

**SBI Clerk 2018**

# Quant

## Instructions

What should come in place of the question mark (?) in the following number series?

### Question 1

17, 19, 23, 29, 37, ?

A 46

B 49

C 47

D 48

E 45

**Answer:** C

### Explanation:

Let the missing number be x

Here the pattern is

$$19 - 17 = 2$$

$$23 - 19 = 4$$

$$29 - 23 = 6$$

$$37 - 29 = 8$$

As we can see that the difference is getting increased by 2 every time so ,

$$x - 37 = 10, \text{ it implies } x = 47$$

### Question 2

900, 899, 891, 864, 800, ?

A 695

B 685

C 665

D 675

E 655

**Answer:** D

### Explanation:

Let the missing number be x

$$900 - 899 = 1 = (1)^2$$

$$899 - 891 = 8 = (2)^3$$

$$891 - 864 = 27 = (3)^3$$

$$864 - 800 = 64 = (4)^3$$

as we can see the pattern between differences of consecutive numbers is of type  $(n)^3$

so  $x-800 = (5)^3$ , this implies that  $x = 675$

### Question 3

4, 32, 224, 1344, 6720, ?

- A 26885
- B 26880
- C 26882
- D 26888
- E 26883

**Answer:** B

### Explanation:

Let the missing number be  $x$

$$32 \div 4 = 8$$

$$224 \div 32 = 7$$

$$1344 \div 224 = 6$$

$$6720 \div 1344 = 5$$

As we can see that the division of consecutive numbers is forming a pattern of decreasing numbers by 1, so

$x \div 6720 = 4$ , it implies  $x$  is 26880

### Question 4

56, 54, 58, 50, 66, ?

- A 34
- B 98
- C 38
- D 94
- E 44

**Answer:** A

### Explanation:

Let the missing number be  $x$

Here, a pattern is getting formed between consecutive numbers.

$$54 - 56 = (-2)^1$$

$$58 - 54 = (-2)^2$$

$$50 - 58 = (-2)^3$$

$$66 - 50 = (-2)^4$$

As we can see that the difference is of the form  $(-2)^n$

so for missing number  $x$ ,

$$x - 66 = (-2)^5$$

This implies that  $x$  is 34

**Question 5**

655, 637, 622, 610, 601, ?

- A 598
- B 593
- C 595
- D 597
- E 594

**Answer:** C

**Explanation:**

Let the missing number be x.

The difference between every two consecutive numbers is forming a pattern.

$$655-637 = 18$$

$$637-622 = 15$$

$$622-610 = 12$$

$$610-601 = 9$$

As the difference is getting reduced by 3 every time . So  $601-x = 6$  which implies that the missing number ,x =595

**Instructions**

approximate value will sonar place of the question mark (1 in ilk. following questions ? (you are not required to calculate the exact value.).)

**Question 6**

$10303.88 \div 55.94 + 62.95 = ?$

- A 247
- B 250
- C 260
- D 220
- E None of these

**Answer:** A

**Explanation:**

$$10303.88 \div 55.94 + 62.95.$$

$$\sim 10304 \div 56 + 63.$$

$$= 184 + 63.$$

$$= 247.$$

Hence, Option A is correct.

**Question 7**

$$\sqrt{\frac{12321}{36.07}} = ?$$

- A 20
- B 18.5
- C 17
- D 17.5
- E None of these

**Answer:** B

**Explanation:**

$$\sqrt{\frac{12321}{36.07}}$$

$$\sim \sqrt{\frac{12321}{36}}$$

We know that,

$$111^2 = 12321, 6^2 = 36.$$

$$\sim \sqrt{\frac{12321}{36}} = \frac{111}{6}.$$

$$= 18.5.$$

Hence, Option B is correct.

**Question 8**

$$19.03 \times 16.98 \times 13.01 = ?$$

- A 4000
- B 4100
- C 4200
- D 4250
- E None of these

**Answer:** C

**Explanation:**

$$19.03 \times 16.98 \times 13.01.$$

$$\sim 19 \times 17 \times 13.$$

$$= 4199.$$

$$\sim 4200.$$

Hence, Option C is correct.

**Question 9**

$$117\% \text{ of } 459.88 - 162\% \text{ of } 143.02 = ?$$

- A 290
- B 280

- C 300
- D 306
- E None of these

**Answer: D**

**Explanation:**

117% of 459.88 - 162% of 143.02.

~117% of 460 - 162% of 143.

$$= \frac{117 \times 460}{100} - \frac{162 \times 143}{100}$$

$$= \frac{53820}{100} - \frac{23166}{100}$$

$$= 538.20 - 231.66$$

~306.

Hence, Option D is correct.

**Question 10**

**$\frac{3}{5} \times \frac{4}{9} \times 5894.92 = ?$**

- A 1527
- B 1572
- C 1752
- D 1725
- E None of these

**Answer: B**

**Explanation:**

$\frac{3}{5} \times \frac{4}{9} \times 5894.92$ .

~ $\frac{3}{5} \times \frac{4}{9} \times 5895$ .

=  $3 \times 4 \times 131$ .

= 1572.

Hence, Option B is correct.

**Instructions**

In these questions, two equations numbered I and II are given. You have to solve both the equations and mark the appropriate answer. Give answer :

- a: If  $x < y$
- b: If  $x > y$
- c: If  $x \leq y$
- d: If  $x \geq y$
- e: If relationship between  $x$  and  $y$  cannot be determined ,

**Question 11**

**I.**  $15x^2 + 26x + 8 = 0$

**II.**  $25y^2 + 15y + 2 = 0$

- A If  $x < y$
- B If  $x > y$
- C If  $x \leq y$
- D If  $x \geq y$

**E** If relationship between  $x$  and  $y$  cannot be determined

**Answer: C**

**Explanation:**

I.  $15x^2 + 26x + 8 = 0$

$$\Rightarrow 15x^2 + 6x + 20x + 8 = 0$$

$$\Rightarrow (3x + 4)(5x + 2) = 0$$

$$\Rightarrow x = \frac{-4}{3}, \frac{-2}{5}$$

II.  $25y^2 + 15y + 2 = 0$

$$\Rightarrow 25y^2 + 5y + 10y + 2 = 0$$

$$\Rightarrow (5y + 2)(5y + 1) = 0$$

$$\Rightarrow y = \frac{-2}{5}, \frac{-1}{5}$$

$$\therefore x \leq y$$

**Question 12**

I.  $6x^2 - 19x + 15 = 0$

II.  $5y^2 - 22y + 24 = 0$

**A** If  $x < y$

**B** If  $x > y$

**C** If  $x \leq y$

**D** If  $x \geq y$

**E** If relationship between  $x$  and  $y$  cannot be determined

**Answer: A**

**Explanation:**

I.  $6x^2 - 19x + 15 = 0$

$$\Rightarrow 6x^2 - 9x - 10x + 15 = 0$$

$$\Rightarrow (3x - 5)(2x - 3) = 0$$

$$\Rightarrow x = \frac{5}{3}, \frac{3}{2}$$

II.  $5y^2 - 22y + 24 = 0$

$$\Rightarrow 5y^2 - 10y - 12y + 24 = 0$$

$$\Rightarrow (5y - 12)(y + 2) = 0$$

$$\Rightarrow y = \frac{12}{5}, 2$$

$$\therefore y > x$$

**Question 13**

I.  $4x^2 - 12x + 5 = 0$

II.  $4y^2 - 8y + 3 = 0$

**A** If  $x < y$

**B** If  $x > y$

**C** If  $x \leq y$

D If  $x \geq y$

E If relationship between  $x$  and  $y$  cannot be determined

**Answer: E**

**Explanation:**

I.  $4x^2 - 12x + 5 = 0$

$$\Rightarrow 4x^2 - 2x - 10x + 5 = 0$$

$$\Rightarrow (2x - 5)(2x - 1) = 0$$

$$\Rightarrow x = \frac{5}{2}, \frac{1}{2}$$

II.  $4y^2 - 8y + 3 = 0$

$$\Rightarrow 4y^2 - 2y - 6y + 3 = 0$$

$$\Rightarrow (2y - 3)(2y - 1) = 0$$

$$\Rightarrow y = \frac{3}{2}, \frac{1}{2}$$

$\therefore$  No relation can be established.

**Question 14**

I.  $10x^2 + 21x + 8 = 0$

II.  $5y^2 + 19y + 18 = 0$

A If  $x < y$

B If  $x > y$

C If  $x \leq y$

D If  $x \geq y$

E If relationship between  $x$  and  $y$  cannot be determined

**Answer: B**

**Explanation:**

I.  $10x^2 + 21x + 8 = 0$

$$\Rightarrow 10x^2 + 5x + 16x + 8 = 0$$

$$\Rightarrow (5x + 8)(2x + 1) = 0$$

$$\Rightarrow x = \frac{-8}{5}, \frac{-1}{2}$$

II.  $5y^2 + 19y + 18 = 0$

$$\Rightarrow 5y^2 + 10y + 9y + 18 = 0$$

$$\Rightarrow (5y + 9)(y + 2) = 0$$

$$\Rightarrow y = \frac{-9}{5}, -2$$

$\therefore x > y$

**Question 15**

I.  $6x^2 - 5x + 1 = 0$

II.  $12y^2 - 23y + 10 = 0$

A If  $x < y$



- B** If  $x > y$
- C** If  $x \leq y$
- D** If  $x \geq y$
- E** If relationship between  $x$  and  $y$  cannot be determined

**Answer:** A

**Explanation:**

I.  $6x^2 - 5x + 1 = 0$

$\Rightarrow 6x^2 - 2x - 3x + 1 = 0$

$\Rightarrow 2x(3x - 1) - 1(3x - 1) = 0$

$\Rightarrow (2x - 1)(3x - 1) = 0$

$\Rightarrow x = \frac{1}{2}, \frac{1}{3}$

II.  $12y^2 - 23y + 10 = 0$

$\Rightarrow 12y^2 - 8y - 15y + 10 = 0$

$\Rightarrow 4y(3y - 2) - 3(3y - 2) = 0$

$\Rightarrow (4y - 3)(3y - 2) = 0$

$\Rightarrow y = \frac{3}{4}, \frac{2}{3}$

$\therefore y > x$

**Instructions**

In the given questions, two quantities are given, one as Quantity I and another as Quantity II. You have to determine relationship between two quantities and choose the appropriate option.

- a: If quantity I  $\geq$  quantity II
- b: If quantity I  $>$  quantity II
- c: If quantity I  $<$  quantity II
- d: If quantity I = quantity II or the relationship cannot be established from the information that is given
- e: If quantity quantity II

**Question 16**

**Arun and Bhadra are brothers. In how many years from now will Bhadra's age be 50 years ? •**

- I. The ratio of the current ages of Arun and Bhadra is 5 : 7 respectively.**
- II. Bhadra was born 10 years before Arun.**
- III. 5 years hence, Arun's age would be three-fourth of Bhadra's age at that time.**

- A** Any two of the three
- B** Only II and either I or III
- C** All I, II and III
- D** Only II and III
- E** Only I and III

**Answer:** A

**Explanation:**

I & II : Let Arun's age =  $x$  years

$\Rightarrow$  Bhadra's age =  $x + 10$  years

$\therefore \frac{x}{x+10} = \frac{5}{7}$

$$\Rightarrow 7x = 5x + 50$$

$$\Rightarrow 7x - 5x = 2x = 50$$

$$\Rightarrow x = \frac{50}{2} = 25$$

$$\Rightarrow \text{Bhadra's age} = 25 + 10 = 35 \text{ years}$$

Thus, I & II are sufficient.

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II & III : Let Arun's age =  $x$  years

$$\Rightarrow \text{Bhadra's age} = x + 10 \text{ years}$$

$$\therefore \frac{x+5}{x+15} = \frac{3}{4}$$

$$\Rightarrow 4x + 20 = 3x + 45$$

$$\Rightarrow 4x - 3x = 45 - 20$$

$$\Rightarrow x = 25$$

$$\Rightarrow \text{Bhadra's age} = 25 + 10 = 35 \text{ years}$$

Thus, II & III are sufficient.

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I & III : Let Arun's age =  $5x$  years

$$\Rightarrow \text{Bhadra's age} = 7x \text{ years}$$

$$\therefore \frac{5x+5}{7x+5} = \frac{3}{4}$$

$$\Rightarrow 20x + 20 = 21x + 15$$

$$\Rightarrow 21x - 20x = 20 - 15$$

$$\Rightarrow x = 5$$

$$\Rightarrow \text{Bhadra's age} = 7 \times 5 = 35 \text{ years}$$

Thus, I & III are sufficient.

**$\therefore$  Any two of the three statements are sufficient.**

### Question 17

**A right-angled triangle is inscribed in a given circle. What is the area of the given circle (in cm<sup>2</sup>) ?**

**I. The base and height of the triangle (in cm) are both the roots of the equation  $x^2 - 23x + 120 = 0$**

**II. The sum of the base and height of the triangle is 23 cm.**

**III. The height of the right-angled triangle is greater than the base of the same.**

**A** III and either only I or only II

**B** ALL I, II and III

**C** Only II and III

**D** Only I

**E** Either I or II

**Answer:** D

**Explanation:**

I :  $x^2 - 23x + 120 = 0$

$$\Rightarrow x^2 - 8x - 15x + 120 = 0$$

$$\Rightarrow x(x - 8) - 15(x - 8) = 0$$

$$\Rightarrow (x - 8)(x - 15) = 0$$

$$\Rightarrow x = 8, 15$$

Thus, base = 8 cm and height = 15 cm (or vice versa)

$$\Rightarrow \text{Hypotenuse of right angled triangle} = \sqrt{(8)^2 + (15)^2}$$

$$= \sqrt{64 + 225} = \sqrt{289} = 17\text{cm}$$

Since, triangle is inscribed in circle,  $\Rightarrow$  Radius of circle = half of hypotenuse

$$\Rightarrow r = \frac{17}{2} = 8.5 \text{ cm}$$

$$\therefore \text{Area of circle} = \pi r^2$$

$$= \frac{22}{7} \times 8.5 \times 8.5 \approx 227\text{cm}^2$$

**Thus, I alone is sufficient.**

Clearly, we cannot find base and height from statements II or III. Thus, they are insufficient.

### Question 18

**What is the ratio between the marked price of two identical items, P and Q, which had been purchased at the same price ?**

**I. Item P was sold at a profit of 20%, while item Q was sold at a loss of 10%.**

**II. Item P was sold at a discount of 4%. The percentage by which Item Q's cost price had been marked up is 2.5 times the profit % earned on selling item P.**

**III. The overall profit earned on selling items P and Q was 5%.**

- A Only I and II
- B All I, II and III
- C Any two of the three
- D Only II and III
- E Question cannot be answered even with the information in all the three statements

**Answer: A**

### Question 19

**Three workers A, B and C complete a given piece of work within different time spans, while working individually. What is the ratio of efficiencies of C and B respectively ?**

**I. A takes 100% more time than C to complete the given piece of work.**

**II. B completes the given piece of work within 8 days.**

**III. B takes 2 days less than A to complete the given piece of work.**

- A Question cannot be answered even with the information in all three statements.
- B All of the three
- C Only II and III
- D II and either only I or only III
- E Only I and III

**Answer: B**

**Explanation:**

Clearly, we require all the statements as only then we can find the relation among A,B and C

From I,II & III : Time taken by B to complete the work = 8 days

=> Time taken by A to complete the work = 8 + 2 = 10 days

Time taken by C =  $\frac{100}{200} \times 10 = 5$  days

We know that, efficiency  $\propto \frac{1}{\text{time}}$

=> Ratio of efficiencies of C and B respectively = 8 : 5

Thus, all the statements are sufficient.

### Question 20

**What is the three-digit number having each digit different from the other ?**

**I. Each of the digits of the given number is a multiple of 3.**

**II. The digit in the unit's place is 50% less than that in the hundred's place.**

- A** All I, II and III
- B** Question cannot be answered even with the information in all the three statements.
- C** Only II
- D** Only I and II
- E** II and either I or III

**Answer: D**

#### **Explanation:**

The three digits of the number are distinct

I : Each digit is multiple of 3

=> Number = 369, 396, 963...

Thus, I alone is not sufficient.

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II : Digit in the unit's place is 50% less than that in the hundred's place

=> Number = 201, 211, 221, 402..

Thus, II alone is not sufficient.

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I & II : Digit at unit's place is half of digit at hundred's place and all digits are multiple of 3

=> The only possibility = 693

**Thus, I & II together are sufficient.**

#### **Instructions**

These question are based on the following data.Study it carefully and answer the question that follow.

In a school having 400 students boys and girls are in the ratio of 3:5 The students speak Hindi,English or both the languages 12% of the boys speak only Hindi. 22% of the girls speak only English 24% of the total students speak only Hindi and the number of boys speaking both the languages is six times the number of boys speaking only Hindi

### Question 21

**How many boys speak Hindi ?**

- A** 18

- B** 126
- C** 108
- D** 26
- E** None of these

**Answer:** B

**Explanation:**

The no. of boys speaking only hindi = 12% of  $\frac{3}{8}$  of 400 = 18  
The no. of boys speaking both Hindi and English =  $6 \times 18 = 108$   
The total no. of boys speaking Hindi = 126

**Question 22**

**How many girls speak only Hindi ?**

- A** 55
- B** 117
- C** 96
- D** 78
- E** None of these

**Answer:** D

**Explanation:**

24% speak only Hindi i.e 96 speak Hindi.

12% of 150 boy i.e 18 boys speak only Hindi

Of these 18 boys speak only Hindi and hence remaining 76 are girls speaking only hindi

**Question 23**

**How many students speak English ?**

- A** 304
- B** 79
- C** 225
- D** 117
- E** None of these

**Answer:** A

**Explanation:**

24% speak only Hindi.

Hence remaining 76% must speak English or English and Hindi both.

Total number of students = 400

76% of 400 = 304

Hence, option A is correct.

### Question 24

The number of girls speaking only Hindi is what percent of the total number of students speaking only Hindi ?

- A 38.2%
- B 71.8%
- C 31.2%
- D 78%
- E None of these

**Answer:** E

#### **Explanation:**

Total number of students who speak only Hindi = 24% of 400 = 96

Number of boys who speak only Hindi = 12% of 150 = 18

Number of girls who speak only Hindi = 78

The percent of girls speaking only Hindi of the total number of students speaking only Hindi =  $\frac{78}{96} \times 100 = 81.25$

### Question 25

What is the ratio of the number of boys to the number of girls speaking both the languages ?

- A 23:25
- B 12:25
- C 12:13
- D 25:13
- E None of these

**Answer:** C

#### **Explanation:**

Number of girls speaking both the language = (400 - no. of boys speaking both language) - No. of girls speaking only english - No. of girls speaking only hindi = 400 - 108 - 44 - 96 = 117

The ratio = 108/117

### Instructions

For the following questions answer them individually

### Question 26

Raghuvir bought 10 calculators and 16 watches for Rs. 56000 and sold them at an overall profit of 20%. At what price should he sell 15 calculators and 24 watches so that he receives the same percentage of profit ?

- A 100980
- B 116176
- C 121176

D 100800

E 124132

**Answer:** D

**Explanation:**

Total S.P. of 10 calculators and 16 watches

$$= 56,000 \times \frac{120}{100} = \text{Rs. } 67,200$$

Multiplying by  $\frac{3}{2}$

=> S.P. of 15 calculators and 24 watches

$$= 67,200 \times \frac{3}{2} = \text{Rs. } 1,00,800$$

**Question 27**

**A vessel contains 64 litres of mixture of milk and water in the ratio 7 : 3 respectively. 8 litres of mixture is replaced by 8 litres of milk. What is the ratio of milk and water in the resulting mixture ?**

A 59 : 21

B 35 : 22

C 64 : 23

D 65 : 21

E None of these

**Answer:** A

**Explanation:**

Solution of milk and water in vessel = 64 litres

ration of Milk:Water = 7:3

using

$$\frac{\text{waterconcentration final}}{\text{total}} = \frac{\text{initialwaterconc.}}{\text{total}} \left(1 - \frac{\text{removedvolume}}{\text{total}}\right)^n$$

$$\frac{\text{waterconcentration final}}{\text{total}} = \frac{3}{10} \left(1 - \frac{8}{64}\right)^1$$

$$\frac{\text{waterconcentration final}}{\text{total}} = \frac{3}{10} \left(1 - \frac{1}{8}\right)^n$$

$$\frac{\text{waterconcentration final}}{\text{total}} = \frac{21}{80}$$

water : milk in new solution after replacement = 21: 59

**Question 28**

**The compound interest earned by Suresh on a certain amount at the end of two years at the rate of 8 p.c.p.a was Rs. 1,414.4. What was the total amount that Suresh got back at the end of two years in the form of principal plus interest earned?**

A Rs. 9,414.4

B Rs. 9,914.4

C Rs. 9,014.4

D Rs. 8,914.4

E None of these

**Answer: B**

**Explanation:**

Compound Interest after 2 years = 1414.4

$$P(1 + \frac{8}{100})^2 - P = 1414.4$$

$$\Rightarrow P(1.08)^2 - P = 1414.4$$

$$\Rightarrow 0.1664P = 1414.4$$

$$\Rightarrow P = 8500$$

Therefore amount = 8500 + 1414.14 = 9914.14

**Question 29**

**A man can row threequarters of a kilometre against the stream in  $\frac{45}{4}$  min and return in  $\frac{15}{2}$  min. The speed of the man in still water is :**

**A** 2 km/h

**B** 3 km/h

**C** 4 km/h

**D** 5 km/h

**E** 6 km/h

**Answer: D**

**Explanation:**

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

$$\Rightarrow \text{Upstream speed} = \frac{3}{\frac{45}{4} \times 60}$$

$$= \frac{3 \times 60}{45} = 4 \text{ km/h}$$

$$\text{Downstream speed} = \frac{3}{\frac{15}{2} \times 60}$$

$$= \frac{3 \times 2 \times 60}{15 \times 4} = 6 \text{ km/h}$$

$$\therefore \text{Speed of man in still water} = \frac{1}{2} (\text{downstream} + \text{upstream})$$

$$= \frac{1}{2} (6 + 4)$$

$$= \frac{10}{2} = 5 \text{ km/h}$$

**Question 30**

**4 men and 3 women finish a job in 6 days, and 5 men and 7 women can do the same job in 4 days. How long will 1 man and 1 woman take to do the work ?**

**A** 22  $\frac{2}{7}$  days

**B** 25  $\frac{1}{2}$  days

**C** 5  $\frac{1}{7}$  days

**D** 12  $\frac{7}{22}$  days



**E** None of these

**Answer: A**

**Explanation:**

Let the time taken to complete the work =  $x$  days

$$\Rightarrow (4M + 3W) \times 6 = (5M + 7W) \times 4$$

$$\Rightarrow 24M + 18W = 20M + 28W$$

$$\Rightarrow 4M = 10W \text{ -----Eqn(1)}$$

Acc to ques,

$$\Rightarrow (4M + 3W) \times 6 = (1M + 1W) \times x$$

Using eqn(1), we get :

$$\Rightarrow (10 + 3) \times 6 = \left(\frac{10}{4} + 1\right) \times x$$

$$\Rightarrow 78 = \frac{7}{2}x$$

$$\Rightarrow x = \frac{78 \times 2}{7} = \frac{156}{7}$$

$$\Rightarrow x = 22\frac{2}{7} \text{ days}$$

**Instructions**

What will come in place of the question mark (?) in the following questions ?

**Question 31**

$$4/9 \times 1701 + 2/11 \times 1386=?$$

**A** 180

**B** 1080

**C** 1008

**D** 1800

**E** None of these

**Answer: C**

**Explanation:**

$$4/9 \times 1701 + 2/11 \times 1386.$$

$$= \frac{4 \times 1701}{9} + \frac{2 \times 1386}{11}.$$

$$= 189 \times 4 + 126 \times 2.$$

$$= 756 + 252.$$

$$= 1008.$$

Hence, Option C is correct.

**Question 32**

$$\frac{1}{\sqrt{7744}} \times 22 = ?$$

**A** 0.35

**B** 0.025

- C 2.5
- D 0.25
- E None of these

**Answer:** D

**Question 33**

$$\frac{\sqrt{6561}}{\sqrt[3]{729}} = ?$$

- A 13
- B 8
- C 99
- D 8
- E None of these

**Answer:** E

**Question 34**

$$\sqrt{12.96} \div 0.6 = ?$$

- A 6
- B 0.06
- C 0.6
- D 60
- E None of these

**Answer:** A

**Question 35**

$$25\% \text{ of } 960 + 55\% \text{ of } 740 = ?$$

- A 689
- B 647
- C 650
- D 699
- E None of these

**Answer:** B

**Explanation:**

$$25\% \text{ of } 960 + 55\% \text{ of } 740.$$

... ..

$$= \frac{25 \times 960}{100} + \frac{55 \times 740}{100}$$

$$= 240 + 407$$

$$= 647$$

Hence, Option B is correct.

## Reasoning

### Instructions

Study the following information carefully and answer the questions given below :

Ten persons — J, K, L, M, N, O, P, Q, R and S — are sitting around a circular table facing the centre with equal distances between each other (but not necessarily in the same order). Each one of them is also related to M in some way or the other. Only two persons sit between Q and L. M sits second to the left of Q. Only three persons sit between L and M's sister. M's son sits second to the right of M's sister. Only one person sits between M's son and S. J sits to the immediate right of R. R is neither the son nor the mother of M.

S is an immediate neighbour of M's mother. Only three persons sit between M's mother and M's brother. M's daughter sits second to the left of M's brother. M's father is not an immediate neighbour of M. M's wife sits third to the right of K. L is to the right of Q. Only four persons sit between M and M's father.

### Question 36

Who sits second to the right R?

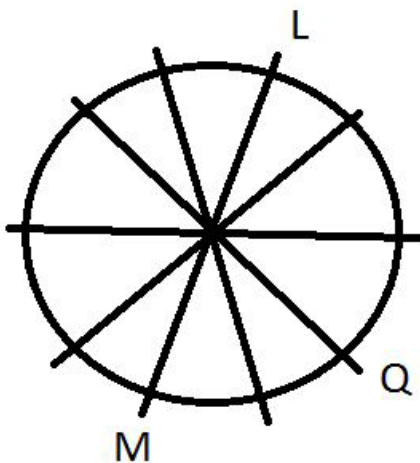
- A M's brother
- B M
- C R
- D N
- E M's daughter

**Answer:** B

### Explanation:

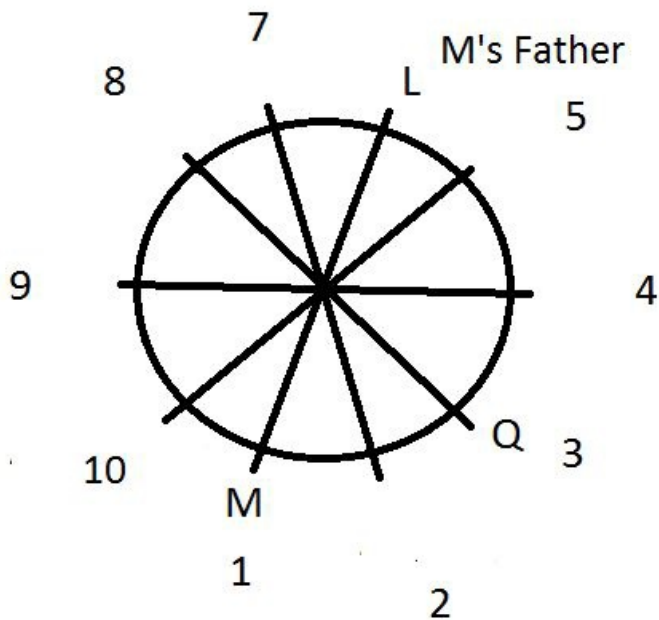
M sits second to the left of Q. There are 2 persons in between Q and L. L sits to the right of Q (second last statement).

From these statements, we can infer the following diagram.



Let us number the positions starting from 1 to make things easier.

3 persons sit between L and M's sister. M's son sits second to the right of M's sister.



M's sister can be at positions 10 or 2. Let us assume the position of M's sister to be 2 and proceed. If this assumption fails, we will reconstruct the diagram with M's sister at 10.

Now, only 1 person sits between M's son and S. Now, M's sister can be S or L.

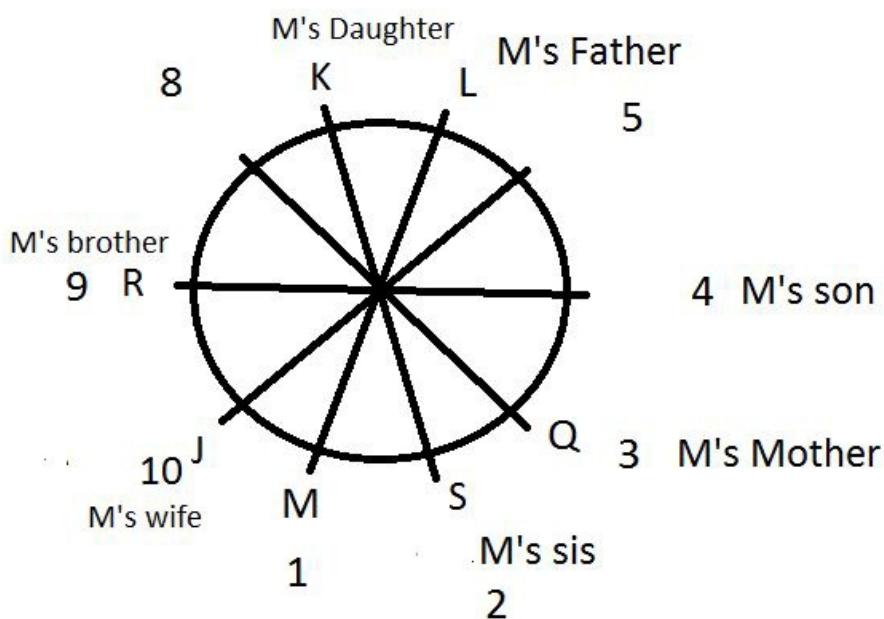
Also, it is given that there are 4 persons between M's Father and M. Therefore, L must be M's Father. S must be M's sister

S is an immediate neighbour of M's mother. Hence, M's mother must be Q. Only 3 persons sit between M's mother and M's brother. Person at 7 or 9 can be M's brother.

Let us assume the person at position 9 to be M's brother.

J sits to the immediate right of R. R is neither the son nor the mother of M. J can sit at position 10 and R at position 9. M's daughter sits second to the left of M's brother. M's daughter sits at position 7. M's wife sits third to the right of K. Let us assume K to be M's daughter. This implies that J will be M's wife.

The final arrangement is as follows.



Any other assumption leads to clash of the facts given at one point of time or another. All the questions can be answered using the diagram given above.

M sits second to the right of R. Option B is the right answer.

**Question 37**

**How many persons sit between K and L, when counted from the left of K ?**

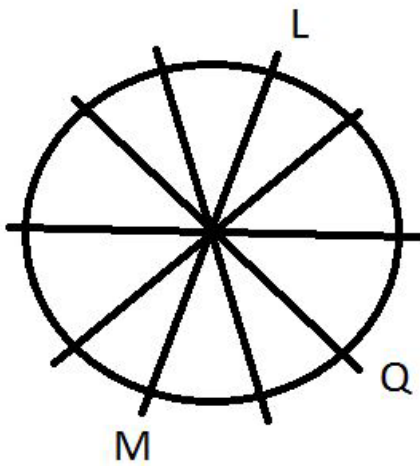
- A** Six
- B** One
- C** None
- D** Two
- E** Four

**Answer: C**

**Explanation:**

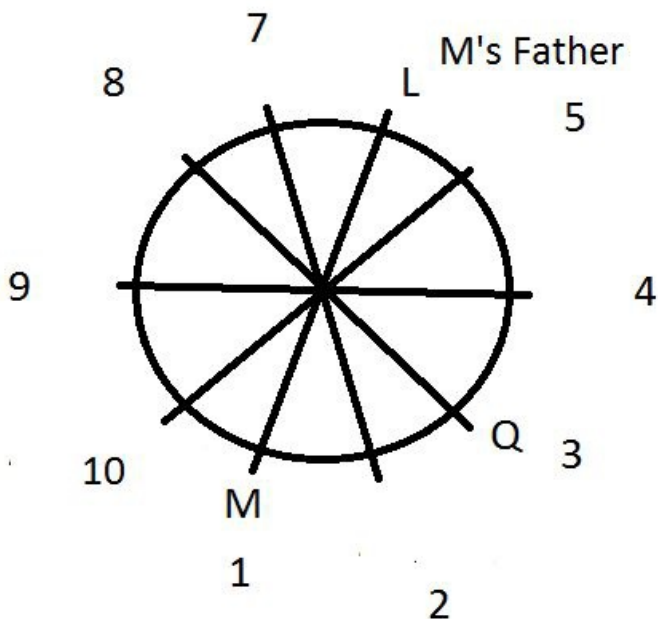
M sits second to the left of Q. There are 2 persons in between Q and L. L sits to the right of Q (second last statement).

From these statements, we can infer the following diagram.



Let us number the positions starting from 1 to make things easier.

3 persons sit between L and M's sister. M's son sits second to the right of M's sister.



M's sister can be at positions 10 or 2. Let us assume the position of M's sister to be 2 and proceed. If this assumption

fails, we will reconstruct the diagram with M's sister at 10.

Now, only 1 person sits between M's son and S. Now, M's sister can be S or L.

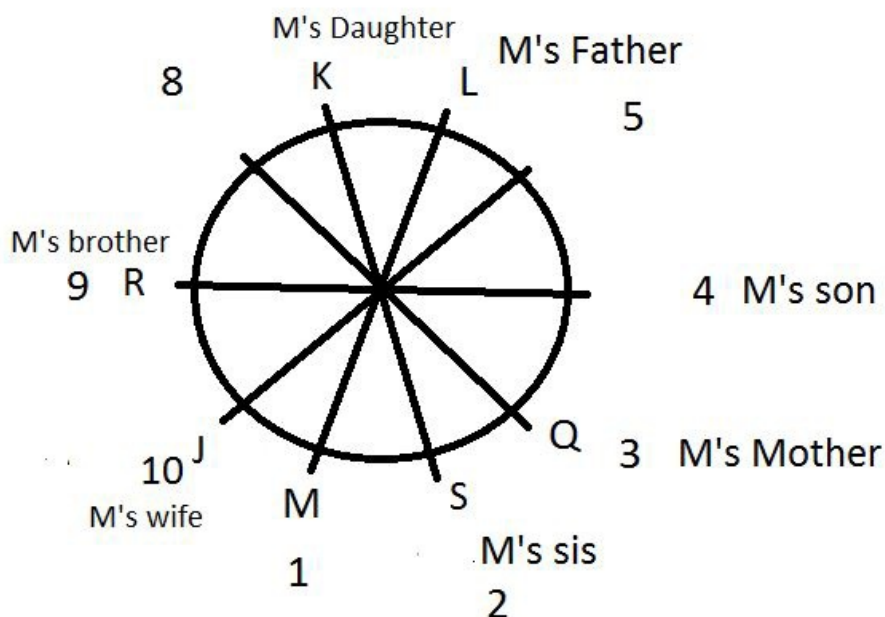
Also, it is given that there are 4 persons between M's Father and M. Therefore, L must be M's Father. S must be M's sister

S is an immediate neighbour of M's mother. Hence, M's mother must be Q. Only 3 persons sit between M's mother and M's brother. Person at 7 or 9 can be M's brother.

Let us assume the person at position 9 to be M's brother.

J sits to the immediate right of R. R is neither the son nor the mother of M. J can sit at position 10 and R at position 9. M's daughter sits second to the left of M's brother. M's daughter sits at position 7. M's wife sits third to the right of K. Let us assume K to be M's daughter. This implies that J will be M's wife.

The final arrangement is as follows.



Any other assumption leads to clash of the facts given at one point of time or another. All the questions can be answered using the diagram given above.

No person sits between K and L. Hence, option C is the right answer.

### Question 38

Which of the following statements is true with respect to the given information

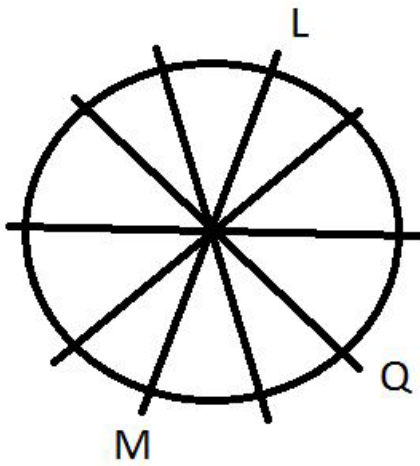
- A R sits second to the right of M's wife.
- B K is an immediate neighbour of R.
- C M sits second to the left of L
- D All the given options are true.
- E S is the daughter of L.

**Answer:** E

### Explanation:

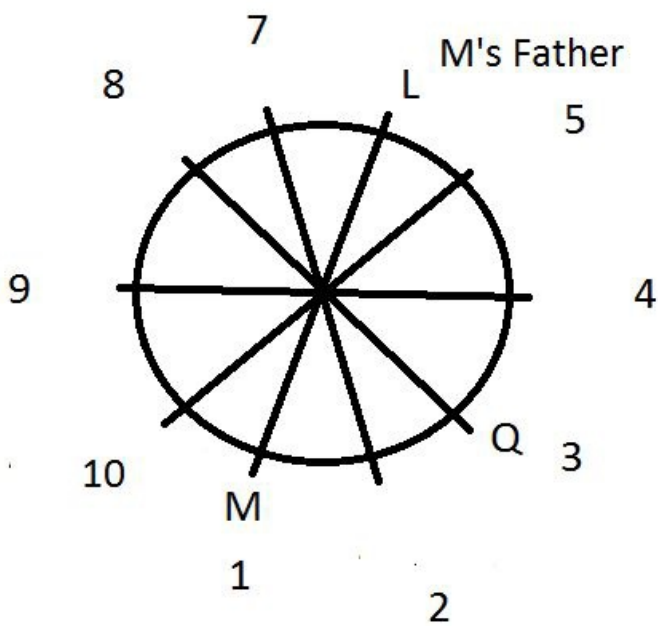
M sits second to the left of Q. There are 2 persons in between Q and L. L sits to the right of Q (second last statement).

From these statements, we can infer the following diagram.



Let us number the positions starting from 1 to make things easier.

3 persons sit between L and M's sister. M's son sits second to the right of M's sister.



M's sister can be at positions 10 or 2. Let us assume the position of M's sister to be 2 and proceed. If this assumption fails, we will reconstruct the diagram with M's sister at 10.

Now, only 1 person sits between M's son and S. Now, M's sister can be S or L.

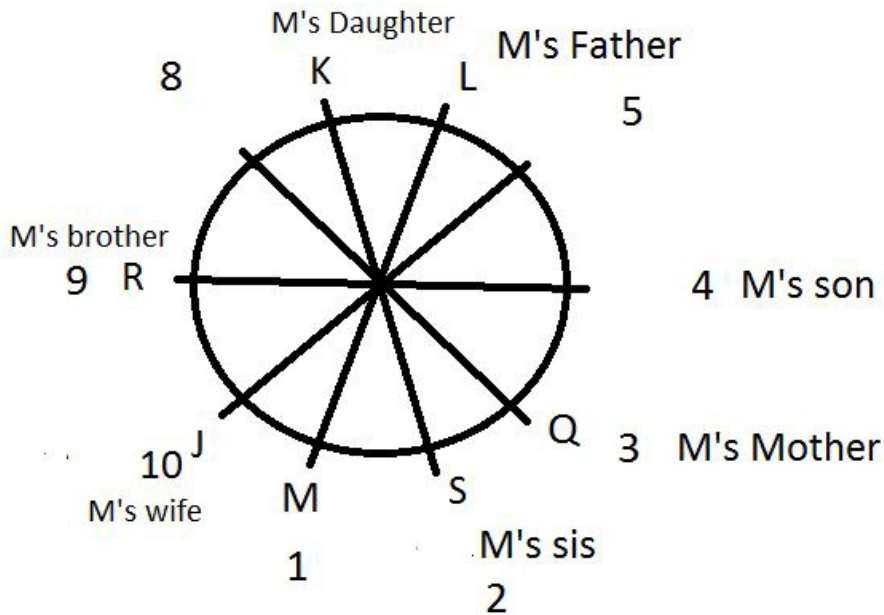
Also, it is given that there are 4 persons between M's Father and M. Therefore, L must be M's Father. S must be M's sister

S is an immediate neighbour of M's mother. Hence, M's mother must be Q. Only 3 persons sit between M's mother and M's brother. Person at 7 or 9 can be M's brother.

Let us assume the person at position 9 to be M's brother.

J sits to the immediate right of R. R is neither the son nor the mother of M. J can sit at position 10 and R at position 9. M's daughter sits second to the left of M's brother. M's daughter sits at position 7. M's wife sits third to the right of K. Let us assume K to be M's daughter. This implies that J will be M's wife.

The final arrangement is as follows.



Any other assumption leads to clash of the facts given at one point of time or another. All the questions can be answered using the diagram given above.

S is M's sister and L is M's father. Hence, S is the daughter of L. Option E is the right answer.

**Question 39**

**How is K related to R ?**

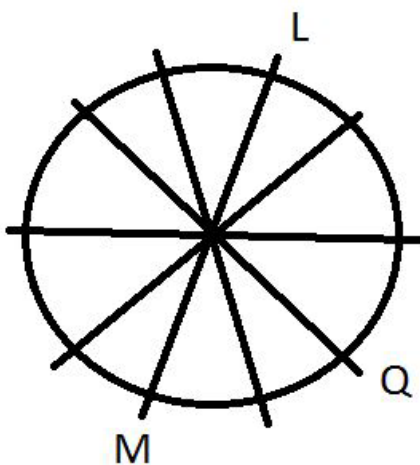
- A Son-in-law
- B Uncle
- C Brother
- D Niece
- E Daughter

**Answer:** D

**Explanation:**

M sits second to the left of Q. There are 2 persons in between Q and L. L sits to the right of Q (second last statement).

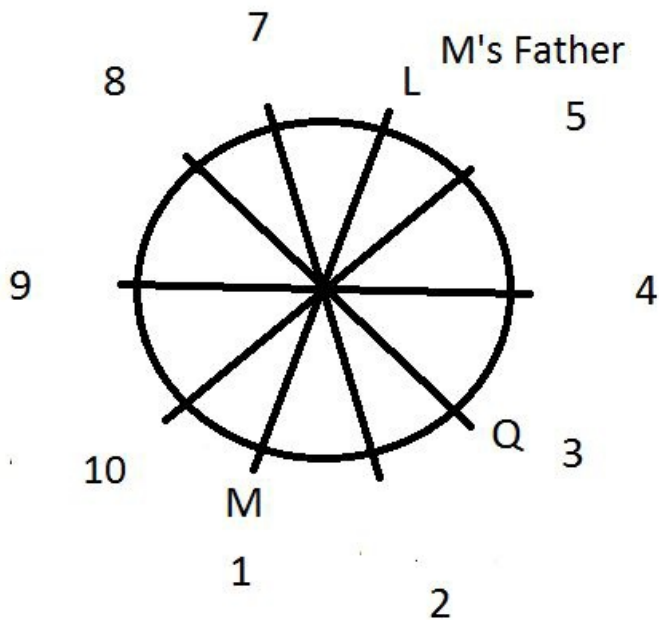
From these statements, we can infer the following diagram.



Let us number the positions starting from 1 to make things easier.

3 persons sit between L and M's sister. M's son sits second to the right of M's sister.





M's sister can be at positions 10 or 2. Let us assume the position of M's sister to be 2 and proceed. If this assumption fails, we will reconstruct the diagram with M's sister at 10.

Now, only 1 person sits between M's son and S. Now, M's sister can be S or L.

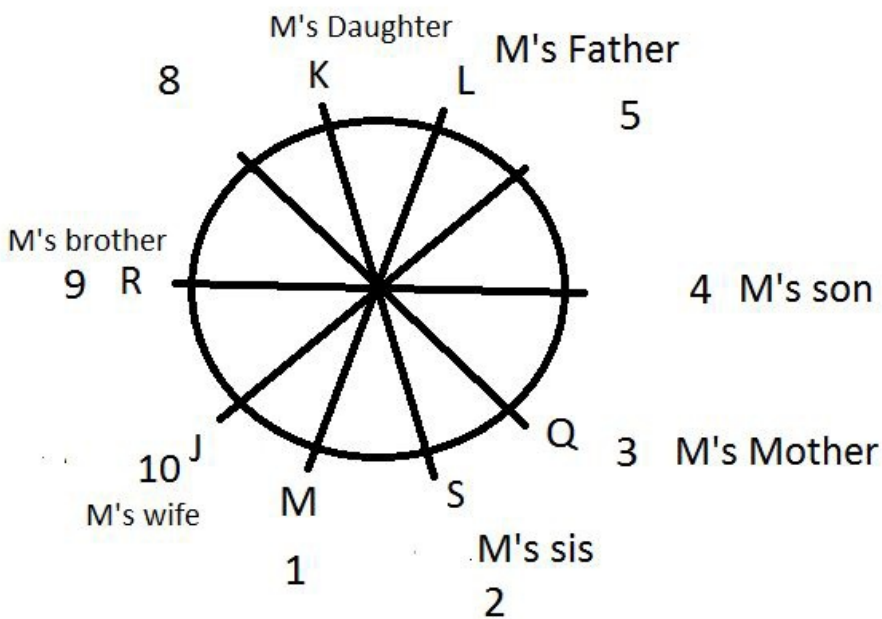
Also, it is given that there are 4 persons between M's Father and M. Therefore, L must be M's Father. S must be M's sister

S is an immediate neighbour of M's mother. Hence, M's mother must be Q. Only 3 persons sit between M's mother and M's brother. Person at 7 or 9 can be M's brother.

Let us assume the person at position 9 to be M's brother.

J sits to the immediate right of R. R is neither the son nor the mother of M. J can sit at position 10 and R at position 9. M's daughter sits second to the left of M's brother. M's daughter sits at position 7. M's wife sits third to the right of K. Let us assume K to be M's daughter. This implies that J will be M's wife.

The final arrangement is as follows.



Any other assumption leads to clash of the facts given at one point of time or another. All the questions can be answered using the diagram given above.

K is M's daughter and R is M's brother. This means that K is the niece of R. Option D is the right answer.

**Question 40**

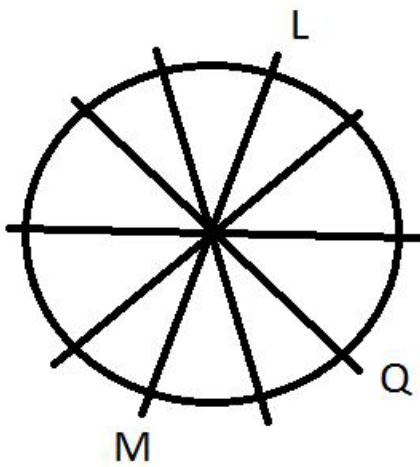
**Who amongst the following is the wife of M ?**

- A J
- B L
- C O
- D Q
- E N

**Answer:** A

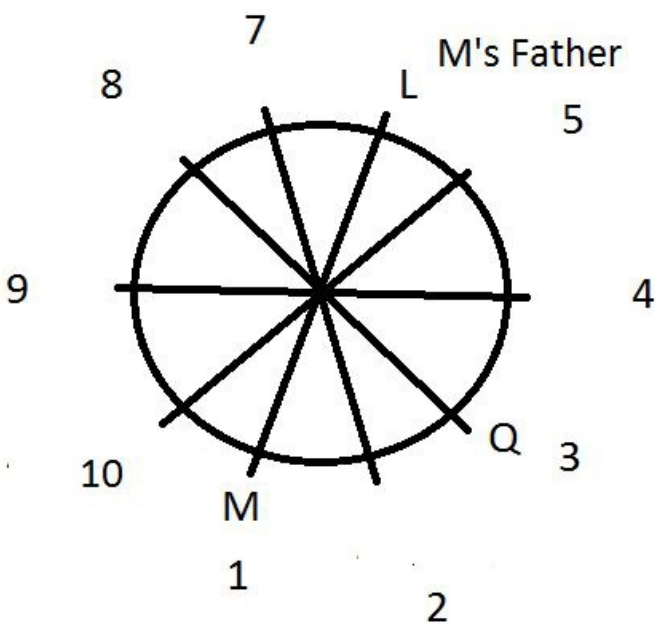
**Explanation:**

M sits second to the left of Q. There are 2 persons in between Q and L. L sits to the right of Q (second last statement). From these statements, we can infer the following diagram.



Let us number the positions starting from 1 to make things easier.

3 persons sit between L and M's sister. M's son sits second to the right of M's sister.



M's sister can be at positions 10 or 2. Let us assume the position of M's sister to be 2 and proceed. If this assumption fails, we will reconstruct the diagram with M's sister at 10.

Now, only 1 person sits between M's son and S. Now, M's sister can be S or L.

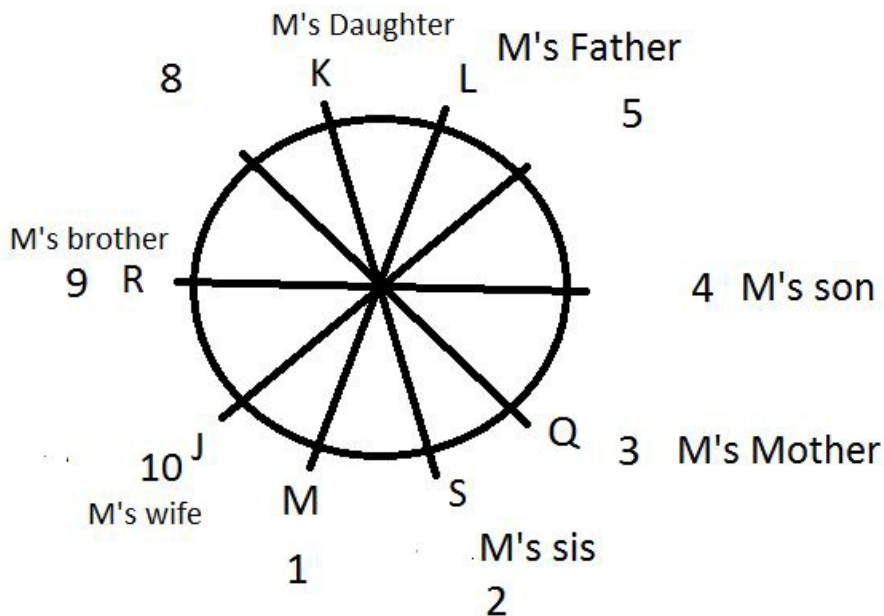
Also, it is given that there are 4 persons between M's Father and M. Therefore, L must be M's Father. S must be M's sister

S is an immediate neighbour of M's mother. Hence, M's mother must be Q. Only 3 persons sit between M's mother and M's brother. Person at 7 or 9 can be M's brother.

Let us assume the person at position 9 to be M's brother.

J sits to the immediate right of R. R is neither the son nor the mother of M. J can sit at position 10 and R at position 9. M's daughter sits second to the left of M's brother. M's daughter sits at position 7. M's wife sits third to the right of K. Let us assume K to be M's daughter. This implies that J will be M's wife.

The final arrangement is as follows.



Any other assumption leads to clash of the facts given at one point of time or another. All the questions can be answered using the diagram given above.

As we can see from the diagram, J is M's wife. Hence, option A is the right answer.

### Instructions

Study the following information carefully and answer the questions given below :

- K is the brother of J. J is the mother of Y.
- Y is the sister of T. T is married to Q. S is the father of J.
- S has only one daughter. S is married to R.
- K is the brother of D. U is the father-in-law of D.

### Question 41

How is D related to Y?

- A Cannot be determined
- B Mother
- C Uncle
- D Father
- E Aunt

**Answer:** C

### Explanation:

Y is sister of T, their mother is J, who is also sister of K.

T is married to Q, and gender of both are unknown.

S is father of J, and is married to R. They have 3 children, i.e. D,K and J.

Since, S has only one daughter, => D and K are brothers and J is their sister.

Also, U is father-in-law of D, => U is father of D's wife.

Here, D is the brother of Y's mother, => D is uncle of Y.

=> Ans - (C)

#### Question 42

**If Y is married to P, then how is S related to P?**

**A** Cannot be determined

**B** Sister

**C** Brother-in-law

**D** Sister-in-law

**E** None of these

**Answer:** E

#### Explanation:

Y is sister of T, their mother is J, who is also sister of K.

T is married to Q, and gender of both are unknown.

S is father of J, and is married to R. They have 3 children, i.e. D,K and J.

Since, S has only one daughter, => D and K are brothers and J is their sister.

Also, U is father-in-law of D, => U is father of D's wife.

If Y is married to P, and also S is grandfather of Y,

=> S is grandfather-in-law of P, which is not given in the options.

=> Ans - (E)

#### Instructions

For the following questions answer them individually

#### Question 43

**Arrange the following words as per order in the English dictionary :**

**1. Caricature**

**2. Cardinal**

**3. Carnivore**

**4. Cartoon**

**5. Category**

**A** 2, 1, 3, 4, 5

**B** 4, 5, 1, 3, 2

**C** 1, 2, 3, 4, 5

**D** 2, 1, 3, 5, 4

**Answer:** A

#### Explanation:

As per order in the English dictionary :

= Cardinal -> Caricature -> Carnivore -> Cartoon -> Category

≡ 2, 1, 3, 4, 5

=> Ans - (A)

#### Question 44

Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?  
R\_S\_ PM\_KSB\_MRK\_

A KRKSP

B KBRPS

C RKSPM

D BPSMP

**Answer: B**

#### Explanation:

In this question we need to fill the blanks in R\_S\_ PM\_KSB\_MRK\_

here the pattern is RKSbPM and hence , the blanks from left to right will be filled by "KBRPS"

#### Question 45

In the following series, how many HIG occur in such a way that "I" is in the middle and 'H' and 'G' are adjacent to it on both sides ?

GGHIIIGGJKLMGIHIG

A 3

B 2

C 5

D 4

**Answer: B**

#### Explanation:

In the expression, we need to find HIG or GIH.

=> GGHIIIGGJKLM **GIH** IG and GGHIIIGGJKLMGI **HIG**

Thus, there are 2 such words.

=> Ans - (B)

#### Instructions

In each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

Give answer

(A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question

(B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question

(C) If the data either in statement I alone or in statement II alone are sufficient to answer the question

(D) If the data given in both statements I and II together are not sufficient to answer the question

(E) If the data in both statements I and II together are necessary to answer the question.

### Question 46

Which word in the code language 'flower' means?

I. 'de fu la pane' means 'rose flower is beautiful' and 'la quiz' means 'beautiful tree'.

II. 'de la chin' means 'red rose flower' and 'pa chin' means 'red tea'.

- A If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- B If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- C If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D If the data given in both statements I and II together are not sufficient to answer the question
- E If the data in both statements I and II together are necessary to answer the question.

**Answer:** D

#### **Explanation:**

I : 'de fu la pane' means 'rose flower is beautiful' and 'la quiz' means 'beautiful tree'.

The only common word in above inferences is '*beautiful*' coded as = 'la'

Thus, we cannot find the code of 'flower' from I alone.

---

II : 'de la chin' means 'red rose flower' and 'pa chin' means 'red tea'.

The only common word in above inferences is '*red*' coded as = 'chin'

Thus, we cannot find the code of 'flower' from II alone.

---

I & II : In the above statements, common words are '*rose*' and '*flower*' coded as = 'de' or 'la'

Thus, code for flower is either 'de' or 'la'.

∴ **Both statements even together are insufficient.**

=> Ans - (D)

### Question 47

How is P is related to the Q?

I. J has the two daughters ,one of them R is married to P.

II. Q is the mother of S, who is the younger sister of R.

- A If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- B If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- C If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D If the data given in both statements I and II together are not sufficient to answer the question
- E If the data in both statements I and II together are necessary to answer the question.

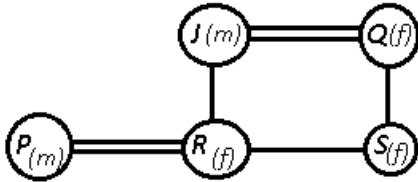
**Answer:** E

#### **Explanation:**

Clearly, both statements alone are insufficient as information about Q and P are not given in respective statements.

J has the two daughters, one of them R is married to P.

Q is the mother of S, who is the younger sister of R, => J is husband of Q.



Thus, P is son-in-law of Q. ∴ **Both statements together are sufficient.**

=> Ans - (E)

#### Question 48

**Among P,Q,R,S and T, who ranks third in the terms of salary obtained by them?**

**I. T's salary is more than P and Q but not more than S.**

**II. R's salary is lowest among them.**

- A** If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- B** If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- C** If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D** If the data given in both statements I and II together are not sufficient to answer the question
- E** If the data in both statements I and II together are necessary to answer the question.

**Answer: D**

#### Explanation:

I : T's salary is more than P and Q but not more than S.

=>  $S > T > P, Q$

There is no information about R, hence we cannot find the person with third highest salary by I alone.

Similarly, statement II alone is also insufficient.

R's salary is lowest among them.

=>  $S > T > P, Q > R$

Thus, the person with third highest salary can be either P or Q.

∴ **Both statements even together are insufficient.**

=> Ans - (D)

#### Instructions

Study the following arrangement carefully and answer the questions given below :

H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q Z 6 © \* N § 6 8 V J

#### Question 49

**If all the symbols and numbers are dropped from the above arrangement, which of the following will be the fourteenth from the right end?**

**A** M

**B** K

- C W
- D E
- E None of these

**Answer:** B

**Explanation:**

Arrangement : H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q Z 6 © \* N § 6 8 V J

If all the symbols and numbers are dropped from the above arrangement, then

= H P K E F R U W G M B Q Z N V J

14th from right end = K

=> Ans - (B)

**Question 50**

**What should come in place of the question mark (?) in the following series based on the above arrangement ?**

**PK% RUW M5Q ?**

- A ©N6
- B ©N§
- C 6\*§
- D 6\*8
- E None of these

**Answer:** A

**Explanation:**

Arrangement : H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q Z 6 © \* N § 6 8 V J

Series : PK% RUW M5Q ?

The pattern followed in each letter of the terms is :

1st letter : P (+7 positions) = R (+7 positions) = M (+7 positions) = ©

2nd letter : K (+7 positions) = U (+7 positions) = 5 (+7 positions) = N

3rd letter : % (+7 positions) = W (+7 positions) = Q (+7 positions) = 6

Thus, missing term = ©N6

=> Ans - (A)

**Question 51**

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

- A None
- B One
- C Two
- D Three
- E More than three

**Answer:** B



**Explanation:**

Arrangement : H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q Z 6 © \* N § 6 8 V J

Numbers which are immediately preceded by a letter and immediately followed by a symbol

= (letter) (number) (symbol)

= H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q **Z 6** © \* N § 6 8 V J

Thus, there is 1 such number.

=> Ans - (B)

**Question 52**

**Which of the following is the seventh to the left of the twentieth from the left end of the above arrangement ?**

- A U
- B \$
- C 1
- D N
- E None of these

**Answer:** A

**Explanation:**

Arrangement : H 9 3 P \$ K E % 4 F R 1 **U** @ W G 2 M 1 **5** B Q Z 6 © \* N § 6 8 V J

20th from left end = 5

7th to the left of 5 = U

=> Ans - (A)

**Question 53**

**How many such consonants are there in the above arrangement each of which is immediately followed by a number but not immediately preceded by a number?**

- A None
- B One
- C Two
- D Three
- E More than three

**Answer:** D

**Explanation:**

Arrangement : H 9 3 P \$ K E % 4 F R 1 U @ W G 2 M 1 5 B Q Z 6 © \* N § 6 8 V J

Consonants which are immediately followed by a number but not immediately preceded by a number

= (not a number) (consonant) (number)

= H 9 3 P \$ K E % 4 F **R 1** U @ W **G 2** M 1 5 B Q **Z 6** © \* N § 6 8 V J

Thus, there are 3 such consonants.

=> Ans - (D)

### Instructions

Study the following information carefully and answer the questions given below.

In a certain code 'all Aspirants must qualify' is written as `na li ja pa', 'qualify in all subjects' is written as `ta ja li ra'.  
'Aspirants read all subjects' is written as 'sa li na ra'.

### Question 54

**What does `li' stand for ?**

- A subject
- B qualify
- C must
- D all
- E None of these

**Answer:** D

### Explanation:

The only common word in all the three statements is 'all' and the common code in the three statements is 'li'.

Thus, 'all' is coded as 'li'.

=> Ans - (D)

### Question 55

**Which word will be the coded as 'ja na' ?**

- A Must qualify
- B Aspirants subjects
- C qualify subjects
- D Can't be determined
- E None of the above

**Answer:** E

### Explanation:

The only common word in all the three statements is 'all' coded as = 'li'.

The common words in the first two statements are 'all' and 'qualify', whose codes are either 'li' or 'ja'

∴ Code for 'all' is known, thus 'qualify' is coded as = 'ja'

Similarly, in the first and last statements common word except for 'all' is 'aspirants' coded as = 'na'

Thus, words with codes 'ja na' is 'aspirants qualify'

=> Ans - (E)

### Instructions

Study the sets of numbers given, below and answer the questions, which follow:

489 541 654 953 783

**Question 56**

If in each number, all the three digits are arranged in ascending order, which of the following will be the lowest number?

- A 489
- B 541
- C 654
- D 953
- E 783

**Answer:** B

**Explanation:**

Numbers = 489 , 541 , 654 , 953 , 783

If all the three digits are arranged in ascending order,

=> New numbers = 489 , 145 , 456 , 359 , 378

Lowest number = 145  $\equiv$  541

=> Ans - (B)

**Question 57**

If five is subtracted from each of the numbers, which of the following numbers will be the difference between the second digit of second highest number and the second digit of the highest number?

- A Zero
- B 3
- C 1
- D 4
- E 2

**Answer:** B

**Explanation:**

Numbers = 489 , 541 , 654 , 953 , 783

If five is subtracted from each of the numbers,

=> New numbers = 484 , 536 , 649 , 948 , 778

2nd digit of second highest number = 778

2nd digit of highest number = 948

$\therefore$  Difference = 7 - 4 = 3

=> Ans - (B)

**Question 58**

If in each number the first and the second digits are interchanged, which will be the third highest number?

- A 489
- B 541
- C 654
- D 953
- E 783

**Answer:** D

**Explanation:**

Numbers = 489 , 541 , 654 , 953 , 783

If the first and the second digits are interchanged,

=> New numbers = 849 , 451 , 564 , 593 , 873

3rd highest number = 593  $\equiv$  953

=> Ans - (D)

**Question 59**

**Which of the following numbers will be obtained if the first digit of lowest number is subtracted from the second digit of highest number after adding one to each of the numbers?**

- A 1
- B 2
- C 3
- D 4
- E 5

**Answer:** A

**Explanation:**

Numbers = 489 , 541 , 654 , 953 , 783

After adding 1 to each of the numbers,

=> New numbers = 490 , 542 , 655 , 954 , 784

1st digit of lowest number = **4**90

2nd digit of highest numbers = 9**5**4

$\therefore$  Difference = 5 - 4 = 1

=> Ans - (A)

**Question 60**

**If in each number, the first and the last digits are interchanged, which of the following will be the second highest number?**

- A 489
- B 541
- C 654
- D 953

**E** 783

**Answer:** C

**Explanation:**

Numbers = 489 , 541 , 654 , 953 , 783

If the first and the last digits are interchanged,

=> New set = 984 , 145 , 456 , 359 , 387

Second highest number = 456  $\equiv$  654

=> Ans - (C)

**Instructions**

Study the following information carefully and answer the questions given below

P, Q, R, S, T, V and W are seven students of a school. Each of them studies in different standard from Standard IV to Standard X not necessarily in the same order. Each of them has favourite subject from English, Science, History, Geography, Mathematics, Hindi and Sanskrit not necessarily in the same order. Q studies in VII Standard and does not like either Mathematics or Geography. R likes English and does not study either in V or in IX. T studies in VIII Standard and likes Hindi. The one who likes Science studies in X Standard. S studies in IV Standard. W likes Sanskrit. P does not study in X

Standard. The one who likes Geography studies in V Standard.

**Question 61**

**In which standard does W study ?**

- A** VII
- B** IX
- C** X
- D** Data inadequate
- E** None of these

**Answer:** B

**Explanation:**

T studies in VIII Standard and likes Hindi.

Q studies in VII Standard and S studies in IV Standard.

R likes English and W likes Sanskrit.

The one who likes Science studies in X Standard and P does not study in X, => V studies in X std. and likes Science.

The one who likes Geography studies in V Standard, => P studies in V std. and like geography.

R does not study either in V or in IX, => R studies in VI std. and W studies in IX std.

Q does not like either Mathematics or Geography, => Q likes History and S likes Mathematics.

Student	Standard	Subject
P	V	Geography
Q	VII	History
R	VI	English
S	IV	Mathematics
T	VIII	Hindi
V	X	Science
W	IX	Sanskrit

W studies in IX standard.

**Question 62**

**Which subject does P like ?**

- A Geography
- B Mathematics
- C English
- D History
- E None of these

**Answer:** A

**Explanation:**

T studies in VIII Standard and likes Hindi.

Q studies in VII Standard and S studies in IV Standard.

R likes English and W likes Sanskrit.

The one who likes Science studies in X Standard and P does not study in X, => V studies in X std. and likes Science.

The one who likes Geography studies in V Standard, => P studies in V std. and like geography.

R does not study either in V or in IX, => R studies in VI std. and W studies in IX std.

Q does not like either Mathematics or Geography, => Q likes History and S likes Mathematics.

Student	Standard	Subject
P	V	Geography
Q	VII	History
R	VI	English
S	IV	Mathematics
T	VIII	Hindi
V	X	Science
W	IX	Sanskrit

P likes Geography.

=> Ans - (A)

**Question 63**

**Which subject does S like ?**

- A History

- B** Geography
- C** Mathematics
- D** Data inadequate
- E** None of these

**Answer:** C

**Explanation:**

T studies in VIII Standard and likes Hindi.

Q studies in VII Standard and S studies in IV Standard.

R likes English and W likes Sanskrit.

The one who likes Science studies in X Standard and P does not study in X, => V studies in X std. and likes Science.

The one who likes Geography studies in V Standard, => P studies in V std. and like geography.

R does not study either in V or in IX, => R studies in VI std. and W studies in IX std.

Q does not like either Mathematics or Geography, => Q likes History and S likes Mathematics.

Student	Standard	Subject
<b>P</b>	V	Geography
<b>Q</b>	VII	History
<b>R</b>	VI	English
<b>S</b>	IV	Mathematics
<b>T</b>	VIII	Hindi
<b>V</b>	X	Science
<b>W</b>	IX	Sanskrit

S likes Mathematics.

=> Ans - (C)

**Question 64**

**In which standard does P study?**

- A** IV
- B** VII
- C** IX
- D** X
- E** None of these

**Answer:** E

**Explanation:**

T studies in VIII Standard and likes Hindi.

Q studies in VII Standard and S studies in IV Standard.

R likes English and W likes Sanskrit.

The one who likes Science studies in X Standard and P does not study in X, => V studies in X std. and likes Science.

The one who likes Geography studies in V Standard, => P studies in V std. and like geography.

R does not study either in V or in IX, => R studies in VI std. and W studies in IX std.

Q does not like either Mathematics or Geography, => Q likes History and S likes Mathematics.

Student	Standard	Subject
P	V	Geography
Q	VII	History
R	VI	English
S	IV	Mathematics
T	VIII	Hindi
V	X	Science
W	IX	Sanskrit

P studies in V standard.

=> Ans - (E)

### Question 65

Which of the following combinations of student standard subject is correct ?

A T- VIII- Mathematics

B W -VII -Sanskrit

C Q- VII- Geography

D V-X-Science

E None of these

**Answer:** D

### Explanation:

T studies in VIII Standard and likes Hindi.

Q studies in VII Standard and S studies in IV Standard.

R likes English and W likes Sanskrit.

The one who likes Science studies in X Standard and P does not study in X, => V studies in X std. and likes Science.

The one who likes Geography studies in V Standard, => P studies in V std. and like geography.

R does not study either in V or in IX, => R studies in VI std. and W studies in IX std.

Q does not like either Mathematics or Geography, => Q likes History and S likes Mathematics.

Student	Standard	Subject
P	V	Geography
Q	VII	History
R	VI	English
S	IV	Mathematics
T	VIII	Hindi
V	X	Science
W	IX	Sanskrit

The correct combination is V-X-Science.

=> Ans - (D)



**Instructions**

For the following questions answer them individually

**Question 66**

**How many meaningful English words can be formed with the letters 'OLBT' using all the letters but each letter only once in each word ?**

- A** One
- B** Two
- C** Three
- D** Four
- E** None

**Answer:** A

**Explanation:**

Letters - O,L,B,T

Only 1 meaningful word can be formed = Bolt

=> Ans - (A)

**Question 67**

**How many meaningful English words can be made with the letters IFEL using each letter only once in each word ?**

- A** None
- B** One
- C** Two
- D** Three
- E** More than three

**Answer:** C

**Explanation:**

Letters - I, F, E, L

2 meaningful words can be formed = File, Life

=> Ans - (C)

**Instructions**

Study the following information and answer the given questions. There are six wires in a table A, B, C, D, E and F. They have different length but not necessarily in the same order. E is greater than C but less than D and B. A is greater than D and B. A is not longest wire. F is 13 cm long and E is 4 long.

**Question 68**

**If D is 5 cm less than F. what would be the length of D ?**

- A** 7
- B** 8

- C 9
- D Cannot be determined
- E None of these

**Answer:** B

**Explanation:**

$D > E > C$  also  $B > E > C$

Now,  $A > D$  and  $A > B$  and A isn't the longest wire.

Possible arrangements :-

1.  $F > A > D > B > E > C$
2.  $F > A > B > D > E > C$

Given E is 4 cm long and F is 13 cm long.

$$D = F - 5 = 13 - 5 = 8 \text{ cm.}$$

Hence B.

**Question 69**

**Which wire has least length ?**

- A B
- B A
- C C
- D E
- E None of these

**Answer:** C

**Explanation:**

$D > E > C$  also  $B > E > C$

Now,  $A > D$  and  $A > B$  and A isn't the longest wire.

Possible arrangements :-

1.  $F > A > D > B > E > C$
2.  $F > A > B > D > E > C$

Hence the wire having the least length is C.

**Question 70**

**If A carry 10 cm length and B carry 5 cm. length then what could be the length of C ?**

- A 6
- B 2
- C 7
- D 9

E None of these

**Answer:** B

**Explanation:**

$D > E > C$  also  $B > E > C$

Now,  $A > D$  and  $A > B$  and A isn't the longest wire.

Possible arrangements :-

1.  $F > A > D > B > E > C$

2.  $F > A > B > D > E > C$

Since C is the smallest wire and  $E = 4$  cm, only 2 cm among the given options can be a possible length for it. Hence B.

## English

### Instructions

Read the following passage to answer the given question Some words have been printed in bold to help you to locate them while answering some of the questions.

We tend to be harsh on our bureaucracy, but nowhere do citizens enjoy dealing with their government. They do it because they have to. But that doesn't mean that the experience has to be **dismal**. Now there is a new wind blowing through government departments around the world, which could take some of the pain away. In the next five years it may well transform not only the way public services are delivered but also the fundamental relationship between government and citizens. Not surprisingly, it is the Internet that is behind it. After e-commerce and e-business the next revolution may be e-governance.

Examples **abound**. The municipality of Phoenix, Arizona, allows its citizens to renew their car registrations, pay traffic fines, replace lost identity cards etc. online without having to stand in endless queues in a grubby municipal office. The municipality is happy because it saves \$5 a transaction it costs only \$1.60 to do it across the counter. In Chile people routinely submit their income tax returns over the Internet which has increased transparency, drastically reduced the time taken and the number of errors and litigation with the tax department. Both taxpayers and the revenue department are happier.

The furthest ahead not surprisingly is the small, rich and entrepreneurial civil service of Singapore which allows citizens to do more functions online than any other. As in many private companies the purchasing and buying of Singapore's government departments is now on the Web and cost benefits come through more competitive bidding easy access to global suppliers and time saved by online processing of orders. They can **post** their catalogues on their sites, bid for contracts submit in voices and check their payments status over the Net.

The most useful idea for Indian municipalities is Gov Works a private sector site that collects local taxes fines and utility bills for 3,600 municipalities across the United States. It is citizen's site which provides information on government jobs, tenders, etc. The most ambitious is the British government, which has targeted to convert 100 per cent of its transactions with its citizens to the Internet by 2005.

Cynics in India will say, 'Oh, e-government will never work in India. We are so poor and we don't have computers but they are wrong. There are many experiments afoot in India as well. Citizens in Andhra Pradesh can download government forms and applications on the net without having to bribe clerks. In many districts land records are online and this has created transparency. Similarly, in Dhar district to Madhya Pradesh villagers have begun to file applications for land transfers and follow their progress on the net. In seventy villages in the Kolhapur and Sangli districts in Maharashtra Internet booths have come up where farmers daily check the market rates of agricultural commodities in Marathi along with data on agriculture schemes information on crop technology. When to spray and plant the crops and buds and railway timetables. They also find vocational guidance on jobs, applications for ration cards kerosene/gas burners and land records extracts with details of landownership.

Sam Pitroda's World Tel, Reliance Industries and the Tamil Nadu government are jointly laying 3,000 km of optic fibre cables to create a Tamil Network which will offer ration cards schools college and hospital admission forms land records and pension records. If successful World Tel will expand the network to Gujarat, Karnataka and West Bengal. In Kerala all the villages are getting linked online to the district headquarters allowing citizens to compare the development properties of their village with other villagers in the state.

Many are still skeptical of the real impact because so few Indians have computers. The answer lies in interactive cable T.V and in Internet kiosks. Although India has only five million computers and thirty-eight million telephones it has thirty-four million homes with cable TV and these are growing eight per cent a year. By 2005 most cable homes will have access to the Internet from many of the 700,000 local STD/PCO booths. Internet usage may be low today, but it

is bound to grow rapidly in the future, and e-government in India may not be a dream.

**Question 71**

**According to the passage which country has the most ambitious plan for e-governance ?**

- A USA
- B Chile
- C Singapore
- D India
- E UK

**Answer:** E

**Explanation:**

"The most ambitious is the British government which has targeted to convert 100 per cent of its transactions with its citizens to the Internet by 2005".

Through this information, we can say that the British(UK) has the most ambitious plan for e-governance.

**Question 72**

**Choose the word that is opposite in meaning of the word "dismal" as used in the passage**

- A grim
- B approve
- C pleasing
- D better
- E enrich

**Answer:** C

**Explanation:**

Dismal means causing a mood of depression.

Pleasing is appealing, which is exactly opposite to dismal.

**Question 73**

**How can India overcome low penetration of computers for e-governance ?**

- A By manufacturing more computers
- B Through cable TV and Internet Kiosks
- C By opening more STD/PCO booths
- D By making the internet free
- E By putting more services on internet

**Answer:** E

**Explanation:**

According to the last paragraph, we can say that by making more services internet-based, the coverage of e-governance can be improved.

Hence, option E is the answer.

**Question 74**

**Which of the following has not been one of the effects of submitting income tax return over internet in Chile ?**

- A Reduction of legal cases
- B Reduction in errors
- C Increase in transparency
- D Increase in number of returns
- E Reduction in time taken

**Answer:** D

**Explanation:**

"In Chile people routinely submit their income tax returns over the Internet, which has increased transparency drastically, reduced the time taken and the number of errors and litigation with the tax department "

Only "increase in number of returns" is not mentioned in the passage.

Hence, option D is the answer.

**Question 75**

**Choose the word that is same in meaning as the word "abound" as used in the passage**

- A around
- B proliferate
- C flourish
- D plentiful
- E few

**Answer:** D

**Explanation:**

Abound means to exist in large amounts.

Plentiful has the same meaning.

**Question 76**

**In which direction is the new wind blowing ?**

- A More and more interaction of citizens with government through internet
- B Outsourcing the work of infrastructure creation for internet
- C Increasing the penetration of computers in rural areas
- D Integrating e-commerce e-business and e-governance
- E Introducing e-governance programmers in schools and colleges

**Answer:** A

**Explanation:**

In the second and the third lines of the passage, the author says that the relationship between government and citizens is improving through internet.

Hence, option A is the answer.

**Question 77**

**According to the passage what is the annual growth rate of computers in India ?**

- A** 8%
- B** 5%
- C** 0.5%
- D** Not mentioned
- E** None of these

**Answer:** D

**Explanation:**

This information has not been mentioned in the passage.

Hence, option D is the answer.

**Instructions**

Read each sentence to find out whether there is any grammatical mistake/error in it. The error if any, will be in one part of the sentence. Mark the number of the part with error as your answer. If there is no error, mark e:.

**Question 78**

**All companies must (a) / send its annual report to (b)/ its shareholders twenty one days (c)/ before the Annual General Body Meeting,(d)/ No error (e)**

- A** All companies must
- B** send its annual report to
- C** its shareholders twenty one days
- D** before the Annual General Body Meeting
- E** No error

**Answer:** A

**Question 79**

**To be an effective manager (a)/ it is vital to (b)/ know the goals and vision (c)/ of your organisation (d)/ No error (e).**

- A** To be an effective manager
- B** it is vital to
- C** know the goals and vision
- D** of your organisation

**E** No error

**Answer:** C

**Question 80**

**Bank notes have (a)/ many special features so (b)/ that bank staff can (c)/ easier identify' fake notes.(d)/ No error (e)**

**A** Bank notes have

**B** many special features so

**C** that bank staff can

**D** easier identify' fake notes

**E** No error

**Answer:** D

**Question 81**

**The state government has (a)/ issued licences to farmers (b)/ allowing them to sell (c)/ its vegetables to hotels. (d)/ No error (e)**

**A** The state government has

**B** issued licences to farmers

**C** allowing them to sell

**D** its vegetables to hotels

**E** No error

**Answer:** D

**Question 82**

**The Reserve Bank of India is (a)/ the only central bank in (b)/Asia which have (c)/ raised interest rates in September.(d) No error (e)**

**A** The Reserve Bank of India is

**B** the only central bank in

**C** Asia which have

**D** raised interest rates in September

**E** No error

**Answer:** C

**Question 83**

**Under this scheme. (a)/ insurance companies will reimburse (b)/ any expenditure on medicines(c)/ if you submitting the original bills.(d)/ No error(e)**

- A Under this scheme
- B insurance companies will reimburse
- C any expenditure on medicines
- D if you submitting the original bills
- E No error

**Answer: D**

#### Question 84

**His aim is (a)/ provided cheap and (b)/ reliable internet facilities (c)/ to every village within five years. (d)/ No error (e).**

- A His aim is
- B provided cheap and
- C reliable internet facilities
- D to every village within five years
- E No error

**Answer: B**

#### Question 85

**Many people decide (a)/ not to buy a car. (b)/last diwali because of (c) / the high price of petrol last year. (d) No error (e)**

- A Many people decide
- B not to buy a car
- C last diwali because of
- D the high price of petrol last year
- E No error

**Answer: A**

#### Instructions

**Some sentences related to a topic are given in each question. Find the sentence which is out of context of the main theme of the paragraph and rearrange the remaining sentences to make a coherent paragraph. If the given sentence is correct as it is then choose option E. If the sequence is the one which is not given then choose option D as your choice.**

#### Question 86

**(A) And students aged 6 to 17 spend at least three hours a day (B)/ For children as young as 10 years old (C)/ According to a recent survey commissioned by HP and conducted by Wakefield Research, (D)/ On devices with Internet access (E)/ computers become a significant part of homework assignments**

- A CBED



- B** CBAD
- C** BCAE
- D** None of these
- E** No correction required

**Answer:** D

**Explanation:**

On carefully reading the fragments, we see that the sentence is about the research by HP on the use of computers by the children. C introduces the subject. Hence, it should be the first part of the sentence. Fragments E and B form a pair as they explain the common use of the computers by the children as young as 10. Fragments A and D conclude the sentence. CEBAD forms a coherent sentence.

**Question 87**

**(A) National School Choice Week provides an opportunity to bring conversations about education (B)/ At its core, school choice affirms the special bond between parents and children (C)/ Parents in communities across America (D)/ Out from the political sphere and to the kitchen tables and living rooms of (E)/ As a nonpartisan awareness effort,**

- A** EADC
- B** EBAC
- C** AEBC
- D** None of these
- E** No correction required

**Answer:** A

**Explanation:**

On carefully reading the fragments, we see that the sentence is about the National School Choice Week. Fragments E and A form a pair as they introduce the subject of the sentence. Since 'nonpartisan' is mentioned in E, D should follow A as it mentions that the discussions are not political. C should follow D as it concludes the sentence - 'out from political sphere to living rooms of parents..'. EADC forms a coherent sentence. Fragment B is out of context and should be excluded.

**Question 88**

**(A) Not only the wonders of oil as might be expected, but also free-market capitalism (B)/ And made at the behest of the American Petroleum Institute, (C)/ Produced at the height of the Cold War, (D)/ lands in the United States and soon discovers the many and myriad delights of petroleum (E)/ This great little promotional film from John Sutherland Studios champions**

- A** CDBE
- B** BCAE
- C** CBEA
- D** None of these
- E** No correction required

**Answer:** C

**Explanation:**

On carefully reading the fragments, we see that the topic of the sentence is a video produced in the cold war era. Fragment C introduces the subject. Hence, it should be the opening part. Fragment B should follow C as it adds an extra detail to the previously mentioned statement. Sentences E and A form a pair - 'champions not only...'. Thus, CBEA forms a coherent sentence. Fragment D which talks about the delights of petroleum is out of context.

**Question 89**

**(A) Secured the book as a landmark in the study and representation of demons. (B)/ A monumental compendium of all things diabolical, was first published in 1818 to much success, (C)/ At its heart lies an unlikely but pertinent synthesis of the Enlightenment and the occult (D)/ It is the fabulously illustrated final edition of 1863 which (E)/ Although Jacques Collin de Plancy's Dictionnaire infernal,**

- A DAEC
- B EBDA
- C CBDA
- D None of these
- E No correction required

**Answer: B**

**Explanation:**

On carefully reading the fragments, we see that Plancy's infernal is the topic of the sentence. Sentence E introduces the subject. So, it should be the opening fragment. Sentence B should follow E as it further describes the book. Fragments D and A form a pair and complete the structure of the sentence - ' Although the first edition was good, it was ....'. Thus, EBDA forms a coherent sentence. C which speaks about the enlightenment and occult is out of context.

**Question 90**

**(A) And although there is great interest among intellectual historians today in (B)/ No major study has focused on the visual documents integral to this epistemic shift (C)/ Even though the philosophical visualizations of Meurisse, Chéron, and Gaultier had (D)/ challenges to Aristotelian orthodoxies during the "scientific revolution", (E)/ An international reputation in the early modern period, they have since been largely forgotten,**

- A DAEB
- B CAED
- C CBEA
- D None of these
- E No correction required

**Answer: E**

**Explanation:**

On carefully reading the fragments, we see that the sentence is about the early philosophical tradition. Sentence C introduces the subject of the sentence. Hence, it should be the opening fragment. Sentence E completes the structure of the 'even though' part. Hence, it should follow sentence C. Fragment A should follow C as it introduces a new dimension. Sentences D and B form a pair, completing the 'although..., no major' part of the sentence. Hence, CEADB forms a coherent sentence.

**Instructions**

Each sentence below has a blank each blank indicates that something has been omitted. Choose the word / group of

words that best fit/s the meaning of the sentence as a whole.

**Question 91**

**When I was training for the marathon, I..... run over 100 kilometres a week.**

- A** Have to
- B** Would
- C** Will
- D** Destined
- E** Use to

**Answer: B**

**Explanation:**

The grammatically correct choice is option B i.e 'would'.

When I was training for the marathon, I would run over 100 kilometres a week.

**Question 92**

**My colleague is one of the kindest people.....**

- A** That I knows
- B** I know
- C** Who I know
- D** Which I know
- E** I had known

**Answer: B**

**Explanation:**

The correct choice among the options is option B.

My colleague is one of the kindest people I know.

**Question 93**

**The lawyer's..... led to the resolution of the problem.**

- A** Behaviour
- B** Fees
- C** Advice
- D** Impact
- E** Approval

**Answer: C**

**Explanation:**

No other option matches the context of sentence.

The lawyers 'advice' led to the resolution of problem.

**Question 94**

**The government claims that..... in the telecommunications industry will mean lower price for customers**

- A Budget
- B Finance
- C Instalments
- D Decrease
- E Competition

**Answer:** E

**Explanation:**

The word 'competition' matches the context of the statement.

Hence, the correct option is option E.

**Question 95**

**Sarah was walking along the street..... she tripped over.**

- A When
- B As
- C While
- D Then
- E However

**Answer:** A

**Explanation:**

The grammatically sensible sentence would read as: Sarah was walking when she tripped over.

Hence, correct option is option A.

**Instructions**

Which of the phrases A, B, C and D given below should replace the phrase given in bold in the following sentences to make the sentence grammatically correct? If the sentence is correct as it is and there is no correction required mark e: i.e. 'No correction required' as the answer.

**Question 96**

**During the recession many companies will be forced to lay oil workers.**

- A have the force to
- B be forced into
- C forcibly have
- D forcefully
- E No correction required

**Answer:** E

**Explanation:**

The given sentence is grammatically correct. Hence no change is required.

**Question 97**

**He wanted nothing else expecting to sleep after a stressful day at work.**

- A nothing better than
- B anything else unless
- C nothing but having
- D nothing else than
- E No correction required

**Answer:** A

**Explanation:**

The correct usage should be 'nothing else except sleep' or 'nothing better than to sleep'. Since the first way does not have 'to' , so it is not possible here. Hence among the given choices, only option 1 is correct.

**Question 98**

**Ramesh took charge of the project, within a few days of having appointed?**

- A having an appointment
- B being appointed
- C after being appointed
- D appointing
- E No correction required

**Answer:** C

**Explanation:**

The correct usage would be 'after being appointed'. Hence option C is the correct answer.

**Question 99**

**It is difficult to work with him because he is one of those persons who think he is always right.**

- A think they are always
- B always thinks he is
- C is always thinking they are
- D always think his
- E No correction required

**Answer:** A

**Explanation:**

The subject here is 'one of those persons', hence the pronoun 'his' is incorrectly used. It should be 'they' instead of 'his'. Hence the correct answer is option A.

**Question 100**

**Foreign businesses in developing countries have usually problems with lack of infrastructure and rigid laws.**

- A** usual problems as
- B** usually problems on
- C** as usual problems like
- D** the usual problems of
- E** No correction required

**Answer: D**

**Explanation:**

The usage of 'with' with 'usually' is incorrect. The correct usage should be 'the usual problems of'. Hence, the correct answer would be option d.