



IBPS RRB PO 2018

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Instructions

In each of these questions, a number series is given. Only one number is wrong in each series. You have to find out the wrong number

Question 1

10, 15, 24, 35, 54, 75, 100

- A 35
- B 75
- C 24
- D 15
- E 54

Answer: A

Explanation:

Let us find the difference between consecutive terms of the series.

The numbers in the series are 10, 15, 24, 35, 54, 75, 100

And their differences are 5, 9, 11, 19, 21, 25. There is no obvious pattern in this.

But if we replace 35 with 37, we see the following numbers 10, 15, 24, 37, 54, 75, 100

And the differences are 5, 9, 13, 17, 21, 25 which is a symmetric pattern.

Hence, the term which is wrong in the series is 35

Question 2

1 3 4 7 11 18 27 47

- A 4
- B 11
- C 18
- D 7
- E 27

Answer: E

Explanation:

The given series is a Fibonacci series with each term equal to the sum of the previous two terms.

For example, $1 + 3 = 4$

$$3 + 4 = 7$$

$$4 + 7 = 11$$

$$7 + 11 = 18$$

$$11 + 18 = 29$$

$$18 + 29 = 47$$

Hence, the incorrect term in the series is 27 (it should have been 29)

Question 3

3, 2, 3, 6, 12, 37.5, 115.5

- A 37.5
- B 3

- C 6
- D 2
- E 12

Answer: E

Explanation:

The numbers are based on the following pattern.

$$3 \times 0.5 + 0.5 = 2$$

$$2 \times 1 + 1 = 3$$

$$3 \times 1.5 + 1.5 = 6$$

$$6 \times 2 + 2 = 14$$

$$14 \times 2.5 + 2.5 = 37.5$$

$$37.5 \times 3 + 3 = 115.5$$

In the series given, we notice that 14 is replaced by 12 and hence the wrong term in the series is 12

Question 4

2, 8, 32, 148, 765, 4626, 32431

- A 765
- B 148
- C 8
- D 32
- E 4626

Answer: D

Explanation:

$$32431 = 7 \times 4626 + 7^2$$

$$4626 = 6 \times 765 + 6^2$$

$$765 = 5 \times 148 + 5^2$$

Following the same pattern,

$$148 = 4 \times 33 + 4^2$$

$$33 = 3 \times 8 + 3^2$$

$$8 = 2 \times 2 + 2^2$$

32 is the wrong number here.

Question 5

2 3 11 38 102 229 443

- A 11
- B 229
- C 102
- D 38
- E 3

Answer: B

Explanation:

$$3 - 2 = 1 = 1^3$$

$$11 - 3 = 8 = 2^3$$

$$38 - 11 = 27 = 3^3$$

$$102 - 38 = 64 = 4^3$$

$$229 - 102 = 127 \neq 5^3$$

$$\text{But } 227 - 102 = 125 = 5^3$$

$$443 - 227 = 216 = 6^3$$

229 is the wrong number

Instructions

Study the following table and carefully answer the given questions.

Months	Gross Revenue (in Rs.)	Amount Allocated for commission (in Rs.)	Amount allocated for discount and others (in Rs.)	Net Revenue (in Rs.)
March	3,60,000	31,200	-	-
April	3,20,000	28,000	16,000	-
May	-	-	36,000	3,36,000
June	-	42,000	30,000	3,30,000
July	-	40,000	28,000	3,62,000

Note :

(i) Net Revenue = Gross Revenue – Amount Allocated for commission – Amount allocated for discount and others

(ii) Few values are missing in the table (indicated by -). A candidate is expected to calculate the missing value, if it is required to answer the given question, on the basis of the given data and the information.

Question 6

In July, if 40% of the gross revenue of the Magazine was collected from Advertisement, what was the amount of gross revenue collected from advertisement in that particular month ?

- A Rs. 1,48,000
- B Rs. 1,64,000
- C Rs. 1,44,000
- D Rs. 1,72,000
- E Rs. 1,56,000

Answer: D

Explanation:

In July,

Gross revenue = net revenue + amount allocated for commission + amount allocated for discount

$$= 3,62,000 + 40,000 + 28,000$$

$$= \text{Rs. } 4,30,000$$

Now, 40% of the gross revenue of the Magazine was collected from Advertisement

∴ Amount of gross revenue collected from advertisement in July

$$= \frac{40}{100} \times 4,30,000$$

$$= \text{Rs. } 1,72,000$$

Question 7

In March, if Net Revenue of the Magazine was 85% of its Gross Revenue, what was the amount allocated for discount and others?

- A Rs. 23,200
- B Rs. 24,200
- C Rs. 22,400
- D Rs. 22,800
- E Rs. 21,600

Answer: D

Explanation:

Gross revenue in March = Rs. 3,60,000

$$\Rightarrow \text{Net revenue} = \frac{85}{100} \times 3,60,000$$

= Rs. 3,06,000

Amount allocated for discount and others = gross revenue - net revenue - amount allocated for commission

$$= 3,60,000 - 3,06,000 - 31,200$$

= Rs. 22,800

Question 8

Amount allocated for commission in March is what percent less than Amount allocated for commission in July?

- A 24
- B 18
- C 28
- D 32
- E 22

Answer: E

Explanation:

Amount allocated for commission in March = Rs. 31,200

Amount allocated for commission in July = Rs. 40,000

$$\Rightarrow \text{Required \%} = \frac{40000 - 31200}{40000} \times 100$$

$$= \frac{8800}{400} = 22\%$$

Question 9

What is the difference between Net Revenue of the Magazine in April and its Gross Revenue in June?

- A Rs. 1,32,000
- B Rs. 1,26,000
- C Rs. 1,18,000
- D Rs. 1,24,000
- E Rs. 1,36,000

Answer: B

Explanation:

Net revenue in April = $3,20,000 - 28,000 - 16,000$

= Rs. 2,76,000

Gross revenue in June = $3,30,000 + 42,000 + 30,000$

= Rs. 4,02,000

=> Required difference = $4,02,000 - 2,76,000$

= Rs. 1,26,000

Question 10

In May, the respective ratio of amount allocated for commission and amount allocated for discount and others was 4 : 3. What was the Gross Revenue of the Magazine in May?

A Rs. 4,24,000

B Rs. 4,40,000

C Rs. 3,80,000

D Rs. 4,20,000

E Rs. 4,30,000

Answer: D

Explanation:

In May, amount allocated for discount = Rs. 36,000

=> Amount allocated for commission = $\frac{4}{3} \times 36000 = Rs.48,000$

Net revenue = Rs. 3,36,000 = gross revenue - amount allocated for commission - amount allocated for discount

=> Gross revenue = $3,36,000 + 36,000 + 48,000$

= Rs. 4,20,000

Instructions

In each of these questions, two equations are given. You have to solve these equations and find out the values of x and y and :

Give answer

a: if $x < y$

b: if $x > y$

c: if $x \leq y$

d: if $x \geq y$

e: if $x = y$

Question 11

I. $8x^2 + 6x = 5$

II. $12y^2 - 22y + 8 = 0$

A if $x < y$

B if $x > y$

C if $x \leq y$

D if $x \geq y$

E if $x = y$

Answer: C

Explanation:

I: $8x^2 + 6x - 5 = 0$

$$\Rightarrow 8x^2 - 4x + 10x - 5 = 0$$

$$\Rightarrow 4x(2x - 1) + 5(2x - 1) = 0$$

$$\Rightarrow (4x + 5)(2x - 1) = 0$$

$$\Rightarrow x = \frac{-5}{4}, \frac{1}{2}$$

$$\text{II: } 12y^2 - 22y + 8 = 0$$

$$\Rightarrow 12y^2 - 6y - 16y + 8 = 0$$

$$\Rightarrow 6y(2y - 1) - 8(2y - 1) = 0$$

$$\Rightarrow (6y - 8)(2y - 1) = 0$$

$$\Rightarrow y = \frac{1}{2}, \frac{4}{3}$$

$$\therefore x \leq y$$

Question 12

I. $4x + 7y = 209$

II. $12x - 14y = -38$

A if $x < y$

B if $x > y$

C if $x \leq y$

D if $x \geq y$

E if $x = y$

Answer: E

Explanation:

I: $4x + 7y = 209$

II: $12x - 14y = -38$

Multiplying equation (1) by 2 and adding both equations, we get:

$$\Rightarrow (8x + 14y) + (12x - 14y) = 418 - 38$$

$$\Rightarrow 20x = 380$$

$$\Rightarrow x = \frac{380}{20} = 19$$

Now, substituting value of x in equation (1)

$$\Rightarrow (4 \times 19) + 7y = 209$$

$$\Rightarrow 7y = 209 - 76 = 133$$

$$\Rightarrow y = \frac{133}{7} = 19$$

$$\therefore x = y$$

Question 13

I. $17x^2 + 48x = 9$

II. $13y^2 = 32y - 12$

A if $x < y$

B if $x > y$

C if $x \leq y$

D if $x \geq y$

E if $x = y$

Answer: A

Explanation:

$$I: 17x^2 + 48x - 9 = 0$$

$$\Rightarrow 17x^2 + 51x - 3x - 9 = 0$$

$$\Rightarrow 17x(x + 3) - 3(x + 3) = 0$$

$$\Rightarrow (17x - 3)(x + 3) = 0$$

$$\Rightarrow x = -3, \frac{3}{17}$$

$$II: 13y^2 - 32y + 12 = 0$$

$$\Rightarrow 13y^2 - 26y - 6y + 12 = 0$$

$$\Rightarrow 13y(y - 2) - 6(y - 2) = 0$$

$$\Rightarrow (13y - 6)(y - 2) = 0$$

$$\Rightarrow y = 2, \frac{6}{13}$$

$\therefore x < y$

Question 14

$$I. 18x^2 + 18x + 4 = 0$$

$$II. 12y^2 + 29y + 14 = 0$$

A if $x < y$

B if $x > y$

C if $x \leq y$

D if $x \geq y$

E if $x = y$

Answer: D

Explanation:

$$I: 18x^2 + 18x + 4 = 0$$

$$\Rightarrow 18x^2 + 6x + 12x + 4 = 0$$

$$\Rightarrow 6x(3x + 1) + 4(3x + 1) = 0$$

$$\Rightarrow (6x + 4)(3x + 1) = 0$$

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

$$II: 12y^2 + 29y + 14 = 0$$

$$\Rightarrow 12y^2 + 8y + 21y + 14 = 0$$

$$\Rightarrow 4y(3y + 2) + 7(3y + 2) = 0$$

$$\Rightarrow (4y + 7)(3y + 2) = 0$$

$$\Rightarrow y = \frac{-2}{3}, \frac{-7}{4}$$

$\therefore x \geq y$

Question 15

I. $16x^2 + 20x + 6 = 0$

II. $10y^2 + 38y + 24 = 0$

- A if $x < y$
 B if $x > y$
 C if $x \leq y$
 D if $x \geq y$
 E if $x = y$

Answer: B**Explanation:**

I: $16x^2 + 20x + 6 = 0$

$$\Rightarrow 16x^2 + 8x + 12x + 6 = 0$$

$$\Rightarrow 8x(2x + 1) + 6(2x + 1) = 0$$

$$\Rightarrow (8x + 6)(2x + 1) = 0$$

$$\Rightarrow x = \frac{-3}{4}, \frac{-1}{2}$$

II: $10y^2 + 38y + 24 = 0$

$$\Rightarrow 10y^2 + 30y + 8y + 24 = 0$$

$$\Rightarrow 10y(y + 3) + 8(y + 3) = 0$$

$$\Rightarrow (10y + 8)(y + 3) = 0$$

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

$$\therefore x > y$$

Instructions**Study the information carefully to answer the following questions:**

In an organisation consisting of 750 employees the ratio of Males to Females is 8:7 respectively. All the employees work in five different departments viz. HR, Management, PR, IT and Recruitment. 16 per cent of the Females work in Management Department. 32 per cent of Males are in HR Department. One-fifth of the Females are in the Department of Recruitment. The ratio of Males to Females in the Management Department is 3:2 respectively. 20 per cent of the total numbers of employees are in PR Department. Females working in Recruitment are 50 per cent of the Males working in the same Department. 8 per cent of the Males are in IT Department. The remaining Males are in PR Department. 22 per cent of the Females work in HR Department and the remaining Females are working in IT Department

Question 16**What is the total number of females working in the IT and Recruitment Department together ?**

- A 147
 B 83
 C 126
 D 45
 E None of these

Answer: B**Explanation:**

The information in numerical format is,
 Number of males=400 and Number of females=350
 Females in management= 16% of 350=56
 Males in management=1.5 *56=84
 32% of males are in HR= 0.32*400=128
 one fifth of females in Recruitment = 0.20*350=70
 20% of employees in PR= .2*750=150
 Males in recruitment = twice of females = 140
 8% of males in IT Department= 32
 Males in PR=16
 Females in IT= 134

The given data can be interpreted in table format as,

	HR	Management	PR	IT	Recruitment
Females	77	56	134	13	70
Males	128	84	16	32	140

The total number of females working in the IT and Recruitment Department together = 83

Question 17

What is the number of females working in the HR Department ?

- A 77
- B 70
- C 56
- D 134
- E None of these

Answer: A

Explanation:

The information in numerical format is,
 Number of males=400 and Number of females=350
 Females in management= 16% of 350=56
 Males in management=1.5 *56=84
 32% of males are in HR= 0.32*400=128
 one fifth of females in Recruitment = 0.20*350=70
 20% of employees in PR= .2*750=150
 Males in recruitment = twice of females = 140
 8% of males in IT Department= 32
 Males in PR=16
 Females in IT= 134

The given data can be interpreted in table format as,

	HR	Management	PR	IT	Recruitment
Females	77	56	134	13	70
Males	128	84	16	32	140

Females in HR Department=77

Question 18

Number of males working in HR Department forms approximately what per cent of total number of the employees in the organisation ?

- A 20
- B 28

- C 32
- D 9
- E 17



Answer: E

Explanation:

The information in numerical format is,
 Number of males=400 and Number of females=350
 Females in management= 16% of 350=56
 Males in management=1.5 *56=84
 32% of males are in HR= 0.32*400=128
 one fifth of females in Recruitment = 0.20*350=70
 20% of employees in PR= .2*750=150
 Males in recruitment = twice of females = 140
 8% of males in IT Department= 32
 Males in PR=16
 Females in IT= 134

The given data can be interpreted in table format as,

	HR	Management	PR	IT	Recruitment
Females	77	56	134	13	70
Males	128	84	16	32	140

Number of males working in HR Department of per cent of total number of the employees in the organisation= $(128/750)*100=17\%$

Question 19

Number of males working in PR Department forms what per cent of the numbers of Females working in the same Department ?
 (rounded off to two digits after decimal)

- A 22.98
- B 16.68
- C 11.94
- D 6.79
- E 27.86

Answer: C

Explanation:

The information in numerical format is,
 Number of males=400 and Number of females=350
 Females in management= 16% of 350=56
 Males in management=1.5 *56=84
 32% of males are in HR= 0.32*400=128
 one fifth of females in Recruitment = 0.20*350=70
 20% of employees in PR= .2*750=150
 Males in recruitment = twice of females = 140
 8% of males in IT Department= 32
 Males in PR=16
 Females in IT= 134

The given data can be interpreted in table format as,

	HR	Management	PR	IT	Recruitment
Females	77	56	134	13	70
Males	128	84	16	32	140

Number of males working in PR Department of per cent of the numbers of Females working in the same Department = $(16/134)*100=11.94$

Question 20

What is the total number of employees working in the Management Department ?

- A 128
- B 77
- C 210
- D 140
- E None of these

Answer: D

Explanation:

The information in numerical format is,
 Number of males=400 and Number of females=350
 Females in management= 16% of 350=56
 Males in management=1.5 *56=84
 32% of males are in HR= 0.32*400=128
 one fifth of females in Recruitment = 0.20*350=70
 20% of employees in PR= .2*750=150
 Males in recruitment = twice of females = 140
 8% of males in IT Department= 32
 Males in PR=16
 Females in IT= 134

The given data can be interpreted in table format as,

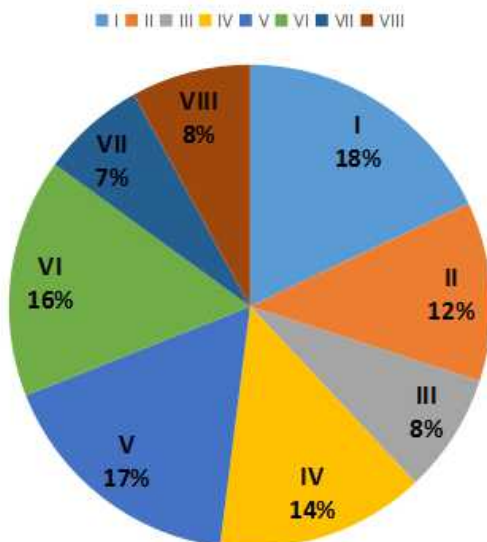
	HR	Management	PR	IT	Recruitment
Females	77	56	134	13	70
Males	128	84	16	32	140

The total number of employees working in the Management Department = 140

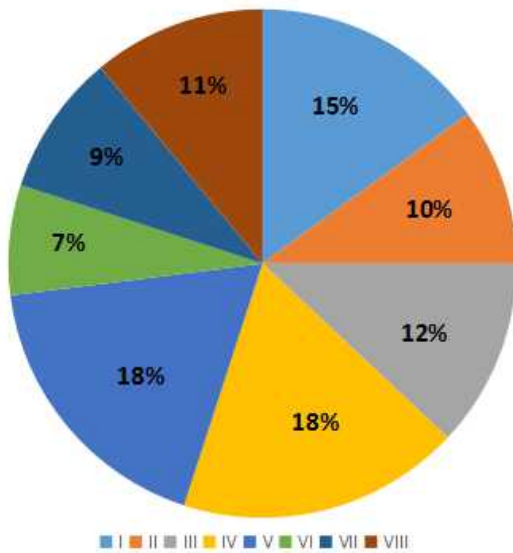
Instructions

In the following pie charts the percentage of employees of a company working in 8 different countries has been given. Study these pie-charts carefully to answer the questions.

TOTAL NO OF EMPLOYEES = 86000



NO OF MALE EMPLOYEES = 56000



Question 21

What is the ratio between male employees working in the country I and country II respectively ?

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

Answer: D

Explanation:

Ratio between male employees working in the country I and country II respectively = ratio of the respective %
= 15 : 10 = 3 : 2

Question 22

What is the ratio between the number of male employees and female employees in country II?

- A 70 : 53
- B 70 : 31
- C 70 : 59
- D 53 : 70
- E None of these

Answer: C

Explanation:

Employees in country II :

$$\text{Males} = \frac{10}{100} * 56000 = 5600$$

$$\text{Females} = \frac{12}{100} * 56000 - 5600$$

$$= 10320 - 5600 = 4720$$

$$\Rightarrow \text{Required ratio} = 5600 : 4720 = 70 : 59$$

Question 23

What is the approximate average number of male employees in countries I, II and III ?

- A 9670
- B 6970
- C 6907
- D 6977
- E None of these

Answer: C

Explanation:

$$\% \text{ of male employees in countries I, II \& III} = (15 + 10 + 12)\% = 37\%$$

$$\text{No. of male employees in countries I, II \& III} = \frac{37}{100} * 56000 = 20720$$

$$\Rightarrow \text{Required Average} = \frac{20720}{3} = 6907$$

Question 24

What is the average number of female employees in the countries IV and VII?

- A 1370
- B 1070
- C 1570
- D 1470
- E None of these

Answer: D

Explanation:

Females in country IV

$$= \left(\frac{14}{100} * 86000\right) - \left(\frac{18}{100} * 56000\right)$$

$$= 12040 - 10080 = 1960$$

Females in country VII

$$= \left(\frac{7}{100} * 86000\right) - \left(\frac{9}{100} * 56000\right)$$

$$= 6020 - 5040 = 980$$

$$\therefore \text{Required average} = \frac{1960+980}{2} = 1470$$

Question 25

If an increase of 40% is made in the average number of female employees, working in countries III, IV and V, then their resulting average number will be what per cent of the average number of female employees ?

- A 83%
- B 85%

C 65%

D 68%

E 69%

Answer: A

Explanation:

Country III :

$$\text{Total employees} = \frac{8}{100} * 86000 = 6880$$

$$\begin{aligned} \text{Female employees} &= 6880 - \frac{12}{100} * 56000 \\ &= 6880 - 6720 = 160 \end{aligned}$$

Country IV :

$$\text{Total employees} = \frac{14}{100} * 86000 = 12040$$

$$\begin{aligned} \text{Female employees} &= 12040 - \frac{18}{100} * 56000 \\ &= 12040 - 10080 = 1960 \end{aligned}$$

Country V :

$$\text{Total employees} = \frac{17}{100} * 86000 = 14620$$

$$\begin{aligned} \text{Female employees} &= 14620 - \frac{18}{100} * 56000 \\ &= 14620 - 10080 = 4540 \end{aligned}$$

$$\therefore \text{Total female employees} = 160 + 1960 + 4540 = 6660$$

$$\text{Average} = \frac{6660}{3} = 2220$$

$$\Rightarrow \text{New average} = \frac{140}{100} * 2220 = 3108$$

$$\text{Earlier average} = \frac{86000 - 56000}{8} = 3750$$

$$\therefore \text{Required \%} = \frac{3108}{3750} * 100 = 83\%$$

Instructions

For the following questions answer them individually

Question 26

A boat takes a total time of eight hours to travel 63 kms upstream and the same distance downstream. The speed of the current is $\frac{1}{8}$ t of the speed of the boat in still water. What is the speed of the boat in still water? (in km/hr)

A 32

B 24

C 16

D 8

E 38

Answer: C

Explanation:

Let speed of current = x km/hr

\Rightarrow Speed of boat in still water = $8x$ km/hr

$$\text{Acc. to ques, } \Rightarrow \frac{63}{9x} + \frac{63}{7x} = 8$$

$$\Rightarrow x + \frac{9}{x} = 8$$

$$\Rightarrow \frac{16}{x} = 8$$

$$\Rightarrow x = \frac{16}{8} = 2$$

∴ Speed of boat in still water = $8 \times 2 = 16$ km/hr

Question 27

From a container of milk, 5 litres of milk is replaced with 5 litres of water. This process is repeated again. Thus in two attempts the ratio of milk and water became 81 : 19. The initial amount of milk in the container was

- A 50 litres
- B 45 litres
- C 40 litres
- D 25 litres
- E None of these

Answer: A

Explanation:

Remaining milk = Initial concentration $\left(1 - \frac{\text{quantity taken out}}{\text{Total amount}}\right)^2$

$$\text{Concentration of milk in the final mixture} = \frac{81}{81+19} = \frac{81}{100}$$

Let initially, milk in the container = x litres

$$\Rightarrow 81 = 100 \left(1 - \frac{5}{x}\right)^2$$

$$\Rightarrow \frac{81}{100} = \left(1 - \frac{5}{x}\right)^2$$

$$\Rightarrow \left(1 - \frac{5}{x}\right)^2 = \left(\frac{9}{10}\right)^2$$

$$\Rightarrow 1 - \frac{5}{x} = \frac{9}{10}$$

$$\Rightarrow \frac{5}{x} = 1 - \frac{9}{10}$$

$$\Rightarrow \frac{5}{x} = \frac{10-9}{10} = \frac{1}{10}$$

$$\Rightarrow x = 5 \times 10 = 50 \text{ litres}$$

Question 28

Sonal's age 4 years hence will be equal to Radhika's age five years ago. If the respective ratio between Radhika's present age and Komal's present age is 3 : 2 and Komal's present age is 22 years, what is Sonal's present age? (in years)

- A 33
- B 32
- C 24
- D 26
- E 21

Answer: C

Explanation:

Komal's present age = 22 years

$$\Rightarrow \text{Radhika's present age} = \frac{3}{2} \times 22$$

= 33 years

Let Sonal's present age = x years

Also, Radhika's age 5 years ago = Sonal's age 4 years hence

$$\Rightarrow 33 - 5 = x + 4$$

$$\Rightarrow x = 28 - 4 = 24 \text{ years}$$

Question 29

The salary of an employee of a company increases every month by 4%. If his salary in August was Rs.6,300, what will be his approximate salary in month of October of the same year ?

A Rs.6,552

B Rs.6,967

C Rs.6,814

D Rs.6,627

E Rs.6.933

Answer: C

Explanation:

Given that, the salary in August is 6300. And the salary increases by 4% every month. i.e. the new salary will be $(1 + \frac{4}{100})$ times. In September, it will be $6300 * (1 + 0.04) = 6552$

In October, it will be $6552 * (1 + 0.04) = 6814$ rs.

Question 30

A rectangular plot 55 m long and 45 m broad, has two concrete crossroads (of equal width) running in the middle of it - one parallel to the length and the other parallel to the breadth. The rest of the plot is used as a lawn. If the area of the lawn is 1911 m², what is the width of each of the crossroads ? (in m)

A 5

B 5.5

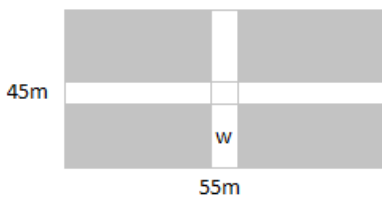
C 6

D 4

E 4.5

Answer: C

Explanation:



Let w be the width of the crossroads.

$$\text{Area of the one shaded portion} = \left[\frac{55-w}{2}\right] \left[\frac{45-w}{2}\right]$$

$$\text{Area of the entire shaded portion} = 4 \times \text{Area of the one shaded portion} = (55-w)(45-w) = 2475 - 55w - 45w + w^2$$

$$\text{Given Area of lawn (shaded portion)} = 1911 \text{ m}^2$$

$$2475 - 55w - 45w + w^2 = 1911$$

$$w^2 - 100w + 564 = 0$$

Solving for w , we get $w=6$ and $w=94$.

$w=6$ is the only possible answer.

Hence Option C is the correct answer.

Question 31

The simple interest accrued on an amount of Rs. 16,500 at the end of three years is Rs. 5,940. What would be the compound interest accrued on the same amount at the same rate in the same period? (rounded off to two digits after decimal)

- A Rs. 6681.31
- B Rs. 6218.27
- C Rs. 6754.82
- D Rs. 6537.47
- E None of these

Answer: A

Explanation:

Principal amount = Rs. 16,500

Simple interest earned = Rs. 5,940 and time = 3 years

Let rate of interest = $R\%$

$$\Rightarrow S.I. = \frac{P \times R \times T}{100}$$

$$\Rightarrow 5940 = \frac{16500 \times R \times 3}{100}$$

$$\Rightarrow R = \frac{5940}{165 \times 3}$$

$$\Rightarrow R = 12\%$$

Now, compound interest accrued on the same amount at the same rate in the same period = $P[(1 + \frac{R}{100})^T - 1]$

$$= 16,500[(1 + \frac{12}{100})^3 - 1]$$

$$= 16,500[(\frac{28}{25})^3 - 1] = 16,500(\frac{21952 - 15625}{15625})$$

$$= 16,500 \times \frac{6327}{15625} = Rs.6681.31$$

Question 32

The respective ratio between the monthly salary of Om and that of Pihu is 7 : 9. Om and Pihu, both save 20% and 40% of their monthly salary respectively. Om invest $\frac{1}{2}$ of his savings in PPF and Pihu invests $\frac{7}{9}$ th of his savings in PPF. If Om and Pihu together saved Rs.17,500/in PPF, what is Pihu's monthly salary?

- A Rs. 72,000
- B Rs. 36,000
- C Rs. 45,000
- D Rs. 22,000
- E Rs. 68,000

Answer: C

Explanation:

Let the monthly salary of Om be $7x$

Monthly salary of Pihu = $9x$
 Savings of Om = $7x \times \frac{20}{100} = \frac{7x}{5}$
 Savings of Pihu = $9x \times \frac{40}{100} = \frac{18x}{5}$

Given that,
 $\frac{1}{2} \times \frac{7x}{5} + 9 \times \frac{7}{5} = 17500$

$x = 5000$

Pihu's monthly salary = $9x = \text{Rs. } 45000$

Question 33

A, B and C, each working alone, can finish a piece of work in 27, 33 and 45 days respectively. A starts by working alone for 12 days, then B takes over from A and works for 11 days. At this stage C takes over from B and completes the remaining work. In how many days the whole work was completed ?

- A 33
- B 31
- C 39
- D 35
- E 37

Answer: A

Explanation:

A's 1 day's work = $\frac{1}{27}$

=> A's 12 days work = $\frac{1}{27} \times 12 = \frac{4}{9}$

Remaining work = $1 - \frac{4}{9} = \frac{5}{9}$

Similarly, B's 11 days work = $\frac{1}{33} \times 11 = \frac{1}{3}$

Remaining work = $\frac{5}{9} - \frac{1}{3} = \frac{2}{9}$

Now, days taken by C to complete the work = 45 days

=> Days taken to complete $\frac{2}{9}$ th of the work = $\frac{2}{9} \times 45 = 10$ days

∴ Days in which the whole work is completed = $12 + 11 + 10 = 33$ days

Question 34

A shopkeeper sells two watches for Rs308 each. On one he gets 12% profit and on the other 12% loss. His profit or loss in the entire transaction was

- A $1\frac{11}{25}$ % loss
- B $1\frac{11}{25}$ % gain
- C $3\frac{2}{25}$ % loss
- D $3\frac{2}{25}$ % gain
- E None of these

Answer: A

Explanation:

Loss percent
 = $\left[\frac{\text{loss}}{10} \right]^2 \%$

$$= \left(\frac{12}{10}\right)^2 \% \\ = \frac{36}{25} \% \\ = \frac{11}{125} \%$$

Question 35

The ratio between the present ages of P and Q is 3:4 respectively. Four years hence Q will be five years older than P. What is P's present age ?

- A 15 years
- B 20 years
- C 25 years
- D Can't be determined
- E None of these

Answer: A

Explanation:

Let $P/q = 3/4$, 4 years from hence means adding 4 to present ages of both p,q .

Also q is 5 years bigger than p after 4 years. so, $p+9 = q+4$.

we already have $p/q = 3/4$ or $3q = 4p$,

so, $q = 4/3p$,

$p+9 = 4/3p+4$,

$p/3 = 5$, so Solving for P we get 15.

Question 36

The compound interest accrued on an amount at the end of two years at the rate of 16% per annum is Rs 3041.28. What is the amount ?

- A Rs 10500
- B Rs 9000
- C Rs 7250
- D Rs 8800
- E None of these

Answer: D

Explanation:

Let the principal be P.

Hence, $CI = P(1 + 16\%)^2 - P = 1.3456P - P = 0.3456P = 3041.28$

$P = 3041.28 / 0.3456 = 8800$

Question 37

56 workers can finish a piece of work in 14 days. If the work is to be completed in 8 days, then how many extra workers are required?

- A 36
- B 48
- C 44

D 42

E 32

Answer: D

Explanation:

56 workers in 14 days => 1 worker in 56×14 days

8 days => $\frac{56 \times 14}{8} = 98$ workers.

Extra workers = $98 - 56 = 42$

Question 38

A shopkeeper purchased 15 kg of variety A rice at X per kg and 10 kg of variety B rice at 'X+ 5' per kg. The shopkeeper sold the whole quantity of variety A rice at 10% profit and that of variety B rice at 20% profit. The total selling price of variety A rice was 30/- more than that of variety B rice. Had the two varieties been mixed and sold at an overall profit of 20%, what would have been the selling price of the mixture per kg?

A Rs. 26.40

B Rs. 23.20

C Rs. 24.20

D Rs. 25.00

E Rs. 28.30

Answer: A

Explanation:

Total revenue generated by selling variety A rice = $1.1 \times 15x = 16.50x$

Total revenue generated by selling variety B rice = $1.2 \times 10(x+5) = 12x + 60$

It is given that, $16.5x - 12x - 60 = 30$

$\Rightarrow x = 20$.

When the two varieties been mixed and sold at an overall profit of 20%. Total weight of the entire mixture = $10+15 = 25$ kg.

Total cost price of the mixture = $15 \times 20 + 10 \times 25 = 550$

Therefore, the cost price of the mixture per kg = $\frac{550}{25} = \text{Rs. } 22$ per kg.

It is known that the mixture was sold at 20%. Therefore, the selling price of the mixture = $1.2 \times 22 = \text{Rs. } 26.40$.

Hence, option A is the correct answer.

Question 39

Which process checks to ensure the components of the computer are operating and connected properly?

A Booting

B Processing

C Saving

D Editing

E None of these

Answer: A

Question 40

A train 350 m long takes 36 seconds to cross a man running at a speed of 5 km/h in the direction opposite to that of train. What is the speed of the train?

- A 30 km/h
- B 40 km/h
- C 24 km/h
- D 34 km/h
- E Other than those given as options

Answer: A

Explanation:

Let the speed of the train be x m/s

Speed of the man = $5\text{ km/hr} = 1.388\text{ m/s}$

Relative speed of man when he is running in opposite direction = $(x+1.388)$

However train crosses him in 36 seconds = $350/36 = 9.722\text{ m/s}$

$$x+1.388 = 9.722$$

$$x = 8.334\text{ m/s}$$

$$x = 30\text{ km/hr}$$

Reasoning

Instructions

Study the given information carefully to answer the given questions.

Seven boxes— J, K, L; M, N, O and P are kept one above the other, but not necessarily in the same order. Each box contains different elements – Cookies, Pencils, Spoons, Diaries, Colours, Jewellery and Watches, but not necessarily in the same order. Only two boxes are kept between M and N. The Pencil box is kept immediately below M. Only two boxes are kept between the Pencil box and the Watch box. N is kept above the Watch box. The Diary box is kept immediately below the Watch box. Only three boxes are kept between the Diary box and J. The Jewellery box is kept immediately above J. O is kept immediately above K. O is not a Pencil box. P is kept immediately above the Cookie box. Only one box is kept between P and the Spoon box.

Question 41

Which of the following boxes is kept immediately above M ?

- A P
- B O
- C L
- D The Diary box
- E The Jewellery box

Answer: D

Question 42

What is the position of O in the given stack of boxes ?

- A First from the top
- B Second from the top
- C Third from the bottom
- D Fifth from the bottom
- E Fourth from the top

Answer: B

Question 43

Which of the following boxes contains Spoons ?

- A Other than those given as options
- B K
- C M
- D N
- E L

Answer: C

Question 44

Four of the following five are alike in a certain way and hence form a group. Which of the following does not belong to the group ?

- A N – Diaries
- B P – Spoons
- C K – Colours
- D L – Pencils
- E O – Spoons

Answer: D

Question 45

How many boxes are kept between K and the Watch box ?

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

Answer: B

Instructions

Study the given information carefully to answer the given questions. Point M is 15m to the east of Point L. Point C is 3m to the north of Point M. Point Q is 6m to the east of Point C. Point P is 3m to the south of Point Q. Point V is to the north of Point L. A person walks 9m from Point V towards south, reaches Point R, takes a left turn and reaches Point C.

Question 46

In which direction is Point V with respect to Point P ?

- A Southwest
- B West
- C Southeast

D Northwest

E Northeast

Answer: D

Explanation:

Point V is to the north of point L. If a person walk 9m towards south from point V, he reaches R, and after that if he turns left, he reaches C

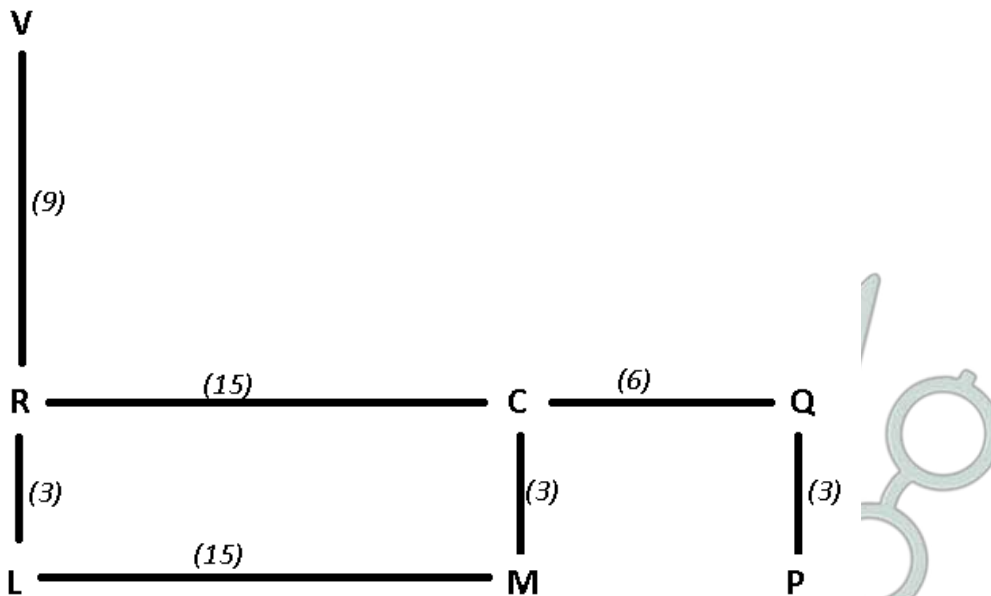
=> R is to the north of L at a distance of 3m.

Distance between R & C is 15m.

Distance between C and Q is 6m, similarly distance between M & P is 6m.

Based on the above condition and plotting the points on a graph, the directions will be :

where the numbers in the brackets represents the distance between two points.



Point V is towards north-west with respect to point P.

Thus, Ans - (D)

Question 47

If a person walks 15m towards east from Point V, takes a right turn and walks 4m, how far will he be from Point M ?

A 5 m

B 9 m

C 12 m

D 6 m

E 8 m

Answer: E

Explanation:

Point V is to the north of point L. If a person walk 9m towards south from point V, he reaches R, and after that if he turns left, he reaches C

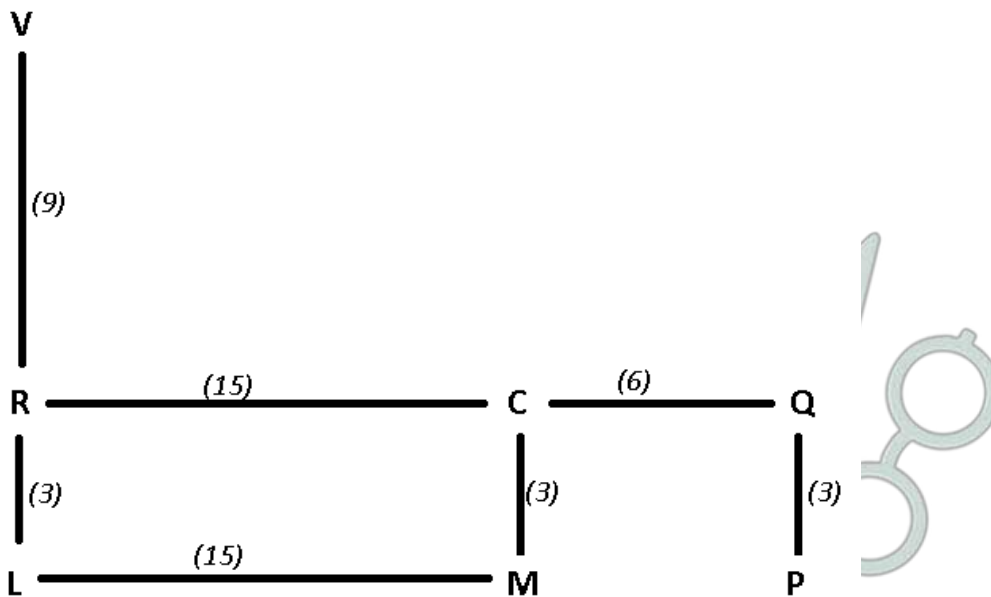
=> R is to the north of L at a distance of 3m.

Distance between R & C is 15m.

Distance between C and Q is 6m, similarly distance between M & P is 6m.

Based on the above condition and plotting the points on a graph, the directions will be :

where the numbers in the brackets represents the distance between two points.



If a person walks 15m towards east from V, he will be at north from C. After that, if he takes a right turn and walks 4m.

The distance between C and the new position of that person = $9 - 4 = 5$

Distance from M = $5 + 3 = 8$ m

Thus, Ans - (E)

Question 48

What is the difference of the distance between Points V, L and Points R, Q ?

- A 14 m
- B 9 m
- C 8 m
- D 3 m
- E 7 m

Answer: B

Explanation:

Point V is to the north of point L. If a person walk 9m towards south from point V, he reaches R, and after that if he turns left, he reaches C

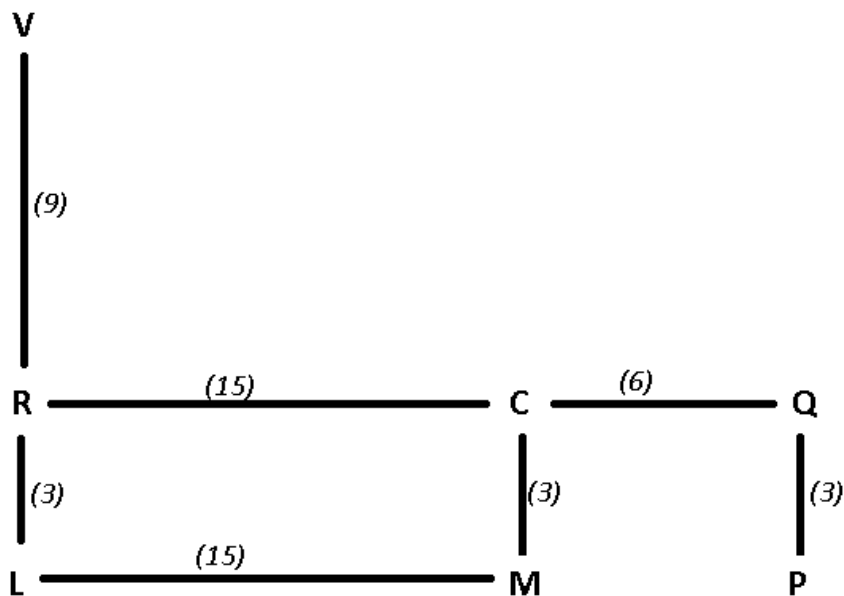
=> R is to the north of L at a distance of 3m.

Distance between R & C is 15m.

Distance between C and Q is 6m, similarly distance between M & P is 6m.

Based on the above condition and plotting the points on a graph, the directions will be :

where the numbers in the brackets represents the distance between two points.



Distance between V & L = $9+3 = 12$

Distance between R & Q = $15+6 = 21$

Required difference = $21-12 = 9\text{m}$

Thus, Ans - (B)

Instructions

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

Eight persons- P, Q, R, S, T, U, V and W - are sitting around a square table in such a way that four of them sit at four corners of the square while other four sit in the middle of each of the four sides. P, Q, R and S are facing towards the centre of table while T, U, V and W are facing outside. The ones who sit at the four corners face towards the centre while those who sit in the middle of the sides face outside. Each one of them has different legislative post viz, Defence Secretary, Finance Minister, Home Minister, Foreign Minister, HRD Minister, Education Minister, Prime Minister and Leader of Opposition but not necessarily in the same order. W is the second to the right of the Leader of Opposition. The Leader of Opposition is facing outside. T is the third to the left of Finance Minister. Finance Minister is not the immediate neighbour of W or Defence Secretary. R is not the Prime Minister and he is not the immediate neighbour of HRD Minister. U is to the immediate left of Prime Minister. Prime Minister is not the immediate neighbour of Defence Secretary. Home Minister and Foreign Minister are immediate neighbours of each other. Foreign Minister is not the immediate neighbour of the Leader of Opposition. There is only one person between Home Minister and S. V is Education Minister and he is not the immediate neighbour of P. S is not the Prime Minister.

Question 49

Who among the following is the Prime Minister ?

- A P
- B Q
- C U
- D T
- E W

Answer: A

Explanation:

P, Q, R and S are facing towards the center.

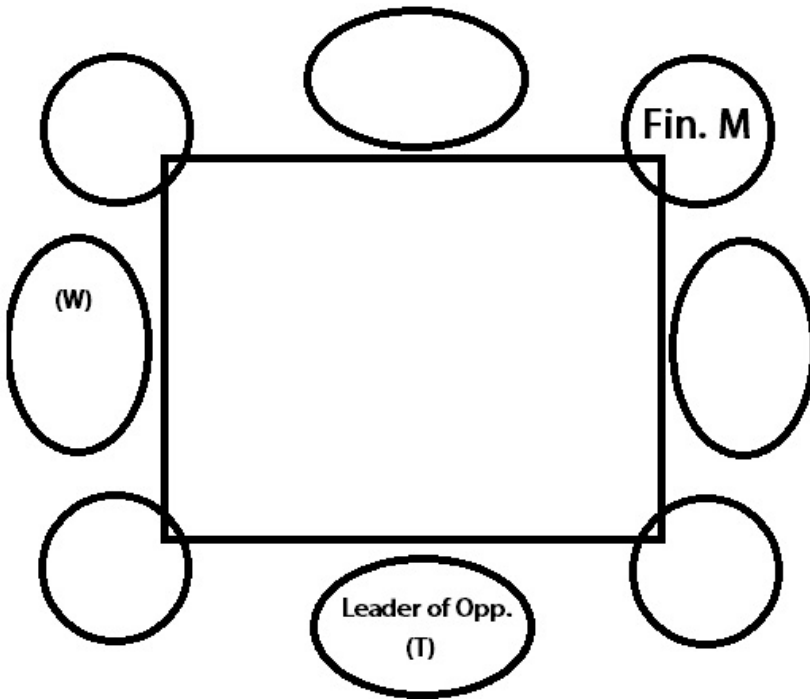
T, U, V and W are facing away from the center.

Note that in this question, any 2 adjacent persons are going to be facing in opposite directions.

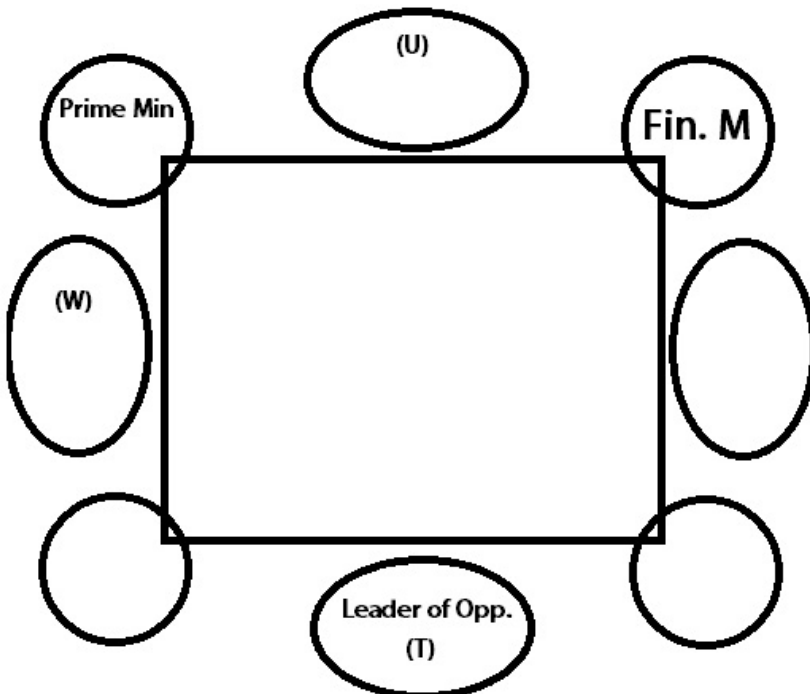
W is sitting second to the right of The leader of Opposition. This means the leader of opposition must be facing away from the center (as W is facing away from the center).

T is third to the left of Finance Minister, which Means Finance Minister is facing towards the center (as T is facing away from the center and Finance minister is sitting third to the right of him).

Now Finance Minister is not an immediate neighbor of T, hence the arrangement becomes :-



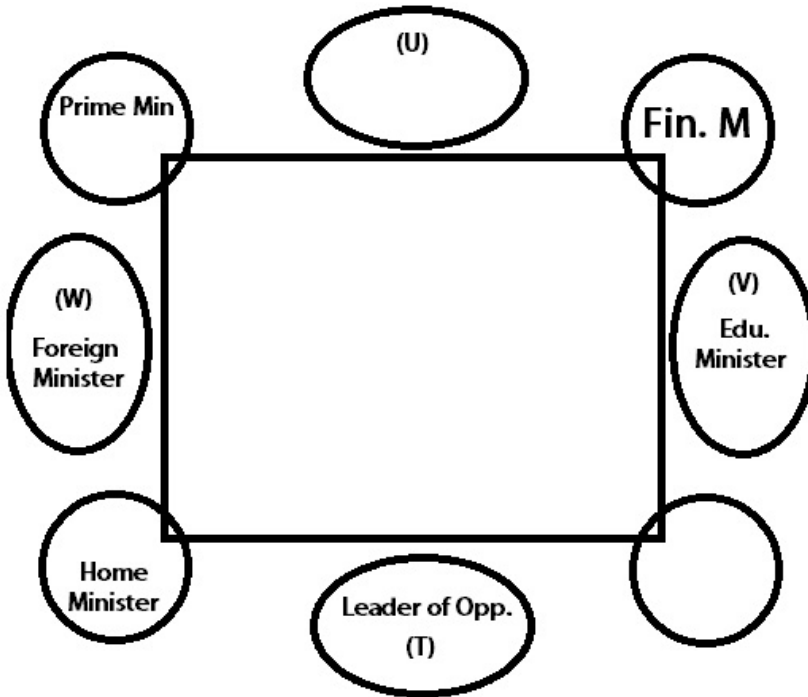
Since U is sitting to the immediate left of Prime Minister, Prime Minister must be facing towards the center (As U is facing away from the center).



(This is the only possible place for U to be facing outwards with Prime Minister being on his left)

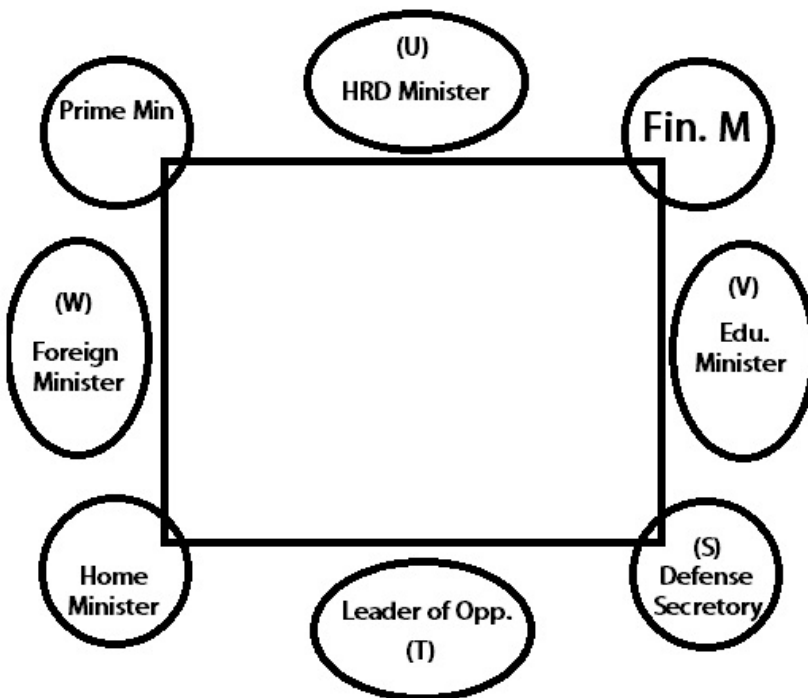
V is the Education minister.

Now Home Minister and Foreign Ministers are immediate neighbors. Also Foreign Minister is not an immediate neighbor of Leader of Opposition.



Only one person is sitting between Home Minister and S.

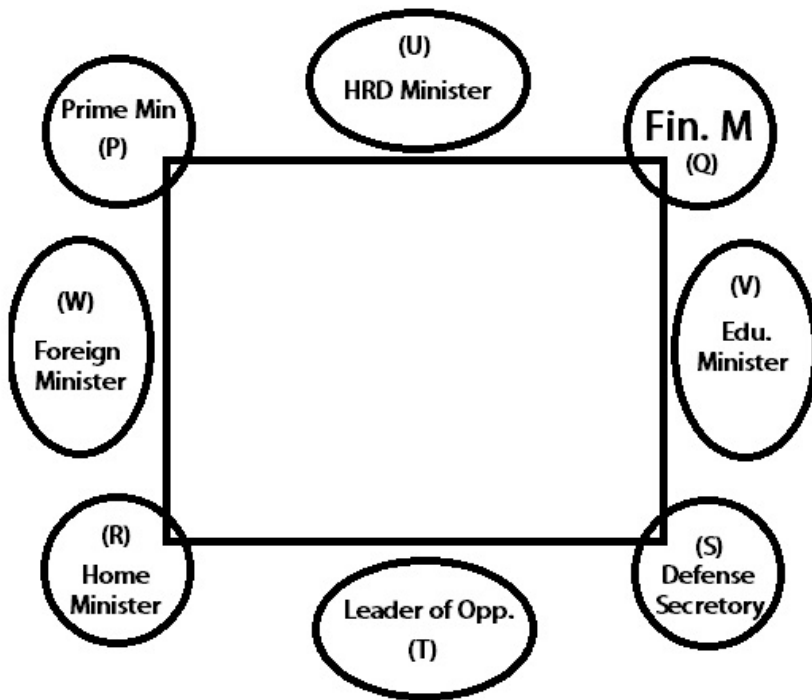
Now, since Prime Minister is not an immediate neighbor of Defense Secretary, S has to be the Defense Secretary. Thus, U is the HRD minister.



Now, neither R, nor S is the Prime Minister. So R has to be the Home Minister. Since P is not the neighbor of V, P has to be Prime Minister and Q has to be Finance Minister.

Hence R is the Home Minister.

Hence the Final Arrangement is :-



P is the Prime Minister.

Question 50

What is the position of the Leader of Opposition with respect to the Prime Minister ?

- A Second to the right
- B Third to the left
- C Third to the right
- D Second to the left
- E The Leader of Opposition and the Prime Minister sit diagonally opposite to each other.

Answer: C

Explanation:

P, Q, R and S are facing towards the center.

T, U, V and W are facing away from the center.

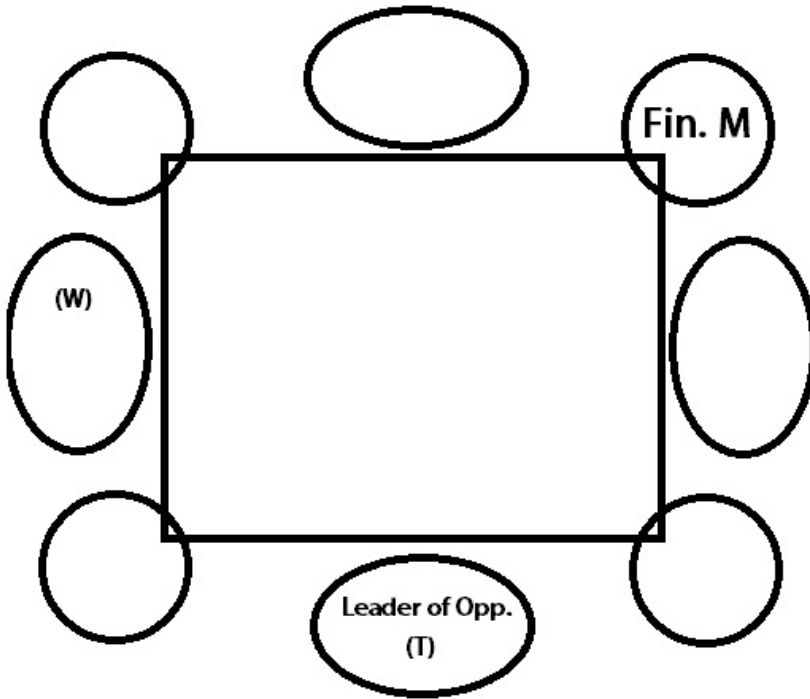
Note that in this question, any 2 adjacent persons are going to be facing in opposite directions.

W is sitting second to the right of The leader of Opposition. This means the leader of opposition must be facing away from the center (as W is facing away from the center).

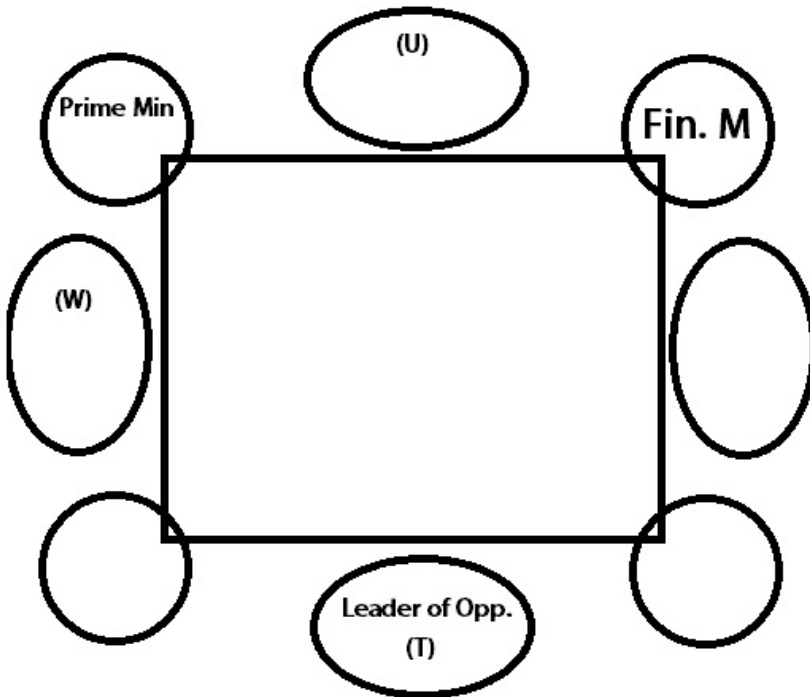
T is third to the left of Finance Minister, which Means Finance Minister is facing towards the center (as T is facing away from the center and Finance minister is sitting third to the right of him).

Now Finance Minister is not an immediate neighbor of T, hence the arrangement becomes :-





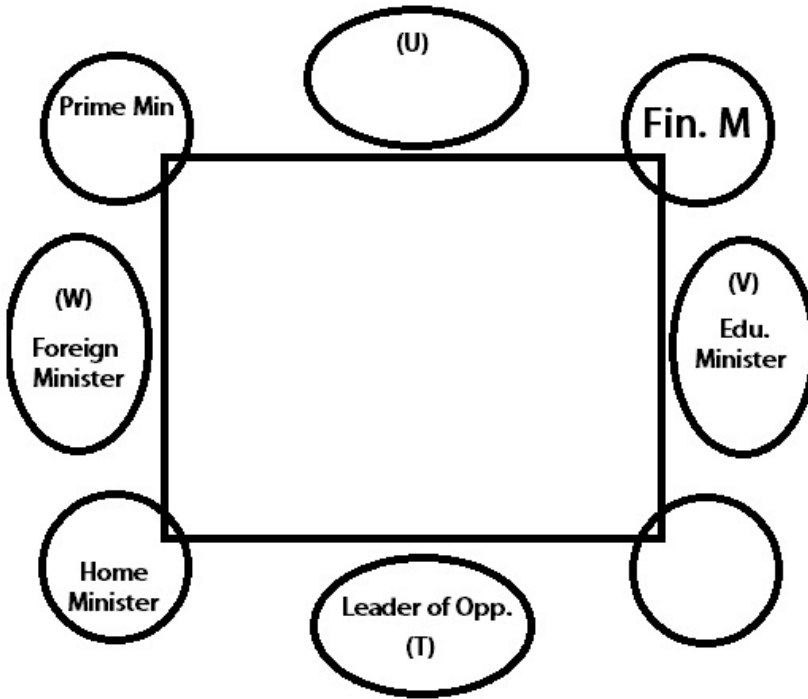
Since U is sitting to the immediate left of Prime Minister, Prime Minister must be facing towards the center (As U is facing away from the center).



(This is the only possible place for U to be facing outwards with Prime Minister being on his left)

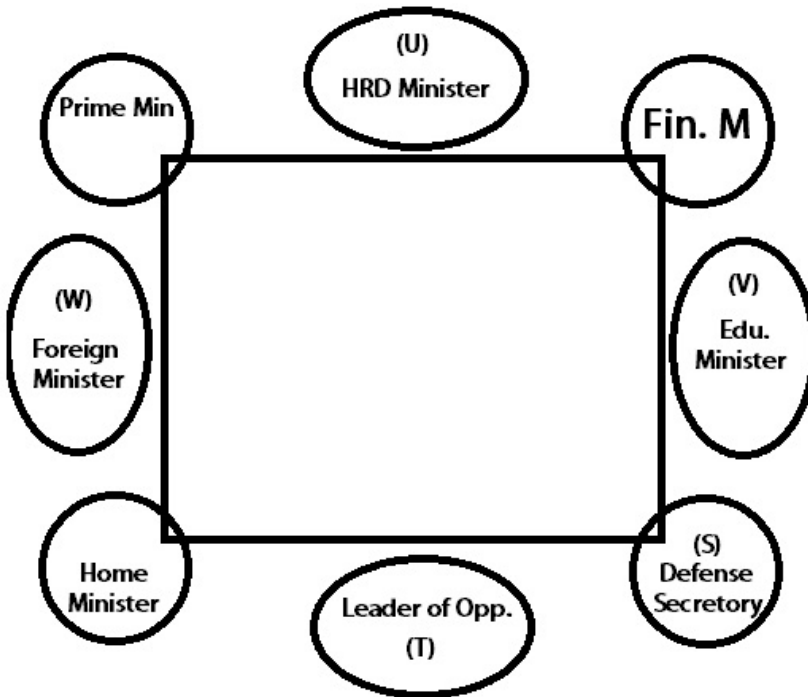
V is the Education minister.

Now Home Minister and Foreign Ministers are immediate neighbors. Also Foreign Minister is not an immediate neighbor of Leader of Opposition.



Only one person is sitting between Home Minister and S.

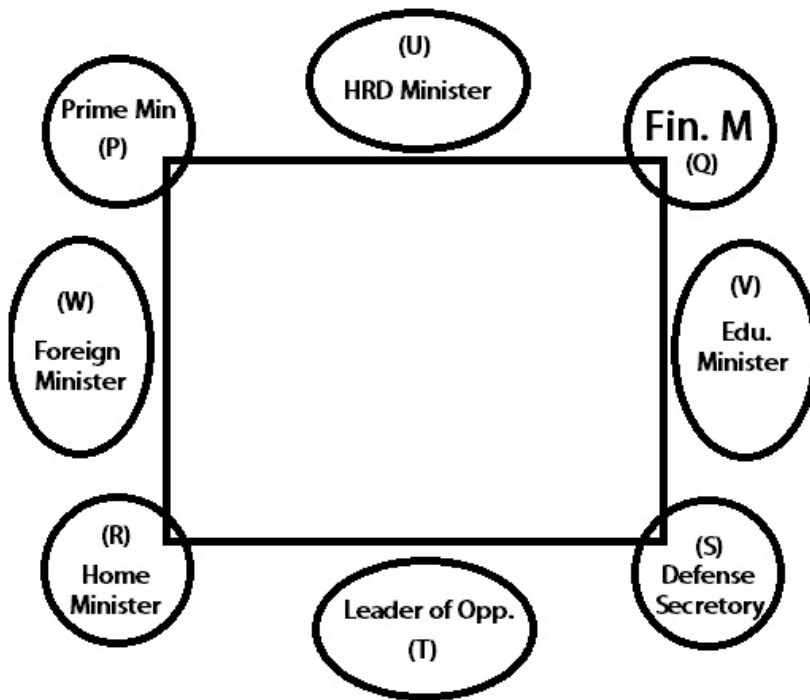
Now, since Prime Minister is not an immediate neighbor of Defense Secretary, S has to be the Defense Secretary. Thus, U is the HRD minister.



Now, neither R, nor S is the Prime Minister. So R has to be the Home Minister. Since P is not the neighbor of V, P has to be Prime Minister and Q has to be Finance Minister.

Hence R is the Home Minister.

Hence the Final Arrangement is :-



The Leader of Opposition is sitting third to the right of the Prime Minister.

Question 51

Which of the following statements is/are true on the basis of given arrangement ?

- A Home Minister and Finance Minister sit diagonally opposite to each other.
- B S is the Defence Secretary.
- C R is an immediate neighbour of the Leader of Opposition
- D W is the Foreign Minister
- E All are true.

Answer: E

Explanation:

P, Q, R and S are facing towards the center.

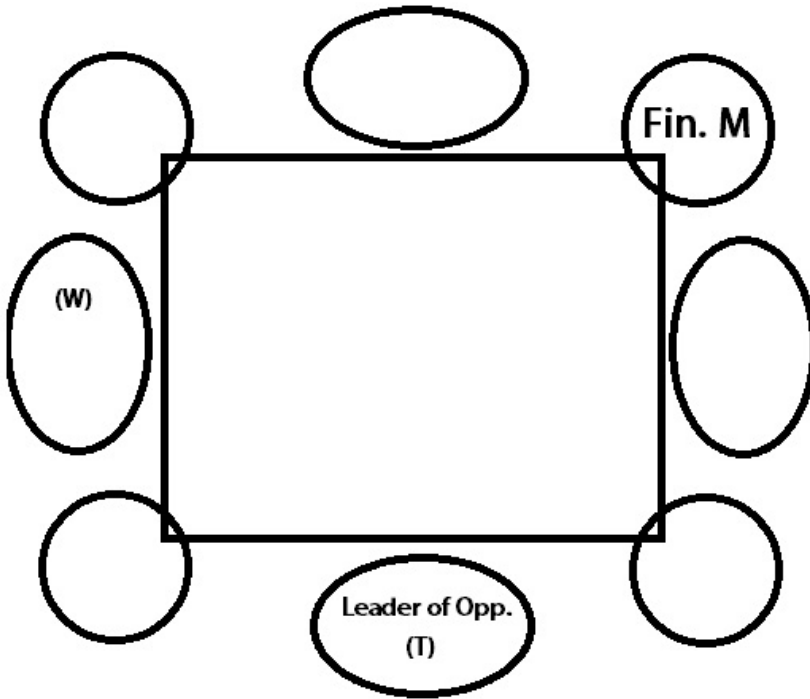
T, U, V and W are facing away from the center.

Note that in this question, any 2 adjacent persons are going to be facing in opposite directions.

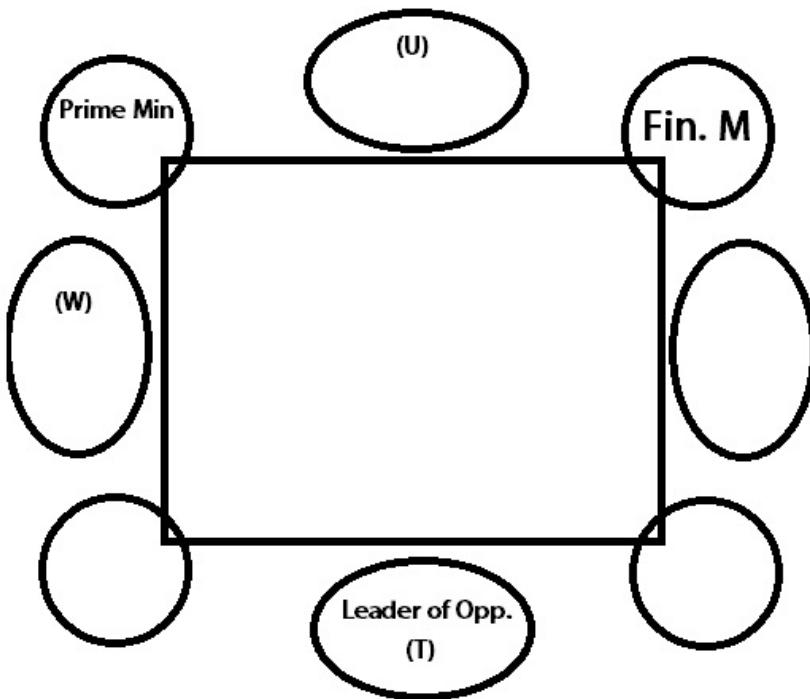
W is sitting second to the right of The leader of Opposition. This means the leader of opposition must be facing away from the center (as W is facing away from the center).

T is third to the left of Finance Minister, which Means Finance Minister is facing towards the center (as T is facing away from the center and Finance minister is sitting third to the right of him).

Now Finance Minister is not an immediate neighbor of T, hence the arrangement becomes :-



Since U is sitting to the immediate left of Prime Minister, Prime Minister must be facing towards the center (As U is facing away from the center).

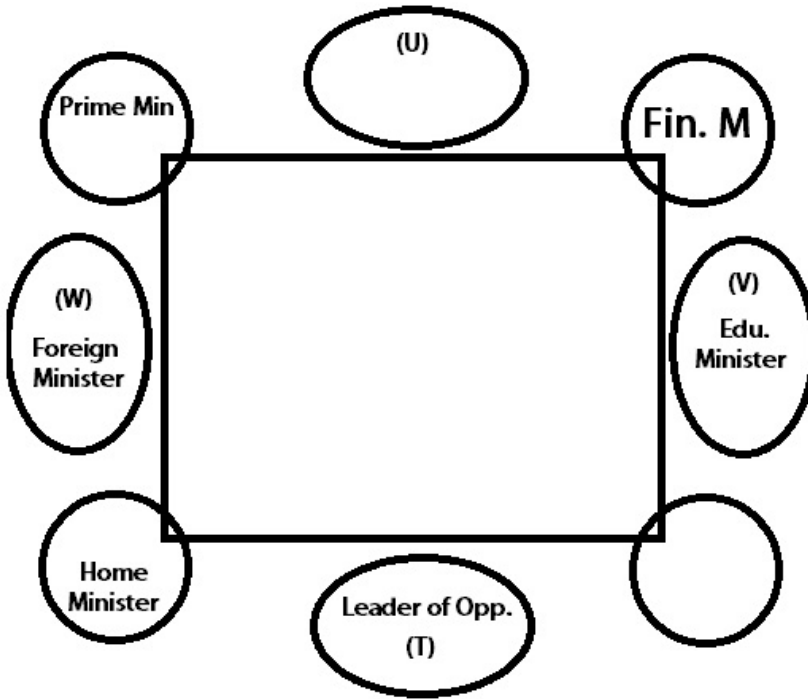


(This is the only possible place for U to be facing outwards with Prime Minister being on his left)

V is the Education minister.

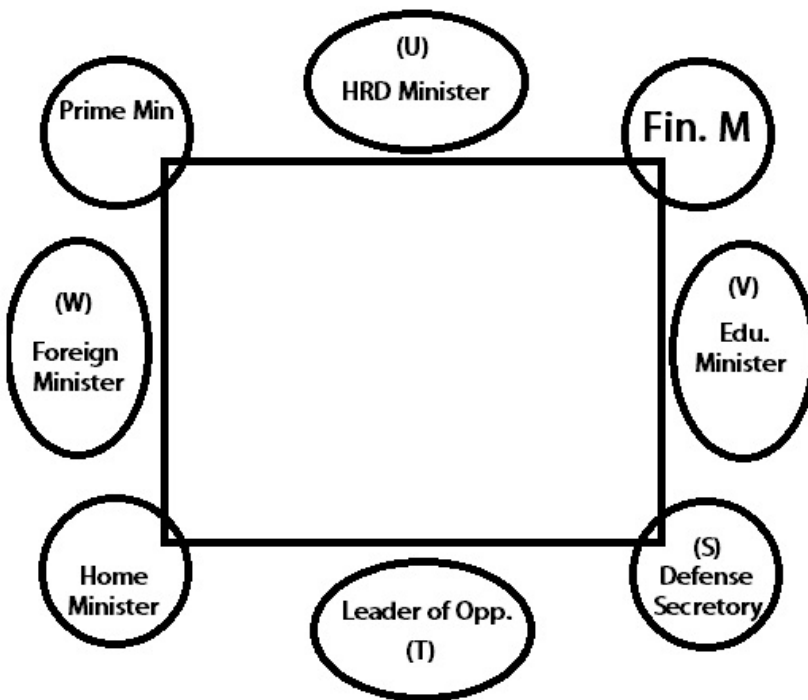
Now Home Minister and Foreign Ministers are immediate neighbors. Also Foreign Minister is not an immediate neighbor of Leader of Opposition.





Only one person is sitting between Home Minister and S.

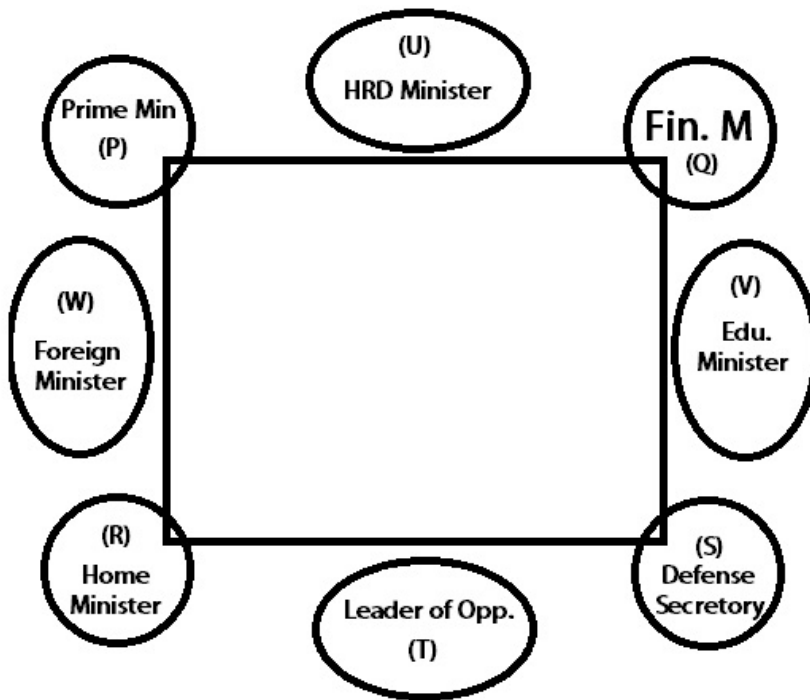
Now, since Prime Minister is not an immediate neighbor of Defense Secretary, S has to be the Defense Secretary. Thus, U is the HRD minister.



Now, neither R, nor S is the Prime Minister. So R has to be the Home Minister. Since P is not the neighbor of V, P has to be Prime Minister and Q has to be Finance Minister.

Hence R is the Home Minister.

Hence the Final Arrangement is :-



As apparent from the above diagram, all of the given statements are true.

Question 52

Who among the following sits exactly between the Prime Minister and Q ?

- A Home Minister
- B HRD Minister
- C Defence Secretary
- D Foreign Minister
- E Leader of Opposition

Answer: B

Explanation:

P, Q, R and S are facing towards the center.

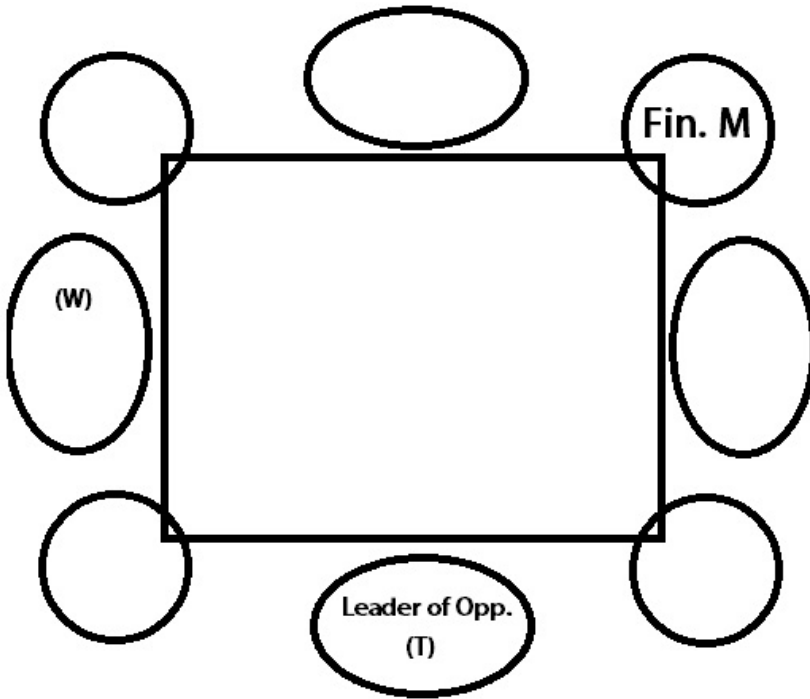
T, U, V and W are facing away from the center.

Note that in this question, any 2 adjacent persons are going to be facing in opposite directions.

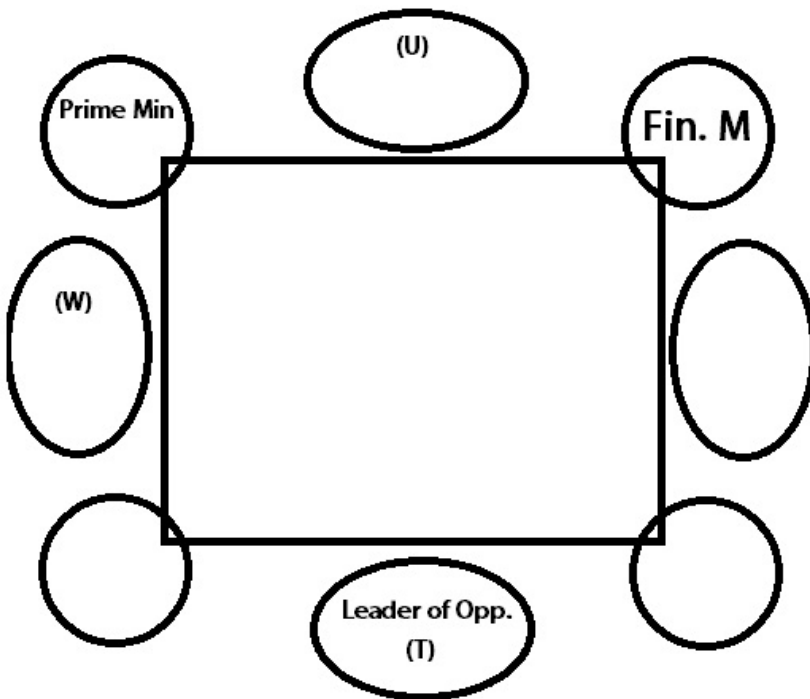
W is sitting second to the right of The leader of Opposition. This means the leader of opposition must be facing away from the center (as W is facing away from the center).

T is third to the left of Finance Minister, which Means Finance Minister is facing towards the center (as T is facing away from the center and Finance minister is sitting third to the right of him).

Now Finance Minister is not an immediate neighbor of T, hence the arrangement becomes :-



Since U is sitting to the immediate left of Prime Minister, Prime Minister must be facing towards the center (As U is facing away from the center).

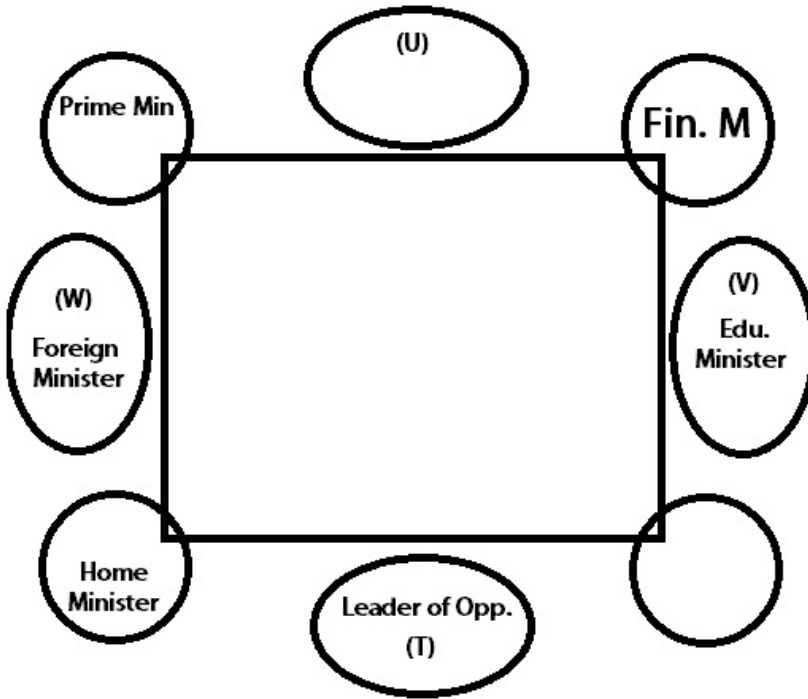


(This is the only possible place for U to be facing outwards with Prime Minister being on his left)

V is the Education minister.

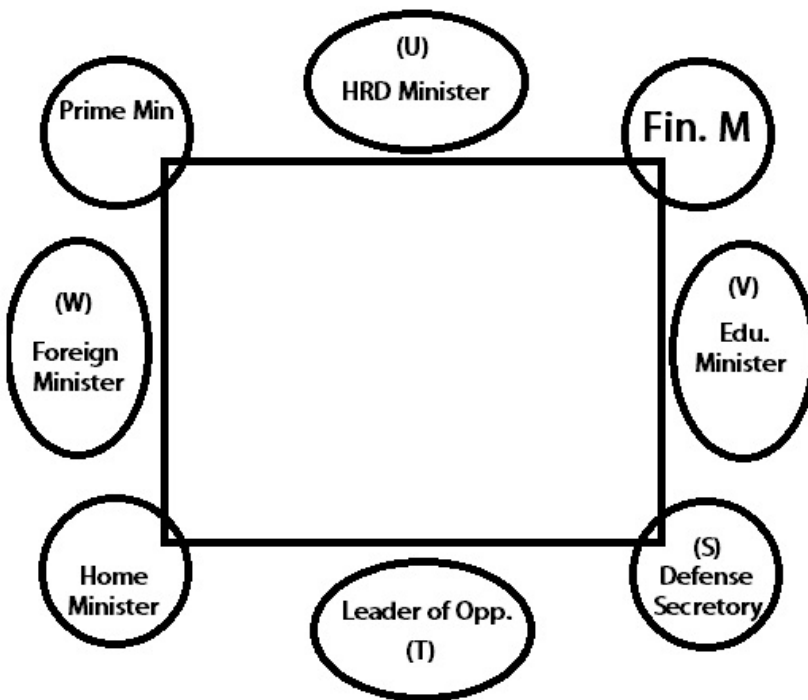
Now Home Minister and Foreign Ministers are immediate neighbors. Also Foreign Minister is not an immediate neighbor of Leader of Opposition.





Only one person is sitting between Home Minister and S.

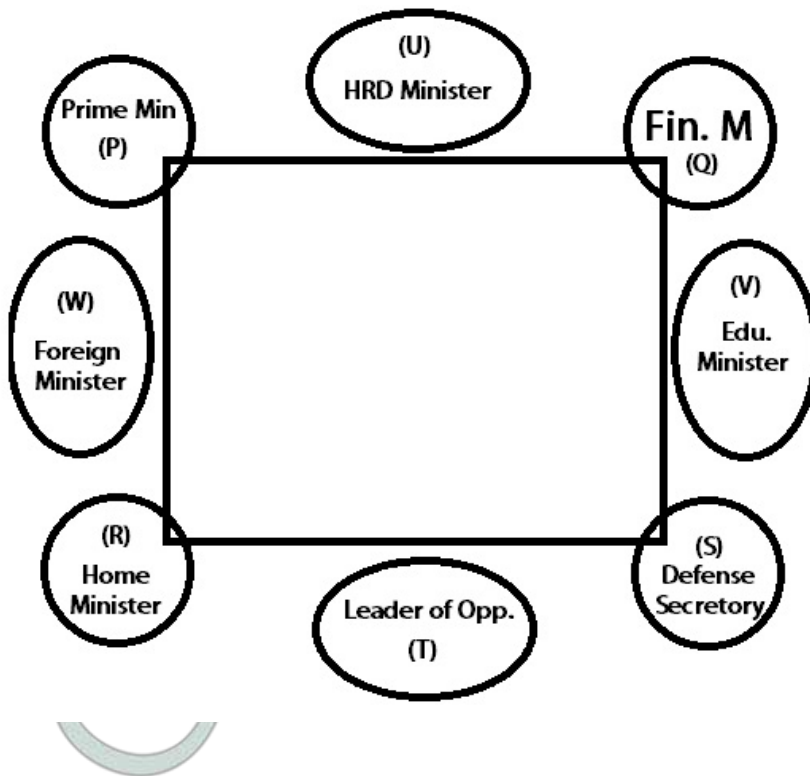
Now, since Prime Minister is not an immediate neighbor of Defense Secretary, S has to be the Defense Secretary. Thus, U is the HRD minister.



Now, neither R, nor S is the Prime Minister. So R has to be the Home Minister. Since P is not the neighbor of V, P has to be Prime Minister and Q has to be Finance Minister.

Hence R is the Home Minister.

Hence the Final Arrangement is :-



The HRD Minister sits between Prime Minister and Q.

Question 53

Which of the following pairs represents the immediate neighbours of Education Minister ?

- A HRD Minister and Finance Minister
- B Defence Secretary and Leader of Opposition
- C Home Minister and Defence Secretary
- D Defence Secretary and Finance Minister
- E None of these

Answer: D

Explanation:

P, Q, R and S are facing towards the center.

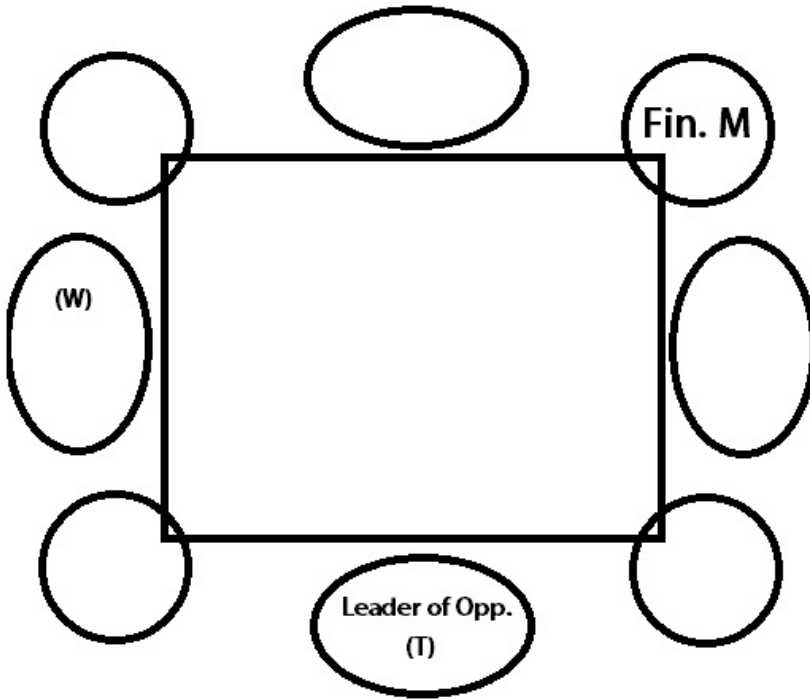
T, U, V and W are facing away from the center.

Note that in this question, any 2 adjacent persons are going to be facing in opposite directions.

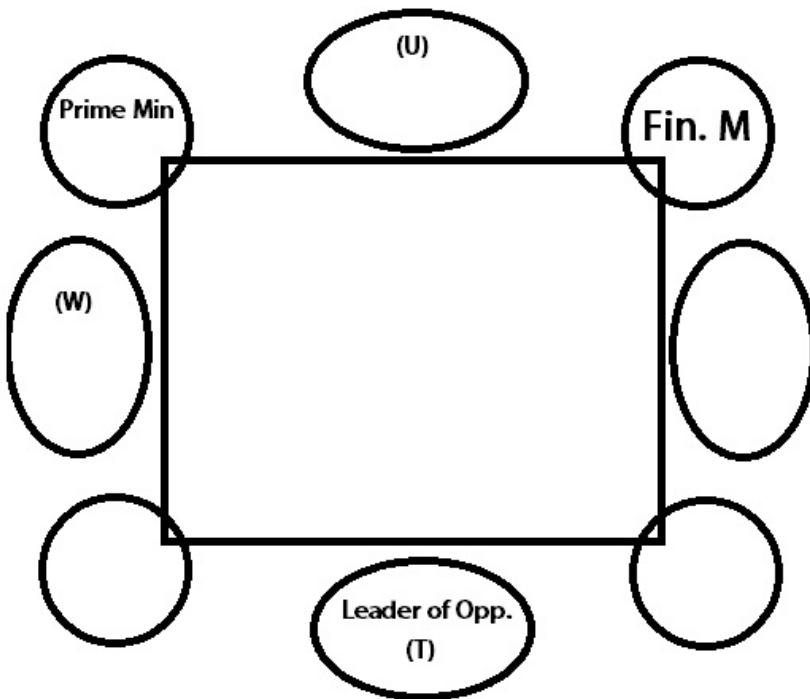
W is sitting second to the right of The leader of Opposition. This means the leader of opposition must be facing away from the center (as W is facing away from the center).

T is third to the left of Finance Minister, which Means Finance Minister is facing towards the center (as T is facing away from the center and Finance minister is sitting third to the right of him).

Now Finance Minister is not an immediate neighbor of T, hence the arrangement becomes :-



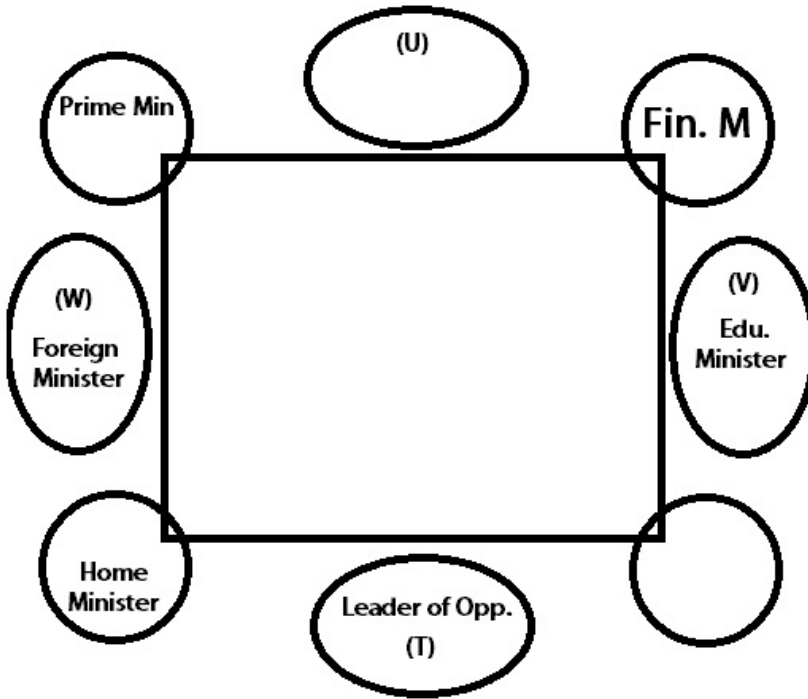
Since U is sitting to the immediate left of Prime Minister, Prime Minister must be facing towards the center (As U is facing away from the center).



(This is the only possible place for U to be facing outwards with Prime Minister being on his left)

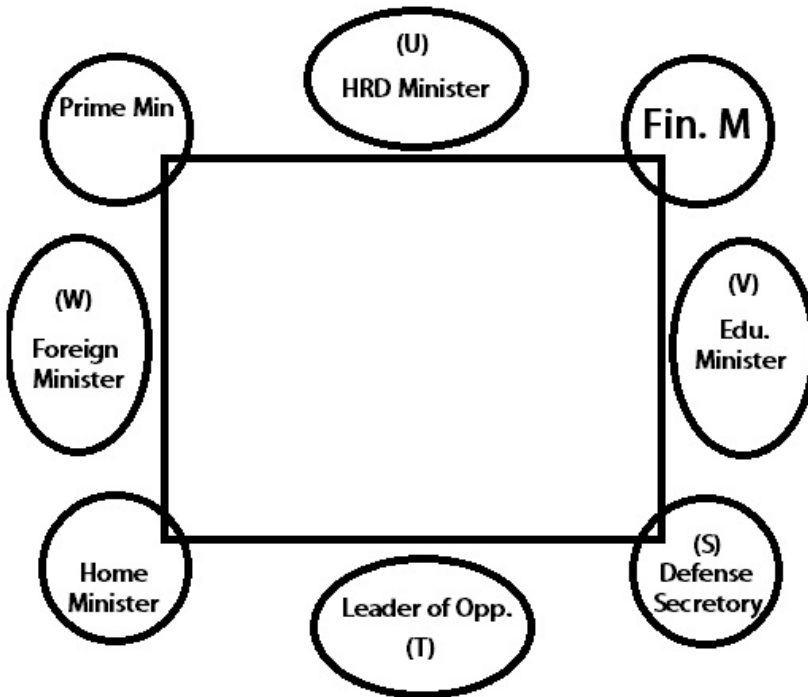
V is the Education minister.

Now Home Minister and Foreign Ministers are immediate neighbors. Also Foreign Minister is not an immediate neighbor of Leader of Opposition.



Only one person is sitting between Home Minister and S.

Now, since Prime Minister is not an immediate neighbor of Defense Secretary, S has to be the Defense Secretary. Thus, U is the HRD minister.

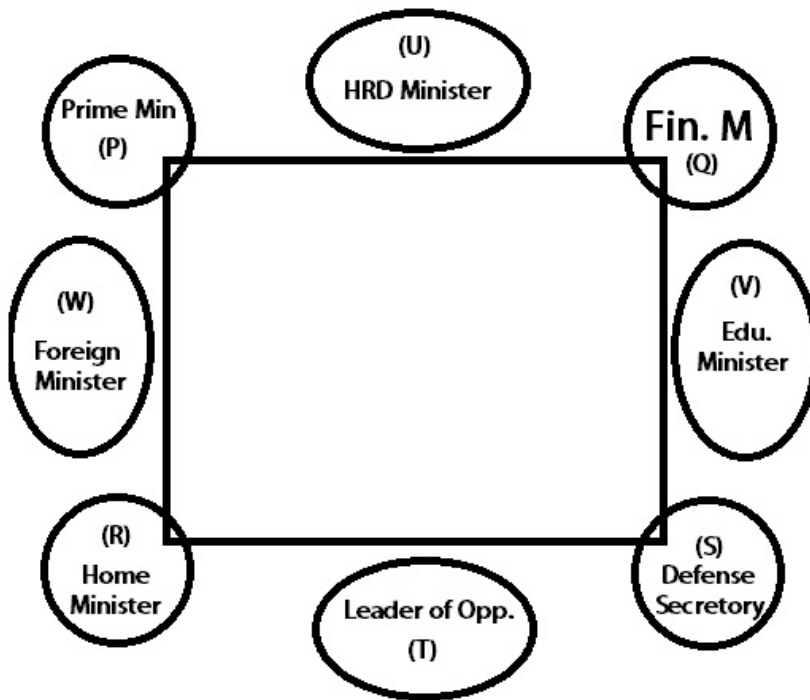


Now, neither R, nor S is the Prime Minister. So R has to be the Home Minister. Since P is not the neighbor of V, P has to be Prime Minister and Q has to be Finance Minister.

Hence R is the Home Minister.

Hence the Final Arrangement is :-





Defense Secretary and Finance Minister are the immediate neighbors of Education Minister.

Instructions

Study the following information to answer the given questions.

Eight friends—P, Q, R, S, T, U, V and W are seated in a straight line with equal distance between each other, but not necessarily in the same order. Some of them are facing north while some are facing south.

- ◆ V is an immediate neighbour of the person sitting at an extreme end of the line. R sits second to the left of V.
- ◆ Only one person sits between R and T.
- ◆ As many people sits to the right of T as to the left of P. V and P face the same direction (i.e., if V faces north then P also faces north and viceversa.)
- ◆ Immediate neighbours of P face opposite directions (i.e., if one neighbour faces north then the other faces south and viceversa.)
- ◆ Q sits fourth to the left of S. Q is not an immediate neighbour of V.
- ◆ Persons sitting at the extreme ends face opposite directions (i.e., if one person faces north then the other person faces south and viceversa.)
- ◆ W faces south. W does not sit at an extreme end of the line: U sits to the immediate right of W.
- ◆ U and Q face the same direction (i.e., if U faces north then Q also faces north and viceversa.)

Question 54

As per the given arrangement, which of the following statements is not true with respect to U ?

- A U sits at an extreme end of the line.
- B Only three persons sit between U and R.
- C U sits second to the left of T
- D All the given statements are true
- E U is an immediate neighbour of Q.

Answer: E

Explanation:

↑ represents - North

↓ represents - South

The above arrangement will be :

U	W	T	Q	R	P	V	S
↓	↓	↑	↓	↓	↑	↑	↑

As seen, U is not an immediate neighbour of Q

Ans - (E)

Question 55

What is the position of Q with respect to W ?

- A Immediate left
- B Second to the right
- C Third to the left
- D Third to the right
- E Second to the left

Answer: E

Explanation:

↑ represents - North

↓ represents - South

The above arrangement will be :

U	W	T	Q	R	P	V	S
↓	↓	↑	↓	↓	↑	↑	↑

Q is second to the left of W since, W is facing south.

Ans - (E)

Question 56

Four of the following five are alike in a certain way based on the given arrangement and hence form a group. Which of them does not belong to that group ?

- A WS
- B QT
- C WR
- D UP
- E RV

Answer: C

Explanation:

↑ represents - North

↓ represents - South

The above arrangement will be :

U	W	T	Q	R	P	V	S
↓	↓	↑	↓	↓	↑	↑	↑

The above relationship is - First person is facing South and the second person is facing North. Only WR do not follow that.

Ans - (C)

Question 57

How many persons sit to the left of T?

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

Answer: A

Explanation:

↑ represents - North

↓ represents - South

The above arrangement will be :

U	W	T	Q	R	P	V	S
↓	↓	↑	↓	↓	↑	↑	↑

Only 2 persons sit to the left of T.

Ans - (A)

Question 58

Which of the following represents the immediate neighbours of P ?

- A R, T
- B S, V
- C W, P
- D V, R
- E T, S

Answer: D

Explanation:

↑ represents - North

↓ represents - South

The above arrangement will be :

U	W	T	Q	R	P	V	S
↓	↓	↑	↓	↓	↑	↑	↑

Clearly, V and R are the immediate neighbours of P.

Ans - (D)

Instructions

For the following questions answer them individually

Question 59

How many meaningful English words can be formed with the letters CFAE using each letter only once in each word?

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

Answer: C

Explanation:

Meaningful English words that can be formed from CFAE :

FACE & CAFE

Thus, only 2 words can be formed.

Question 60

How many meaningful English words can be formed with the letters MASTE using each letter only once in each word ?

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

Answer: C

Explanation:

Letters = M,A,S,T,E

2 meaningful words can be formed = Teams, Steam

=> Ans - (C)

Instructions

Read the following information and answer the given question.

Seven people, namely O, P, Q, R, S, T and U have to attend a practical but not necessarily in the same order, on seven different months (of the same year) namely February, March, April, June, August, September and November. Each of them also likes a different subject namely Chemistry, Biology, Psychology, Hindi, English, Geography and Account but not necessarily in the same order. The one who likes Hindi will attend a practical in a month which has 31 days. Only two people will attend a practical between the one who likes Hindi and T. Only three people will attend a practical between T and Q. Only one person will attend a practical between Q and the one who likes

Accounts. The one who likes Chemistry will attend a practical in one of the months before the one who likes Accounts. The one who likes Chemistry will attend a practical in the month which has less than 30 days. Only two people will attend a practical between the one who likes Chemistry and S. Only one person will attend a practical between S and the one who likes Psychology. The one who likes Psychology will attend a practical on one of the months after S. Only two people will attend a practical between the one who likes Psychology and P. The one who likes Geography will attend a practical immediately before P. Only three people will attend a practical between P and the one who likes English. Only one person will attend a practical between O and R. O will attend a practical in a month which has 31 days.

Question 61

Who amongst the following likes Biology ?

- A P
- B T
- C U
- D R
- E O

Answer: A

Explanation:

The one who likes Hindi will attend a practical in a month which has 31 days, => let that person attends in the month of August.
 Only two people will attend a practical between the one who likes Hindi and T, => T attends practical in March.
 Only three people will attend a practical between T and Q, => Q attends practical in September.
 Only one person will attend a practical between Q and the one who likes Accounts, => The one who likes Accounts attends in June.
 The one who likes Chemistry will attend a practical in the month which has less than 30 days, => He attends in February.
 Only two people will attend a practical between the one who likes Chemistry and S, => S attends in June.
 Only one person will attend a practical between S and the one who likes Psychology and the one who likes Psychology will attend a practical on one of the months after S, => The one who likes Psychology attends practicals in September.
 Only two people will attend a practical between the one who likes Psychology and P, => P attends in April.
 The one who likes Geography will attend a practical immediately before P, => He will attend in March.
 Only three people will attend a practical between P and the one who likes English, => The one who likes English attends in November.
 Only one person will attend a practical between O and R. O will attend a practical in a month which has 31 days, => O attends practical in August and R in November.

Month	Person	Subject
February	U	Chemistry
March	T	Geography
April	P	Biology
June	S	Accounts
August	O	Hindi
September	Q	Psychology
November	R	English

Clearly, P likes Biology.

=> Ans - (A)

Question 62

How many people will attend a practical after P ?

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

Answer: E

Explanation:

The one who likes Hindi will attend a practical in a month which has 31 days, => let that person attends in the month of August.

Only two people will attend a practical between the one who likes Hindi and T, => T attends practical in March.

Only three people will attend a practical between T and Q, => Q attends practical in September.

Only one person will attend a practical between Q and the one who likes Accounts, => The one who likes Accounts attends in June.

The one who likes Chemistry will attend a practical in the month which has less than 30 days, => He attends in February.

Only two people will attend a practical between the one who likes Chemistry and S, => S attends in June.

Only one person will attend a practical between S and the one who likes Psychology and the one who likes Psychology will attend a practical on one of the months after S, => The one who likes Psychology attends practicals in September.

Only two people will attend a practical between the one who likes Psychology and P, => P attends in April.

The one who likes Geography will attend a practical immediately before P, => He will attend in March.

Only three people will attend a practical between P and the one who likes English, => The one who likes English attends in November.

Only one people will attend a practical between O and R. O will attend a practical in a month which has 31 days, => O attends practical in August and R in November.

Month	Person	Subject
February	U	Chemistry
March	T	Geography
April	P	Biology
June	S	Accounts
August	O	Hindi
September	Q	Psychology
November	R	English

There are 4 people who will attend practical after P.

=> Ans - (E)

Question 63

Which of the following represents the people who will attend a practical immediately before and immediately after O ?

- A T, P
- B P, Q
- C S, Q
- D S, P
- E U, P

Answer: C

Explanation:

The one who likes Hindi will attend a practical in a month which has 31 days, => let that person attends in the month of August.

Only two people will attend a practical between the one who likes Hindi and T, => T attends practical in March.

Only three people will attend a practical between T and Q, => Q attends practical in September.

Only one person will attend a practical between Q and the one who likes Accounts, => The one who likes Accounts attends in June.

The one who likes Chemistry will attend a practical in the month which has less than 30 days, => He attends in February.

Only two people will attend a practical between the one who likes Chemistry and S, => S attends in June.

Only one person will attend a practical between S and the one who likes Psychology and the one who likes Psychology will attend a practical on one of the months after S, => The one who likes Psychology attends practicals in September.

Only two people will attend a practical between the one who likes Psychology and P, => P attends in April.

The one who likes Geography will attend a practical immediately before P, => He will attend in March.

Only three people will attend a practical between P and the one who likes English, => The one who likes English attends in November.

Only one people will attend a practical between O and R. O will attend a practical in a month which has 31 days, => O attends practical in August and R in November.

Month	Person	Subject
February	U	Chemistry
March	T	Geography
April	P	Biology
June	S	Accounts
August	O	Hindi
September	Q	Psychology
November	R	English

S and Q will attend practical immediately before and immediately after O respectively.

=> Ans - (C)

Question 64

As per the given arrangement February is related to T and March is related to P following a certain pattern, which of the following is August related to following the same pattern ?

- A U
- B Q
- C R
- D S
- E O

Answer: B

Explanation:

The one who likes Hindi will attend a practical in a month which has 31 days, => let that person attends in the month of August.

Only two people will attend a practical between the one who likes Hindi and T, => T attends practical in March.

Only three people will attend a practical between T and Q, => Q attends practical in September.

Only one person will attend a practical between Q and the one who likes Accounts, => The one who likes Accounts attends in June.

The one who likes Chemistry will attend a practical in the month which has less than 30 days, => He attends in February.

Only two people will attend a practical between the one who likes Chemistry and S, => S attends in June.

Only one person will attend a practical between S and the one who likes Psychology and the one who likes Psychology will attend a practical on one of the months after S, => The one who likes Psychology attends practicals in September.

Only two people will attend a practical between the one who likes Psychology and P, => P attends in April.

The one who likes Geography will attend a practical immediately before P, => He will attend in March.

Only three people will attend a practical between P and the one who likes English, => The one who likes English attends in November.

Only one people will attend a practical between O and R. O will attend a practical in a month which has 31 days, => O attends practical in August and R in November.

Month	Person	Subject
February	U	Chemistry
March	T	Geography
April	P	Biology
June	S	Accounts
August	O	Hindi
September	Q	Psychology
November	R	English

February is related to T, => T attends practical immediately after February.

March is related to P, => P attends practical immediately after March.

Similarly, Q attends practical immediately after August, thus August is related to Q.

=> Ans - (B)

Question 65

Which of the following represents the month in which U will attend a practical ?

- A November
- B February
- C April
- D June
- E Cannot be determined

Answer: B

Explanation:

The one who likes Hindi will attend a practical in a month which has 31 days, => let that person attends in the month of August.

Only two people will attend a practical between the one who likes Hindi and T, => T attends practical in March.

Only three people will attend a practical between T and Q, => Q attends practical in September.

Only one person will attend a practical between Q and the one who likes Accounts, => The one who likes Accounts attends in June.

The one who likes Chemistry will attend a practical in the month which has less than 30 days, => He attends in February.

Only two people will attend a practical between the one who likes Chemistry and S, => S attends in June.

Only one person will attend a practical between S and the one who likes Psychology and the one who likes Psychology will attend a practical on one of the months after S, => The one who likes Psychology attends practicals in September.

Only two people will attend a practical between the one who likes Psychology and P, => P attends in April.

The one who likes Geography will attend a practical immediately before P, => He will attend in March.

Only three people will attend a practical between P and the one who likes English, => The one who likes English attends in November.

Only one people will attend a practical between O and R. O will attend a practical in a month which has 31 days, => O attends practical in

August and R in November.

Month	Person	Subject
February	U	Chemistry
March	T	Geography
April	P	Biology
June	S	Accounts
August	O	Hindi
September	Q	Psychology
November	R	English

U will attend practical in February.

=> Ans - (B)

Instructions

In each of the questions below are given three statements followed by three conclusions numbered I, II and III. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Question 66

Statements :

Some flowers are bins.

Some bins are handles.

All handles are sticks.

Conclusions :

I : Some sticks are bins.

II : Some handles are flowers.

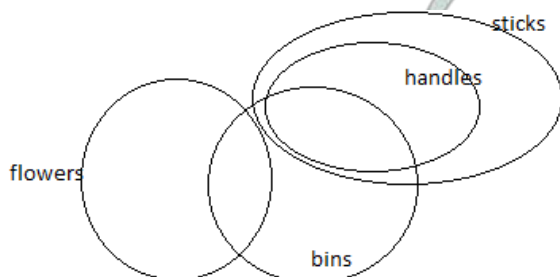
III: Some sticks are flowers.

- A Only II follows
- B Only III follows
- C Only I and II follow
- D Only I follow
- E None of these

Answer: D

Explanation:

one of the possibility generated due to above statements can be drawn in the form of following venn



as we can conclude from the above that only conclusion 1 is true.

Question 67

Statements :

Some towers are windows.

All windows are houses.

Some houses are temples.

Conclusions :

I : Some towers are temples.

II : Some houses are towers.

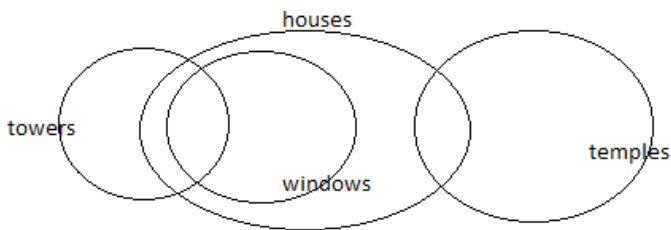
III : Some temples are windows.

- A Only I follows
- B Only II follows
- C Only III follows
- D Only I and II follow
- E None of these

Answer: B

Explanation:

Following venn can be drawn from the above statements



and hence we can say that only conclusion 2nd is true .

Question 68

Statements :

Some walls are doors.

Some doors are cots.

Some cots are chairs.

Conclusions :

I : Some chairs are doors.

II : Some cots are walls.

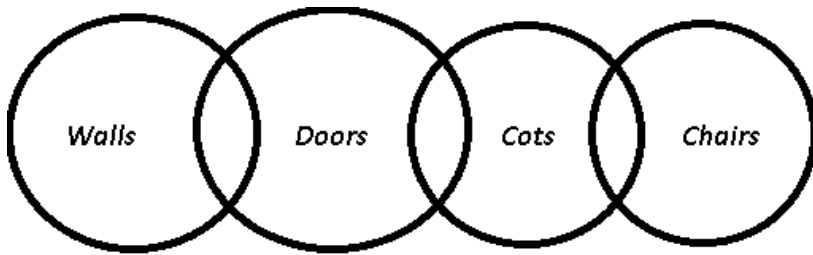
III : No chair is door.

- A Only II follows
- B Only III follows
- C Only either I or III follows
- D Only I follows
- E None of these

Answer: C

Explanation:

The venn diagram for above statements is :



Conclusions :

- I. Some chairs are doors = may or may not be true
- II. Some cots are walls = false
- III. No chair is door = may or may not be true

Thus, only either I or III follows

=> Ans - (C)

Question 69

Statements :

- All trees are gardens.
- All gardens are stones.
- All stones are fences.

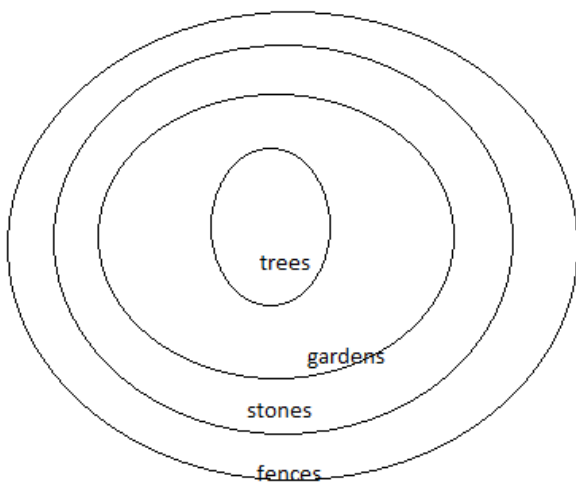
Conclusions

- I : Some fences are gardens.
- II : All gardens are fences.
- III : Some stones are trees.

- A Only I and II follow
- B Only I and III follow
- C Only II and III follow
- D All follow
- E None of these

Answer: D

Explanation:



following venn can be drawn from the above statements and hence we can see that all conclusions are true

Question 70

Statements :

All books are leaves.

Some leaves are jungles.

No jungle is box.

Conclusions :

I : Some jungles are books.

II : No book is box.

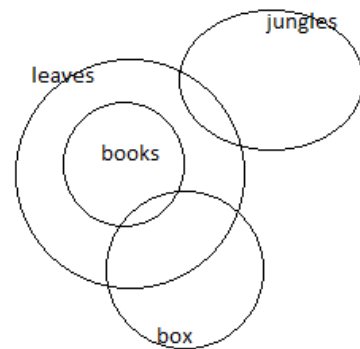
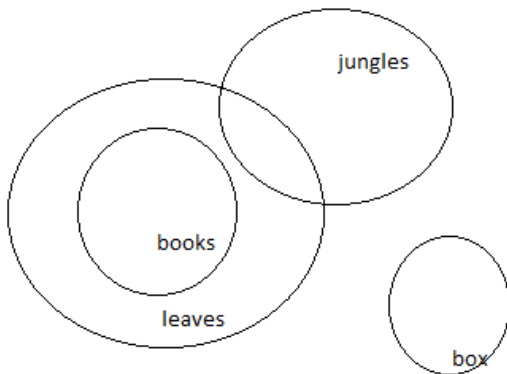
III : Some leaves are boxes.

- A None follows
- B Only I follows
- C Only II follows
- D Only III follows
- E either of II or III follow

Answer: A

Explanation:

following 2 possibilities can arise from the given statements



so we can say that no conclusion follows.

Instructions

Study the following information and answer the questions.

Seven people, namely, A, B, C, D, E, F and G have an appointment but not necessarily in the same order, on seven different months (of the same year) namely January, February, April, June, August, October and December. Each of them also likes a different activity namely Drawing, Singing, Painting, Boxing, Karate, Craft and Running but not necessarily in the same order. The one who likes Craft has an appointment on one of the months before April. Only two people have an appointment between the one who likes craft and the one who likes painting. Only one person has an appointment between the one who likes painting and the one who likes running. The one who likes running has an appointment in a month which has 31 days. Only three people have an appointment between the one who likes running and E. G has an appointment on one of the months before E. G does not have an appointment in the month which has the least number of days. Only three people have an appointment between G and C. Only one person has an appointment between C and the one who likes Karate. The one who likes Karate has an appointment before C. The one who likes singing has an appointment immediately before B. B has an appointment in a month which has less than 31 days. Only one person has an appointment between A and F. A has an appointment before F. Only one person has an appointment between F and the one who likes drawing.

Question 71

Who amongst the following has an appointment before the one who has an appointment in December ?

- A B

- B E
- C C
- D The one who likes Running
- E The one who likes Boxing

Answer: E

Explanation:

The one who likes Craft has an appointment on one of the months before April, => Let he has appointment in February.

Only two people have an appointment between the one who likes craft and the one who likes painting, => The one who likes painting has an appointment in August.

Only one person has an appointment between the one who likes painting and the one who likes running and the one who likes running has an appointment in a month which has 31 days, => The one who likes running has an appointment in December.

Only three people have an appointment between the one who likes running and E, => E has appointment in April.

G has an appointment on one of the months before E and G does not have an appointment in the month which has the least number of days, => G has appointment in January.

Only three people have an appointment between G and C, => C has appointment in August.

Only one person has an appointment between C and the one who likes Karate and the one who likes Karate has an appointment before C, => The one who likes Karate has an appointment in April.

The one who likes singing has an appointment immediately before B and B has an appointment in a month which has less than 31 days, => B has appointment in February and G likes Singing.

Only one person has an appointment between A and F and A has an appointment before F, => F has appointment in October.

Only one person has an appointment between F and the one who likes drawing, => The one who likes drawing has appointment in June.

Months	Person	Activity
January	G	Singing
February	B	Craft
April	E	Karate
June	A	Drawing
August	C	Painting
October	F	Boxing
December	D	Running

F, who likes boxing has an appointment before December.

=> Ans - (E)

Question 72

In which of the following pairs, both the persons have an appointment in months which have less than 31 days ?

- A A, F
- B F, D
- C B, F
- D E, D
- E B, E

Answer: E

Explanation:

The one who likes Craft has an appointment on one of the months before April, => Let he has appointment in February.

Only two people have an appointment between the one who likes craft and the one who likes painting, => The one who likes painting has an appointment in August.

Only one person has an appointment between the one who likes painting and the one who likes running and the one who likes running has an appointment in a month which has 31 days, => The one who likes running has an appointment in December.

Only three people have an appointment between the one who likes running and E, => E has appointment in April.

G has an appointment on one of the months before E and G does not have an appointment in the month which has the least number of days, => G has appointment in January.

Only three people have an appointment between G and C, => C has appointment in August.

Only one person has an appointment between C and the one who likes Karate and the one who likes Karate has an appointment before C, => The one who likes Karate has an appointment in April.

The one who likes singing has an appointment immediately before B and B has an appointment in a month which has less than 31 days, => B has appointment in February and G likes Singing.

Only one person has an appointment between A and F and A has an appointment before F, => F has appointment in October.

Only one person has an appointment between F and the one who likes drawing, => The one who likes drawing has appointment in June.

Months	Person	Activity
January	G	Singing
February	B	Craft
April	E	Karate
June	A	Drawing
August	C	Painting
October	F	Boxing
December	D	Running

B and E have appointments in months which have less than 31 days.

=> Ans - (E)

Question 73

Which of the following combinations is correct ?

- A G-Singing
- B A-Painting
- C F-Running
- D B-Karate
- E D-Painting

Answer: A

Explanation:

The one who likes Craft has an appointment on one of the months before April, => Let he has appointment in February.

Only two people have an appointment between the one who likes craft and the one who likes painting, => The one who likes painting has an appointment in August.

Only one person has an appointment between the one who likes painting and the one who likes running and the one who likes running has an appointment in a month which has 31 days, => The one who likes running has an appointment in December.

Only three people have an appointment between the one who likes running and E, => E has appointment in April.

G has an appointment on one of the months before E and G does not have an appointment in the month which has the least number of days, => G has appointment in January.

Only three people have an appointment between G and C, => C has appointment in August.

Only one person has an appointment between C and the one who likes Karate and the one who likes Karate has an appointment before

C, => The one who likes Karate has an appointment in April.

The one who likes singing has an appointment immediately before B and B has an appointment in a month which has less than 31 days, => B has appointment in February and G likes Singing.

Only one person has an appointment between A and F and A has an appointment before F, => F has appointment in October.

Only one person has an appointment between F and the one who likes drawing, => The one who likes drawing has appointment in June.

Months	Person	Activity
January	G	Singing
February	B	Craft
April	E	Karate
June	A	Drawing
August	C	Painting
October	F	Boxing
December	D	Running

The only true statement is that G likes singing.

=> Ans - (A)

Question 74

As per the given arrangement Craft is related to April and Karate is related to June following a certain pattern, which of the following is Drawing related to following the same pattern ?

A February

B October

C December

D August

E January

Answer: D

Explanation:

The one who likes Craft has an appointment on one of the months before April, => Let he has appointment in February.

Only two people have an appointment between the one who likes craft and the one who likes painting, => The one who likes painting has an appointment in August.

Only one person has an appointment between the one who likes painting and the one who likes running and the one who likes running has an appointment in a month which has 31 days, => The one who likes running has an appointment in December.

Only three people have an appointment between the one who likes running and E, => E has appointment in April.

G has an appointment on one of the months before E and G does not have an appointment in the month which has the least number of days, => G has appointment in January.

Only three people have an appointment between G and C, => C has appointment in August.

Only one person has an appointment between C and the one who likes Karate and the one who likes Karate has an appointment before C, => The one who likes Karate has an appointment in April.

The one who likes singing has an appointment immediately before B and B has an appointment in a month which has less than 31 days, => B has appointment in February and G likes Singing.

Only one person has an appointment between A and F and A has an appointment before F, => F has appointment in October.

Only one person has an appointment between F and the one who likes drawing, => The one who likes drawing has appointment in June.

Months	Person	Activity
January	G	Singing
February	B	Craft
April	E	Karate
June	A	Drawing
August	C	Painting
October	F	Boxing
December	D	Running

Craft is related to April, => The person who likes craft has appointment immediately before April.

Karate is related to June, => The person who likes Karate has appointment immediately before June.

Similarly, the one who likes Drawing has appointment immediately before August, => Drawing is related to August.

=> Ans - (D)

Question 75

Who amongst the following likes Running ?

- A F
- B D
- C A
- D B
- E Other than those given as options

Answer: B

Explanation:

The one who likes Craft has an appointment on one of the months before April, => Let he has appointment in February.

Only two people have an appointment between the one who likes craft and the one who likes painting, => The one who likes painting has an appointment in August.

Only one person has an appointment between the one who likes painting and the one who likes running and the one who likes running has an appointment in a month which has 31 days, => The one who likes running has an appointment in December.

Only three people have an appointment between the one who likes running and E, => E has appointment in April.

G has an appointment on one of the months before E and G does not have an appointment in the month which has the least number of days, => G has appointment in January.

Only three people have an appointment between G and C, => C has appointment in August.

Only one person has an appointment between C and the one who likes Karate and the one who likes Karate has an appointment before C, => The one who likes Karate has an appointment in April.

The one who likes singing has an appointment immediately before B and B has an appointment in a month which has less than 31 days, => B has appointment in February and G likes Singing.

Only one person has an appointment between A and F and A has an appointment before F, => F has appointment in October.

Only one person has an appointment between F and the one who likes drawing, => The one who likes drawing has appointment in June.

Months	Person	Activity
January	G	Singing
February	B	Craft
April	E	Karate
June	A	Drawing
August	C	Painting
October	F	Boxing
December	D	Running

D likes running.

=> Ans - (B)

Instructions

Read the information carefully and answer the following questions:

If A + B means A is the father of B

If A x B means A is the sister of B

If A \$ B means A is the wife of B

If A % B means A is the mother of B

If A ÷ B means A is the son of B

Question 76

What should come in place of the question mark, to establish that J is the brother of T in the expression?

$J \div P \% H ? T \% L$

A x

B ÷

C \$

D Either ÷ or x

E Either + or ÷

Answer: A

Explanation:

In the expression, $J \div P \% H ? T \% L$

J is son of P and P is mother of H, => J is brother of H

Now, for J to be brother of T, T must be a sibling of H.

The only option available is 'x'

After that, H is sister of T, and hence J is brother of T

Ans - (A)

Question 77

Which among the given expression indicate that M is the daughter of D?

A $L \% R \$ D + T x M$

B $L + R \$ D + M x T$

C $L \% R \% D + T \div M$

D $D + L \$ R + M x T$

E $L \$ D \div R \% M \div T$

Answer: B

Explanation:

(A) : $L \% R \$ D + T \times M = L$ is the mother of R, who is wife of D. D is father of T, who is sister of M.

=> Gender of M is not known. M can be son/daughter of D.

(B) : $L + R \$ D + M \times T = L$ is father of R, who is wife of D. D is father of M, who is sister of T.

=> M is female and hence daughter of D.

(C) $L \% R \% D + T \div M = L$ is mother of R, who is mother of D. D is father of T and T is son of M

=> M is wife of D

(D) $D + L \$ R + M \times T = D$ is father of L, who is wife of R. R is father of M, who is sister of T.

=> M is granddaughter of D

(E) $L \$ D \div R \% M \div T = L$ is wife of D, who is son of R. R is mother of M, who is son of T.

=> M is brother of D

Thus, Ans - (B)

Question 78

Which among the following options is true if the expression ' $I + T \% J \times L \div K$ ' definitely true?

A L is the daughter of T

B K is the son-in-law of I

C I is the grandmother of L

D T is the father of J

E J is the brother of L

Answer: B

Explanation:

$I + T \% J \times L \div K$ implies I is the father of T and T is the mother of J and J is the sister of L and L is the son of K.

1) L is the son of K. So, L is male. So, (a) is incorrect

3) I is the father of T. So, I is male. So, (c) is incorrect.

4) T is the mother of J. So, T is female. So, (d) is incorrect

5) J is the sister of L. So, J is female. So, (e) is incorrect.

The correct answer is (b)

Instructions

Read the following information and answer the given questions.

Point J is 20m to the north of Point G. Point G is 10m to the west of Point K. Point K is 15m to the south of Point L. Ashish is standing at Point T which is 30m to the east of Point L. He starts walking towards south and walks for 35m. He takes a right turn and stops at Point M after walking for 40m.

Question 79

How far and in which direction is Point G with respect to Point M ?

A 15m towards South

B 15m towards West

C 20m towards South

D 15m towards North

E 20m towards North

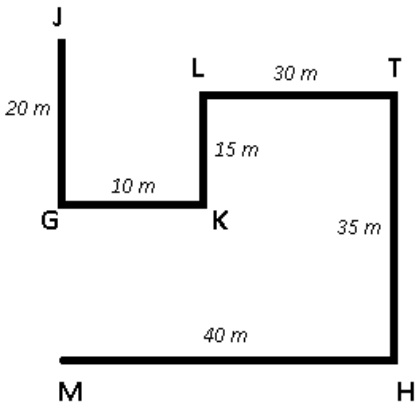
Answer: E

Explanation:

Point J is 20m to the north of Point G and Point G is 10m to the west of Point K. Also, point K is 15m to the south of Point L.

Ashish is standing at Point T which is 30m to the east of Point L.

He starts walking towards south and walks for 35m and stops at point H. Finally, he takes a right turn and stops at Point M after walking for 40m.



Point G is in north direction with respect to point M, distance $MG = 35 - 15 = 20$ m

=> Ans - (E)

Question 80

If Ashish walks for 10m towards north from his final position to reach Point D, how much distance will he have to cover in order to reach Point J ?

- A 10 m
- B 35 m
- C 25 m
- D 20m
- E 30m

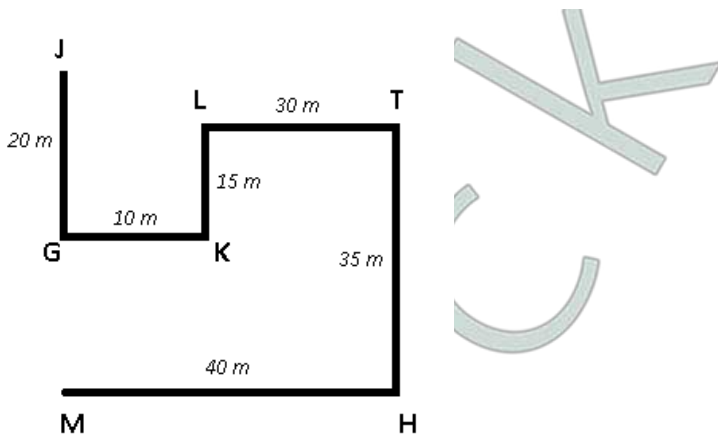
Answer: E

Explanation:

Point J is 20m to the north of Point G and Point G is 10m to the west of Point K. Also, point K is 15m to the south of Point L.

Ashish is standing at Point T which is 30m to the east of Point L.

He starts walking towards south and walks for 35m and stops at point H. Finally, he takes a right turn and stops at Point M after walking for 40m.



Distance between point M and J = $20 + (35 - 15) = 40$ m

If Ashish walks for 10 m from M and reach D, distance DJ = $40 - 10 = 30$ m

=> Ans - (E)