleets.
- In 1757, Robert Clive led the Company's army against Siraj Ud-Daulah at Plassey.
- One of the main reasons for the defeat of the Nawab was that the forces led by Mir Jafar, one of Siraj Ud-Daulah's commanders, never fought the battle.
- Robert Clive had managed to secure his support by promising to make him nawab after crushing Siraj Ud-Daulah
- The Battle of Plassey became famous because it was the first major victory the Company won in India.
- After the defeat at Plassey, Siraj Ud-Daulah was assassinated and Mir Jafar made the nawab.
- The Company was still unwilling to take over the responsibility of the administration.
- Its prime objective was the expansion of trade. If this could be done without conquest, through the help of local rulers who were willing to grant privileges, then territories need not be taken over directly.
- When Mir Jafar protested, the Company deposed him and installed Mir Qasim in his place.
- When Mir Qasim complained, he in turn was defeated in a battle fought at Buxar (1764), driven out of Bengal, and Mir Jafar was reinstalled.

Video Solution:



Q17 Text Solution:

Here Pen is a tool which is used to write and poet uses it. Then, the needle is a tool which is used to stitch and it is used by Tailor. Except tailor, none of the other options is a person to use it.

Q18 Text Solution:

S. P. = Rs. 392 and gain % = 22.5%

$$C.P. = \frac{S.P. \times 100}{100 + \text{gain \%}}$$

$$\therefore C.P. = \text{Rs.} \left(\frac{100}{122.5} \right)$$

$$= \text{Rs.} \left(\frac{1000}{1225} \times 392 \right)$$

$$= \text{Rs.} 320$$

$$\text{profit} = S. P. - C. P.$$

$$\therefore \text{Profit} = \text{Rs.} (392 - 320)$$

$$= \text{Rs.} 72.$$

Hence, the profit of the shopkeeper on the sale of Rs. 392 is Rs. 72 .

Q19 Text Solution:

Given:

Initial value of mobile phone: Rs. 25000

Depreciation: 5% per annum for 2 years

Concept:

Calculate the depreciation using the formula $(1 - \text{Discount}\%/100) \text{ years}$

Solution:

$$\text{Final value} = 25000 \times (1 - 5/100)^2 = 25000 \times 0.95 \times 0.95 = \text{Rs.} 22562.50$$

Therefore, the value of the mobile phone after 2 years is Rs. 22562.50.



Q20 Text Solution:

All the actions are controlled in human by Brain whereas in computer all activities are controlled by Central Processing Unit.

Q21 Text Solution:

In option 'D' two circles are shown simultaneously which is not possible. So we can say odd one will be as follows;

**Q22 Text Solution:**

The logic follows here is:

D	F	I	M
-1	-1	-1	-1
C	E	H	L

Similarly,

L	N	Q	U
-1	-1	-1	-1
K	M	P	T

Thus, the correct answer is 'LNQU'.

Q23 Text Solution:

The Indian Space Research Organization (ISRO) successfully launched and established "Chandrayaan-1" on October 22, 2008. Chandrayaan-1 was India's first lunar probe and played a significant role in the exploration of the Moon, including mapping its surface and detecting water molecules on the lunar surface.

Q24 Text Solution:

First country to use glass	Egypt
First country to make written constitution	USA
First country to do Artificial Satellite Experiment	Russia

First Country to impose Carbon Tax	New Zealand
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Q25 Text Solution:

Let us assume that earlier Monika was at 'x' th position from the left end.

After being shifted by four places towards the right, her new position becomes $(x + 4)$ th,

which is equal to 12^{th} from the left end.

Therefore, we can write:

$$x + 4 = 12$$

$$\Rightarrow x = 12 - 4$$

$$\Rightarrow x = 8$$

So, Monika's position from the left end of the row is 8 th.

Therefore, her position from the right end of the row = $(31 - 8) + 1$

$$= 23 + 1$$

$$= 24$$

Hence, '24th' is the correct answer.

Q26 Text Solution:

The logic follows here is:

C	L	A	S	S	I	F	Y
Reverse							
X	O	Z	H	H	R	U	B

Similarly,

M	O	D	I	F	Y
Reverse					
N	L	W	R	U	B

Thus, the correct answer is 'NLWRUB'.

Q27 Text Solution:

$$\frac{\sec^2 60^\circ \cos^2 45^\circ + \operatorname{cosec}^2 30^\circ}{\cot 30^\circ \sec^2 45^\circ - \operatorname{cosec}^2 30^\circ \tan 45^\circ}$$

$$\Rightarrow \frac{(2)^2 \left(\frac{1}{\sqrt{2}}\right)^2 + (2)^2}{\sqrt{3}(\sqrt{2})^2 - (2)^2}$$

$$\Rightarrow \frac{4\frac{1}{2} + 4}{2\sqrt{3} - 4}$$



$$\Rightarrow \frac{2+4}{2\sqrt{3}-4} \times \frac{2\sqrt{3}+4}{2\sqrt{3}+4} = -3(2 + \sqrt{3})$$

Q28 Text Solution:

Except for EHK N, rest follows a similar pattern of a gap of two Alphabets between two consecutive letters.

Q29 Text Solution:

Flowers, Leaves and Fruits all are part of trees and independent to each other, so diagram is as follows;

**Q30 Text Solution:**

The pattern followed is :

$$219 - 8 = 211$$

$$211 - 7 = 204$$

$$204 - 6 = 198$$

$$198 - 5 = 193$$

$$193 - 4 = 189$$

Q31 Text Solution:**Q32 Text Solution:**

In triangle ABC, $\angle BAC + \angle ABC + \angle ACB = 180^\circ$

(Angle sum property of triangle)

$$(x - y) + (2x - y) + (3x) = 180^\circ$$

$$6x - 2y = 180^\circ$$

$$3x - y = 90^\circ$$

Video Solution:**Q33 Text Solution:**

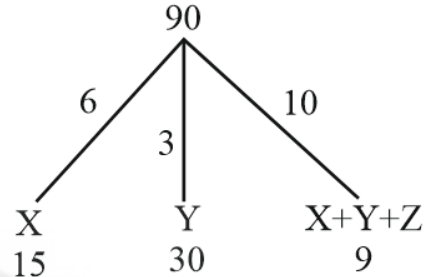
Lady's mother's husband–Lady's father: lady's father's sister –Lady's aunt.

Q34 Text Solution:

From both I and II, we find that Rahul is $(35 - 25) = 10$ years older than his brother, who was born in 1964. So, Rahul was born in 1954.

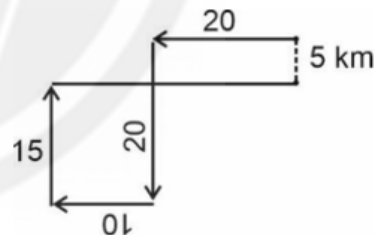
Q35 Text Solution:

Let the number of days = 90 unit



Efficiency of Z = $10 - 6 - 3 = 1$ unit

Number of days taken by Z = $90/1 = 90$ days

Video Solution:**Q36 Text Solution:****Q37 Text Solution:**

$$A's\ 2\ day's\ work = \left(\frac{1}{20} \times 2\right) = \frac{1}{10}.$$

$(A + B + C)$'s 1 day's work

$$= \left(\frac{1}{20} + \frac{1}{30} + \frac{1}{60}\right) = \frac{6}{60} = \frac{1}{10}.$$

$$\text{Work done in 3 days} = \left(\frac{1}{10} + \frac{1}{10}\right) = \frac{1}{5}.$$

Now, $\frac{1}{5}$ work is done in 3 days.

\therefore Whole work will be done in $(3 \times 5) = 15$ days.



Q38 Text Solution:

Using formula for 29 January 2003

$$A = 6, B = 3, C = 0, D = 0, E = 29$$

$$A + B + C + D + E = 38$$

38 divided by 7 gives remainder as 3

3 means Wednesday (True according to question)

So, 26 February 2005 is

$$A = 6, B = 5, C = 1, D = 3, E = 26$$

$$A + B + C + D + E = 41$$

41 divided by 7 gives remainder as 6

6 means Saturday.

Q39 Text Solution:

When we have to find out the mirror image of a clock we have to subtract of given time from 11:60.

so the given mirror image time = 7:45

Now the actual time is = $11:60 - 7:45 = 5:15$

Q40 Text Solution:

Total number of students in the class
 $= 7 + 28 - 1 = 34$

Q41 Text Solution:

Except option 'A' all others are closed diagram.

Q42 Text Solution:

$$a^2 + b^2 + 2b + 4a + 5 = 0$$

$$(a + 2)^2 + (b + 1)^2 = 0$$

$$a = -2, b = -1$$

Put the value of a and b, we get

$$\frac{2a-3b}{2a+3b}$$

$$(-4 + 3)/(-4 - 3) = 1/7$$

Q43 Text Solution:

Let the other number is n.

We know that

Product of H.C.F. and L.C.M = Product of two numbers.

$$3321 = 369 \times n$$

$$n = 9$$

$$369 = 3 \times 3 \times 41$$

$$9 = 3 \times 3$$

Clearly the HCF = $3 \times 3 = 9$

Q44 Text Solution:

$$\begin{aligned} a:b &= 12:3 \\ b:c &= 4:5 \\ a:b:c &= 8:12:15 \end{aligned}$$

Video Solution:**Q45 Text Solution:**

Days of week are repeated after every 7 days.

29th day of month is Saturday

Q46 Text Solution:

Given series is a double series.

4, 8, 16, 32, and 4, 12, 36,

In the first series,

$$4 \times 2 = 8$$

$$8 \times 2 = 16$$

$$16 \times 2 = 32$$

In the second series,

$$4 \times 3 = 12$$

$$12 \times 3 = 36$$

Similarly next number should be $36 \times 3 = 108$.

Q47 Text Solution:

$$\begin{aligned} \sqrt{1500 + \sqrt{441}} &= \sqrt{1500 + \sqrt{(21)^2}} \\ &= \sqrt{1500 + 21} \\ &= \sqrt{1521} \\ &= 39 \end{aligned}$$

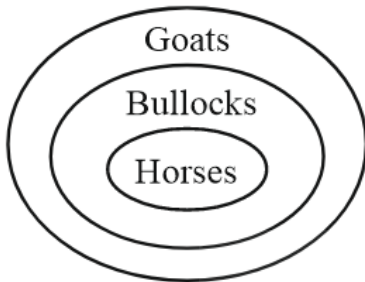
Q48 Text Solution:

Given that, $\frac{(793 + 232)^2 - (793 - 232)^2}{973 \times 232}$

$$= \frac{4 \times 793 \times 232}{793 \times 232} = 4$$

Q49 Text Solution:

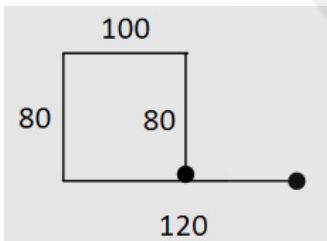
The venn diagram for above statements is :

**Conclusions:**

(I) All horses are goats = true

(II) All goats are horses = false

Thus, only conclusion I follows

Video Solution:**Q50 Text Solution:**

Distance from initial position = $120 - 100 = 20$ km

Q51 Text Solution:

Parts of the equation enclosed in the 'brackets' must be solved first and BODMAS rule will be followed.

Any mathematical 'Of' or 'Exponent' must be solved first. Then, parts of the equation that contain division and multiplication are evaluated. Then, at last, the parts of the

equation that contain 'addition' and 'subtraction' should be evaluated.

$$14 \div \{(5 \text{ of } 2 - 3)\} \times 4(7 - 2)$$

$$14 \div 7 \times 20$$

$$2 \times 20$$

$$40$$

Q52 Text Solution:

According to the sequence in the dictionary:

The correct order of the given words is:

Mango

Master

Mind

Minty

Muted

Hence, the correct answer is "**1,3,2,4,5**".

Additional Information

1. First of all, check the common letter in all.
2. Arrange them according to the alphabet they come first.
3. When common letters are arranged, then go for the rest.

Video Solution:**Q53 Text Solution:**

As the temperature of water goes down, its pH goes up. For the following temperatures in degrees °C, 25, 20, 10, 0, correspond to pHs of 7.0, 7.08, 7.27, and at 0 degrees C, 7.47. But, at different pHs, water still is at a neutral pH.

Video Solution:

Q54 Text Solution:

Equinox is the day when day and night are equal. This occurs two times every year on 20 March and 23 September. Summer Solstice is on 21 June. Winter Solstice is on 22 December.

Video Solution:**Q55 Text Solution:**

- The "One Nation One FASTag" scheme was implemented in India on December 1, 2019.
- This scheme aimed to promote digital payments and streamline toll collection on national highways by using a single electronic toll collection system called FASTag.

Q56 Text Solution:

Sodium benzoate is a preservative commonly used in fruit pies, jams, beverages, salads, pickle, relishes, and sauerkraut mainly in foods that have an acidic pH. When sodium benzoate is combined with water, benzoic acid is produced. Benzoic acid is the active form of the preservative which protects foods.

Q57 Text Solution:

The Koraga tribal community in Kerala will receive land titles under the Operation Smile project. The Koragas are a Particularly Vulnerable Tribal Group (PVTG) found in Kerala's Kasaragod district and Karnataka. PVTGs are identified by the Ministry of Home Affairs, with 75 such communities currently listed. The Koragas were recognized as a Scheduled Tribe under the Presidential Order of 1956. Their traditional occupation is basket making, and they speak Tulu along with their

own language. Operation Smile, launched by the Kerala government, aims to rehabilitate and support homeless people.

Q58 Text Solution:

Indian Council of Social Science Research (ICSSR) faculty and staff have appealed to the Education Minister regarding delays in implementing 7th Central Pay Commission pay scales. ICSSR was founded by the Government of India in 1969, based on Prof. V. K. R. V. Rao's recommendations. It is an autonomous body under the Department of Higher Education, Ministry of Education, promoting social science research. ICSSR funds projects, fellowships, international collaborations, and publications in social sciences. It supports 24 research institutes, six regional centers, and five recognized institutes across India.

Q59 Text Solution:

The Union Ministry of Road Transport and Highways launched the Humsafar Policy on 7 October 2024 in New Delhi. The policy was introduced by Nitin Gadkari in the presence of key officials. Humsafar Policy aims to improve travel convenience on National Highways and Expressways. It focuses on developing world-class facilities like eateries, fuel stations, and trauma centres along highways. Commuters will have access to well-maintained, hygienic services. Service provider details can be easily found on the NHAI's 'Rajmarg Yatra' app.

Q60 Text Solution:

The Indian Army inaugurated a state-of-the-art skin bank at Army Hospital (Research & Referral) on June 18. This facility, a first within Armed Forces Medical Services, focuses on treating severe burn injuries for armed forces personnel and families. It addresses injuries from fire accidents, electrical incidents, and high-altitude kerosene warmers. The skin bank centralizes collection, processing, storage, and



distribution of skin grafts, enhancing medical capabilities nationwide for military hospitals.



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