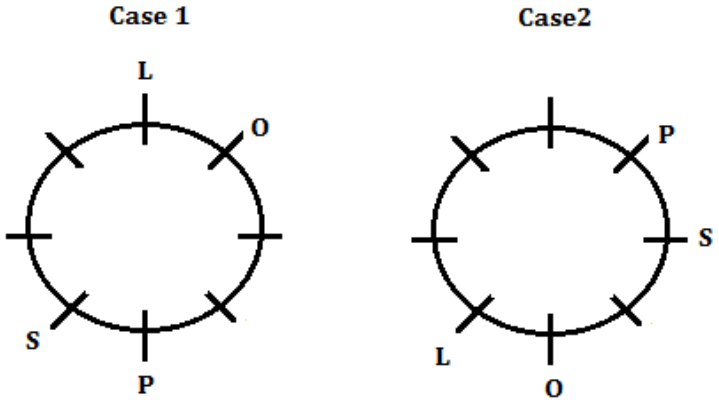
All India Mock: IBPS RRB PO Prelims 12th June 2021 - Solutions

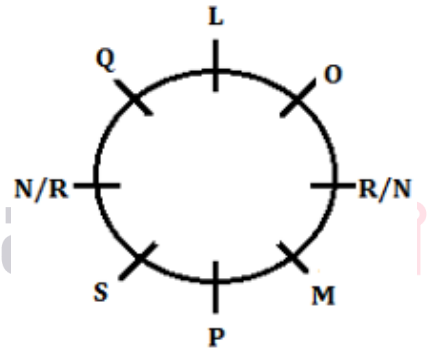
S1. Ans.(e)

Sol. From the given statements, there are two persons sit between P and O (either left or right). Here we get two possibilities i.e. Case 1 and Case 2. S sits 3rd to the right of L. Both O and L are immediate neighbors. Both P and S are immediate neighbors.



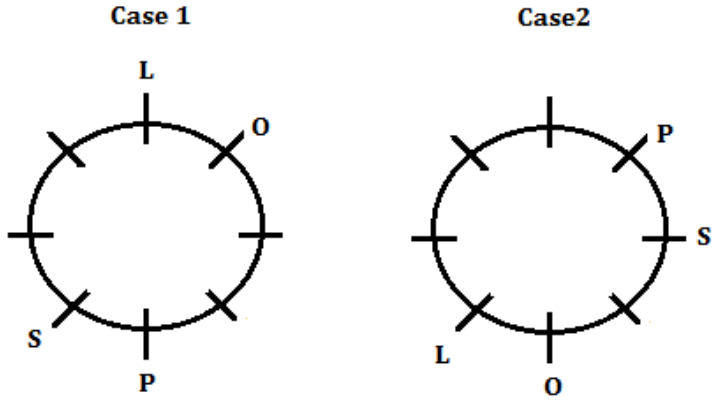
From the given statements, M sits 2nd to the right of S and faces to Q. Here Case 2 is ruled out now. Both N and R, are facing to each other.

So, the final arrangement-

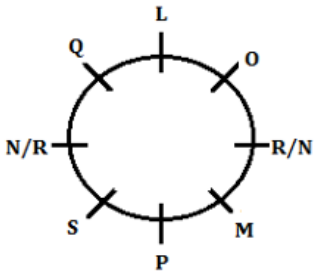


S2. Ans.(a)

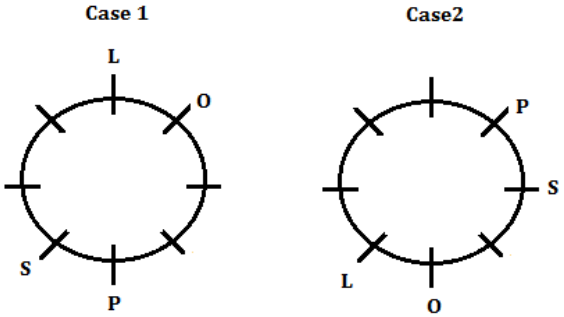
Sol. From the given statements, there are two persons sit between P and O (either left or right). Here we get two possibilities i.e. Case 1 and Case 2. S sits 3rd to the right of L. Both O and L are immediate neighbors. Both P and S are immediate neighbors.



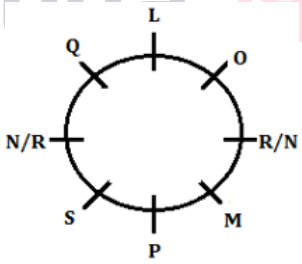
From the given statements, M sits 2nd to the right of S and faces to Q. Here Case 2 is ruled out now. Both N and R, are facing to each other.
So, the final arrangement-



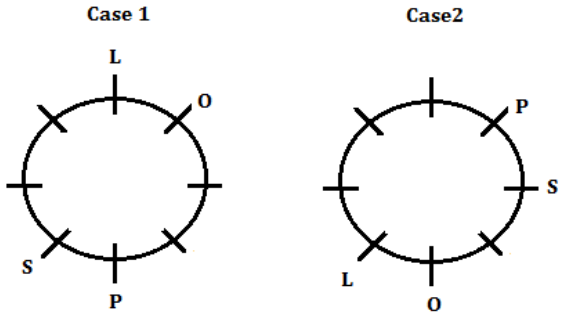
S3. Ans.(c)
Sol. From the given statements, there are two persons sit between P and O (either left or right). Here we get two possibilities i.e. Case 1 and Case 2. S sits 3rd to the right of L. Both O and L are immediate neighbors. Both P and S are immediate neighbors.



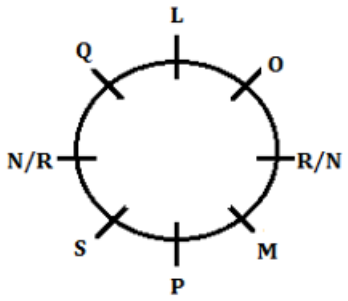
From the given statements, M sits 2nd to the right of S and faces to Q. Here Case 2 is ruled out now. Both N and R, are facing to each other.
So, the final arrangement-



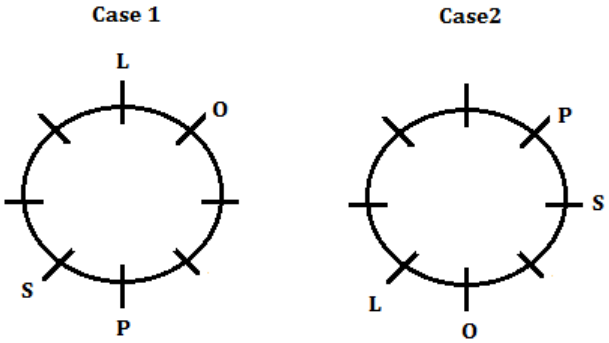
S4. Ans.(b)
Sol. From the given statements, there are two persons sit between P and O (either left or right). Here we get two possibilities i.e. Case 1 and Case 2. S sits 3rd to the right of L. Both O and L are immediate neighbors. Both P and S are immediate neighbors.



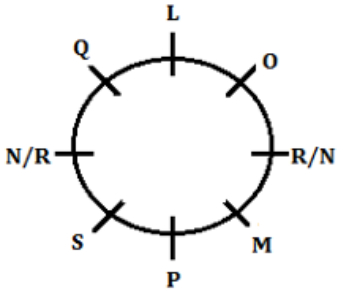
From the given statements, M sits 2nd to the right of S and faces to Q. Here Case 2 is ruled out now. Both N and R, are facing to each other.
So, the final arrangement-



S5. Ans.(e)
Sol. From the given statements, there are two persons sit between P and O (either left or right). Here we get two possibilities i.e. Case 1 and Case 2. S sits 3rd to the right of L. Both O and L are immediate neighbors. Both P and S are immediate neighbors.



From the given statements, M sits 2nd to the right of S and faces to Q. Here Case 2 is ruled out now. Both N and R, are facing to each other.
So, the final arrangement-



S6. Ans.(c)
Sol. Two – R%3, F#5

S7. Ans.(e)
Sol. T

S8. Ans.(a)

S9. Ans.(b)
Sol. J

S10. Ans.(d)

S11. Ans.(b)
Sol. From the given statements, On Thursday Sneak a peek is playing. One game plays between Dumb *charades and* Sneak a Peek. Here we get 2 possibilities i.e. Case 1 and Case 2. What's My Name is playing on Friday. Only one day gap between when Cook-Off and Scavenger Hunt is playing. Cook-Off is playing before Scavenger Hunt.

Days	Case 1	Case 2
	Fun activity	Fun activity
Monday	Cook-Off	Cook-Off
Tuesday		Dumb charades
Wednesday	Scavenger Hunt	Scavenger Hunt
Thursday	Sneak a Peek	Sneak a Peek
Friday	What's My Name	What's My Name
Saturday	Dumb charades	

From the given statements, more than Two days gap between when Cook-Off and Office Trivia are playing. Here Case 1 is ruled out now.
So, the final arrangement is such as-

Days	Fun activity
Monday	Cook-Off
Tuesday	Dumb charades
Wednesday	Scavenger Hunt
Thursday	Sneak a Peek
Friday	What's My Name
Saturday	Office Trivia

S12. Ans.(b)

Sol. From the given statements, On Thursday Sneak a peek is playing. One game plays between Dumb *charades and* Sneak a Peek. Here we get 2 possibilities i.e. Case 1 and Case 2. What's My Name is playing on Friday. Only one day gap between when Cook-Off and Scavenger Hunt is playing. Cook-Off is playing before Scavenger Hunt.

Days	**Case 1**	**Case 2**
	Fun activity	**Fun activity**
Monday	Cook-Off	Cook-Off
Tuesday		Dumb charades
Wednesday	Scavenger Hunt	Scavenger Hunt
Thursday	Sneak a Peek	Sneak a Peek
Friday	What's My Name	What's My Name
Saturday	Dumb charades	

From the given statements, more than Two days gap between when Cook-Off and Office Trivia are playing. Here Case 1 is ruled out now.

So, the final arrangement is such as-

Days	**Fun activity**
Monday	Cook-Off
Tuesday	Dumb charades
Wednesday	Scavenger Hunt
Thursday	Sneak a Peek
Friday	What's My Name
Saturday	Office Trivia

S13. Ans.(c)

Sol. From the given statements, On Thursday Sneak a peek is playing. One game plays between Dumb *charades and* Sneak a Peek. Here we get 2 possibilities i.e. Case 1 and Case 2. What's My Name is playing on Friday. Only one day gap between when Cook-Off and Scavenger Hunt is playing. Cook-Off is playing before Scavenger Hunt.

Days	Case 1	Case 2
	Fun activity	Fun activity
Monday	Cook-Off	Cook-Off
Tuesday		Dumb charades
Wednesday	Scavenger Hunt	Scavenger Hunt
Thursday	Sneak a Peek	Sneak a Peek
Friday	What's My Name	What's My Name
Saturday	Dumb charades	

From the given statements, more than Two days gap between when Cook-Off and Office Trivia are playing. Here Case 1 is ruled out now.
So, the final arrangement is such as-

Days	Fun activity
Monday	Cook-Off
Tuesday	Dumb charades
Wednesday	Scavenger Hunt
Thursday	Sneak a Peek
Friday	What's My Name
Saturday	Office Trivia

S14. Ans.(e)
Sol. From the given statements, On Thursday Sneak a peek is playing. One game plays between Dumb *charades and* Sneak a Peek. Here we get 2 possibilities i.e. Case 1 and Case 2. What's My Name is playing on Friday. Only one day gap between when Cook-Off and Scavenger Hunt is playing. Cook-Off is playing before Scavenger Hunt.

Days	Case 1	Case 2
	Fun activity	Fun activity
Monday	Cook-Off	Cook-Off
Tuesday		Dumb charades
Wednesday	Scavenger Hunt	Scavenger Hunt
Thursday	Sneak a Peek	Sneak a Peek
Friday	What's My Name	What's My Name
Saturday	Dumb charades	

From the given statements, more than Two days gap between when Cook-Off and Office Trivia are playing. Here Case 1 is ruled out now.
So, the final arrangement is such as-

Days	Fun activity
Monday	Cook-Off
Tuesday	Dumb charades
Wednesday	Scavenger Hunt
Thursday	Sneak a Peek
Friday	What's My Name
Saturday	Office Trivia

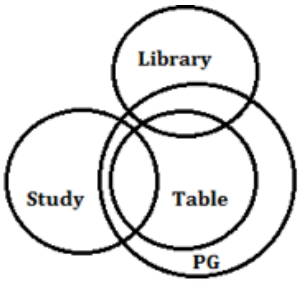
S15. Ans.(c)
Sol. From the given statements, On Thursday Sneak a peek is playing. One game plays between Dumb *charades and* Sneak a Peek. Here we get 2 possibilities i.e. Case 1 and Case 2. What's My Name is playing on Friday. Only one day gap between when Cook-Off and Scavenger Hunt is playing. Cook-Off is playing before Scavenger Hunt.

Days	Case 1	Case 2
	Fun activity	Fun activity
Monday	Cook-Off	Cook-Off
Tuesday		Dumb charades
Wednesday	Scavenger Hunt	Scavenger Hunt
Thursday	Sneak a Peek	Sneak a Peek
Friday	What's My Name	What's My Name
Saturday	Dumb charades	

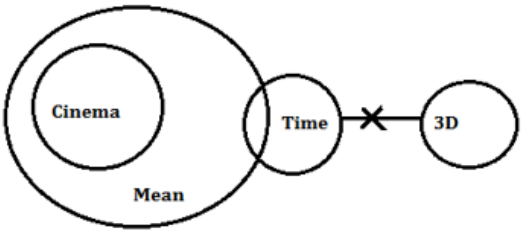
From the given statements, more than Two days gap between when Cook-Off and Office Trivia are playing. Here Case 1 is ruled out now.
So, the final arrangement is such as-

Days	Fun activity
Monday	Cook-Off
Tuesday	Dumb charades
Wednesday	Scavenger Hunt
Thursday	Sneak a Peek
Friday	What's My Name
Saturday	Office Trivia

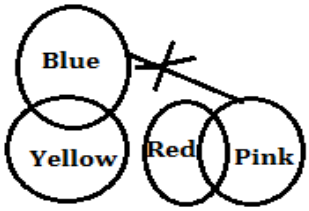
S16. Ans.(b)
Sol.



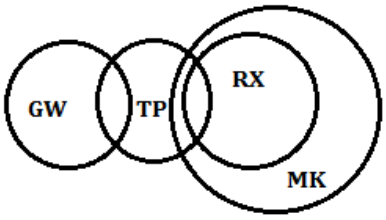
S17. Ans.(e)
Sol.



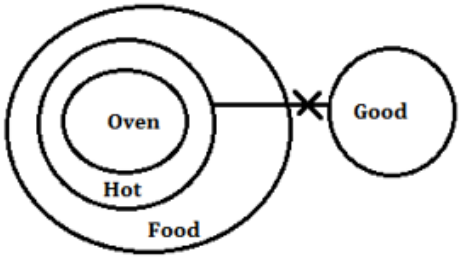
S18. Ans.(e)
Sol.



S19. Ans.(a)
Sol.



S20. Ans.(b)
Sol.



S21. Ans.(d)

Sol.

I. P > T (false)
II. Q < T(false)

S22. Ans.(b)

Sol.

I. N ≥ T (false)
II. R < O(true)

S23. Ans.(b)

Sol.

I. D > G (false)
II. E < H (true)

S24. Ans.(c)

Sol.

I. O≥ T (false)
II. N < T (false)

S25. Ans.(a)

Sol.

I. Z > D (true)
II. V < F (false)

S26. Ans.(b)

Sol. There are four floors gap between Q and R. M lives on the 4th floor. There are two persons live between M and O.

	CASE 1	CASE 2
FLOORS	**PERSONS**	**PERSONS**
7	Q/R	O
6		Q/R
5		
4	M	M
3		
2	R/Q	
1	O	R/Q

S lives just above M. There is one floor gap between S and Q. hence case 2 gets cancelled. N lives on one of the floor above P. Hence final arrangement will be,

FLOORS	PERSONS
7	Q
6	N
5	S
4	M
3	P
2	R
1	O

S27. Ans.(c)

Sol. There are four floors gap between Q and R. M lives on the 4th floor. There are two persons live between M and O.

	CASE 1	CASE 2
FLOORS	PERSONS	PERSONS
7	Q/R	O
6		Q/R
5		
4	M	M
3		
2	R/Q	
1	O	R/Q

S lives just above M. There is one floor gap between S and Q. hence case 2 gets cancelled. N lives on one of the floor above P. Hence final arrangement will be,

FLOORS	PERSONS
7	Q
6	N
5	S
4	M
3	P
2	R
1	O

S28. Ans.(e)

Sol. There are four floors gap between Q and R. M lives on the 4th floor. There are two persons live between M and O.

	CASE 1	CASE 2
FLOORS	**PERSONS**	**PERSONS**
7	Q/R	O
6		Q/R
5		
4	M	M
3		
2	R/Q	
1	O	R/Q

S lives just above M. There is one floor gap between S and Q. hence case 2 gets cancelled. N lives on one of the floor above P. Hence final arrangement will be,

FLOORS	PERSONS
7	Q
6	N
5	S
4	M
3	P
2	R
1	O

S29. Ans.(a)

Sol. There are four floors gap between Q and R. M lives on the 4th floor. There are two persons live between M and O.

	CASE 1	CASE 2
FLOORS	**PERSONS**	**PERSONS**
7	Q/R	O
6		Q/R
5		
4	M	M
3		
2	R/Q	
1	O	R/Q

S lives just above M. There is one floor gap between S and Q. hence case 2 gets cancelled. N lives on one of the floor above P. Hence final arrangement will be,

FLOORS	PERSONS
7	Q
6	N
5	S
4	M
3	P
2	R
1	O

S30. Ans.(c)

Sol. There are four floors gap between Q and R. M lives on the 4th floor. There are two persons live between M and O.

	CASE 1	CASE 2
FLOORS	PERSONS	PERSONS
7	Q/R	O
6		Q/R
5		
4	M	M
3		
2	R/Q	
1	O	R/Q

S lives just above M. There is one floor gap between S and Q. hence case 2 gets cancelled. N lives on one of the floor above P. Hence final arrangement will be,

FLOORS	PERSONS
7	Q
6	N
5	S
4	M
3	P
2	R
1	O

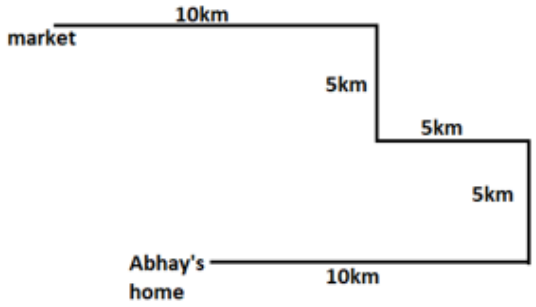
S31. Ans.(a)

Sol. MEAT, TEAM, MATE, META, TAME

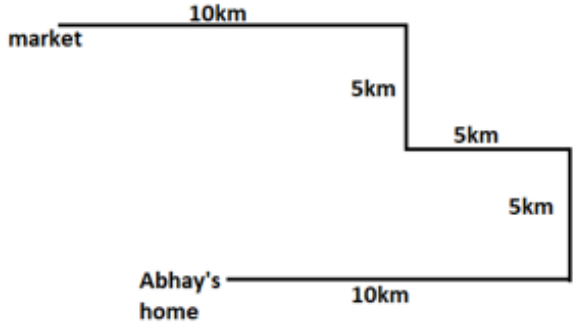
S32. Ans.(b)
Sol.

CLASSMATE

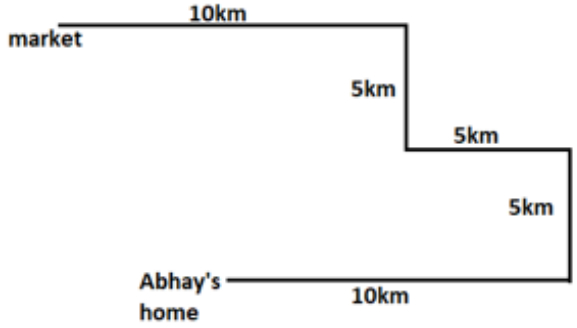
S33. Ans.(b)
Sol.

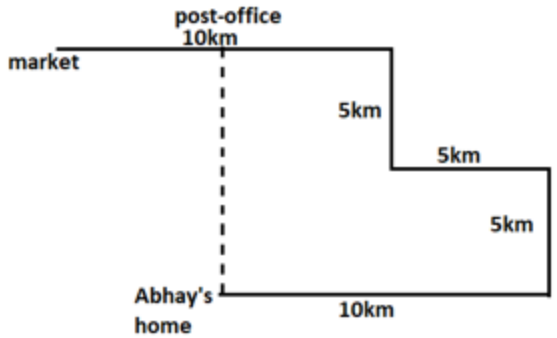


S34. Ans.(e)
Sol.



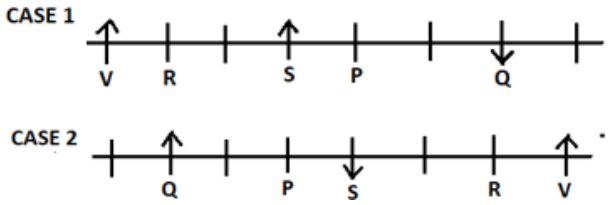
S35. Ans.(b)
Sol.



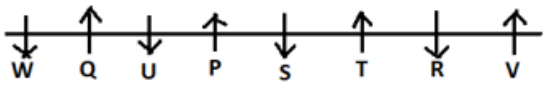


S36. Ans.(c)

Sol. V faces to north and sits at one of the extreme ends. There are two persons sit between S and V. Q sits 3rd to the right of S. S is the immediate neighbor of P, who sits 2nd to the right of Q. R is neither an immediate neighbor of Q nor S.

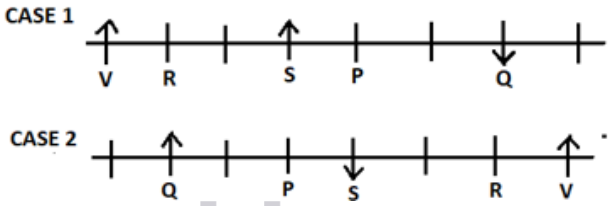


U sits 4th to the right of R. T does not sit at extreme ends. No two person sitting adjacent to each other faces the same direction. Hence CASE 1 gets cancelled. Final arrangement will be,

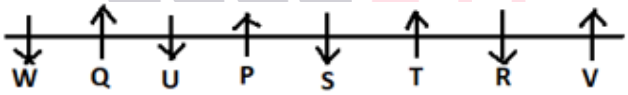


S37. Ans.(d)

Sol. V faces to north and sits at one of the extreme ends. There are two persons sit between S and V. Q sits 3rd to the right of S. S is the immediate neighbor of P, who sits 2nd to the right of Q. R is neither an immediate neighbor of Q nor S.

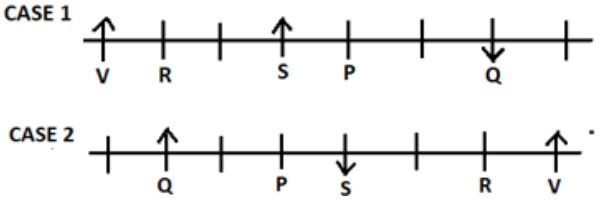


U sits 4th to the right of R. T does not sit at extreme ends. No two person sitting adjacent to each other faces the same direction. Hence CASE 1 gets cancelled. Final arrangement will be,

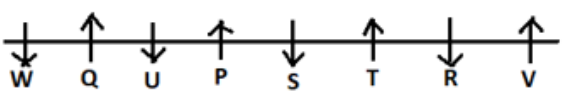


S38. Ans.(b)

Sol. V faces to north and sits at one of the extreme ends. There are two persons sit between S and V. Q sits 3rd to the right of S. S is the immediate neighbor of P, who sits 2nd to the right of Q. R is neither an immediate neighbor of Q nor S.

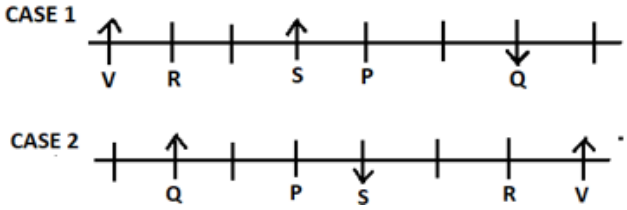


U sits 4th to the right of R. T does not sit at extreme ends. No two person sitting adjacent to each other faces the same direction. Hence CASE 1 gets cancelled. Final arrangement will be,

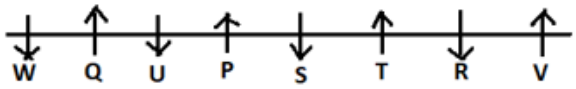


S39. Ans.(d)

Sol. V faces to north and sits at one of the extreme ends. There are two persons sit between S and V. Q sits 3rd to the right of S. S is the immediate neighbor of P, who sits 2nd to the right of Q. R is neither an immediate neighbor of Q nor S.

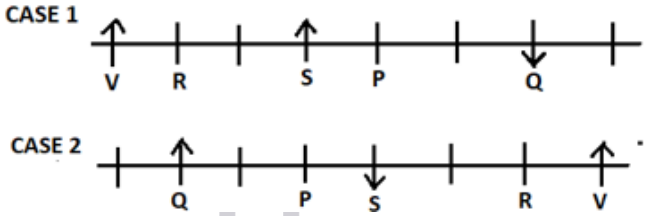


U sits 4th to the right of R. T does not sit at extreme ends. No two person sitting adjacent to each other faces the same direction. Hence CASE 1 gets cancelled. Final arrangement will be,

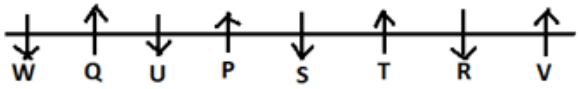


S40. Ans.(e)

Sol. V faces to north and sits at one of the extreme ends. There are two persons sit between S and V. Q sits 3rd to the right of S. S is the immediate neighbor of P, who sits 2nd to the right of Q. R is neither an immediate neighbor of Q nor S.



U sits 4th to the right of R. T does not sit at extreme ends. No two person sitting adjacent to each other faces the same direction. Hence CASE 1 gets cancelled. Final arrangement will be,



S41. Ans.(b)

Sol.

Total male voters from A = $128 \times \frac{25}{4} = 800$

Total female voters from A = $1528 - (128 + 800) = 600$

Total male voters from D = $180 \times \frac{50}{9} = 1000$

Required percentage = $\frac{600}{1000} \times 100 = 60\%$

S42. Ans.(d)

Sol.

Total male voters from B = $64 \times \frac{75}{8} = 600$

Total male voters from C = $144 \times \frac{50}{6} = 1200$

Required difference = $1200 - 600 = 600$

S43. Ans.(a)
Sol.

Total male voters from D = $180 \times \frac{50}{9} = 1000$

Total female voters from D = $1000 \times \frac{52}{100} = 520$

Total male voters from B = $64 \times \frac{75}{8} = 600$

Required ratio = $\frac{520}{600} = 13 : 15$

S44. Ans.(c)
Sol.

Total female voters from A = $128 \times \frac{25}{4} \times \frac{60}{100} = 480$

Total female voters from C = $144 \times \frac{50}{6} \times \frac{70}{100} = 840$

Required average = $\frac{480 + 840}{2} = 660$

S45. Ans.(d)
Sol.

Total male voters from A = $128 \times \frac{25}{4} = 800$

Total male voters from C = $144 \times \frac{50}{6} = 1200$

Required percentage = $\frac{1200 - 800}{800} \times 100$

= 50%

S46. Ans.(a)
Sol.

Let breadth of rectangle be 'x' cm

So, length of rectangle will be '(x + 6)' cm

And side of square will be $\frac{(7x+42)}{4}$ cm

ATQ -

4 (2x + 6) = (7x + 42)

x = 18 cm

Length = 24 cm

So, side of square = $24 \times \frac{7}{4} = 42\ cm$

Area of square = $42 \times 42 = 1764\ cm^2$

S47. Ans.(b)
Sol.

ATQ –

$\frac{1200 \times (R + 5) \times 2}{1600 \times R \times 3} = \frac{3}{4}$

R = 10%

(R + 5)% = 10 + 5 = 15%

S48. Ans.(d)

Sol.

Let investment of Veer be 'x' Rs,

So, investment of Ayush will be $(16000 - x)$ Rs.

ATQ –

$\frac{(16000-x)\times 8}{(16000-x)\times 8+x\times 12} = \frac{10}{19}$

x = 6000 Rs.

Investment of Ayush = 10000 Rs.

S49. Ans.(b)

Sol.

Let salary of Ayush = 50a

So, Salary of Veer = $50a \times \frac{6}{5} = 60a$

And, salary of Aniket = $50a \times 1.4 = 70a$

30% of salary of Veer = $60a \times \frac{30}{100} = 18a$

$28\frac{4}{7}$% of salary of Aniket = $70a \times \frac{2}{7} = 20a$

Required percentage = $\frac{20a - 18a}{20a} \times 100 = 10\%$

S50. Ans.(a)

Sol.

Let efficiency of Anurag be 5a units/day

So, efficiency of Veer = $5a \times \frac{120}{100} = 6a\ unit/day$

Efficiency of Sameer = $6a \times \frac{2}{3} = 4a\ units/day$

Total work = $(6a + 5a + 4a) \times 32 = 480a\ units$

Veer & Sameer together = $\frac{480a}{(6a+4a)}$ = 48 day

S51. Ans.(e)

Sol.

From I –

Reasoning + English = $26 \times 2 = 52$

From II –

Quant + Reasoning = $30 \times 2 = 60$

From I & II together we can't get the answer the questions.

S52. Ans.(c)

Sol.

From I –

Speed of bus P & Q is 75km/h and 90km/hr respectively

From I & II –

Total distance between A & B = $165 \times \frac{8}{5} = 264\ km$

Time taken by bus P to cover total distance from point A & B

$= \frac{264}{75} = 3\frac{13}{25}\ hours$

So, From I & II together we can get the answer the questions.

S53. Ans.(d)

Sol.

From I –

$2\pi r + 2r = 29 \times 4$

r = 14 cm

We can find the area of circle from I.

From II –

$2\pi r - 2r = 15 \times 4$

r = 14 cm

We can find the area of circle from II.

So, either statement **(I)** or statement **(II)** by itself is sufficient to answer the question.

S54. Ans.(a)

Sol.

Let cost price = x

Marked price = $\frac{100x}{70} = \frac{10x}{7}$

Discount % = d%

From I –

SP of jeans = 2400 Rs.

$x = 2400 - 300 = 2100\ Rs.$

$MP = 10 \times \frac{2100}{7} = 3000\ Rs.$

$Discount = 3000 - 2400 = 600\ Rs.$

$d\% = 600 \times \frac{100}{3000} = 20\%$

From II –

Given, x = 2100 Rs.

$MP = 10 \times \frac{2100}{7} = 3000\ Rs.$

So, Statement **(I)** alone is sufficient to answer the question but statement **(II)** alone is not sufficient to answer the questions.

S55. Ans.(c)

Sol.

Let speed of boat X & Y in still water be 'x' & 'y' respectively and speed of stream be 's'.

Downstream speed of boat X = x + s

Downstream speed of boat Y = y + s

$x - s = \frac{x}{2}$

$s = \frac{x}{2}$

From I –

x + y = 100

$x = 100 - y$

From II –

$40 = 2(y + s) - 2(x + s)$

$x = y - 20$

$100 - y = y - 20$

$y = 60\ km/hr$

$x = 60 - 20 = 40\ km/hr$

$s = \frac{40}{2} = 20\frac{km}{hr}$

Upstream speed of Y $= 60 - 20 = 40\frac{km}{hr}$

So, From I & II together we can get the answer the questions.

S56. Ans.(d)

Sol.

$\frac{144}{\sqrt[4]{?}} + \frac{24}{100} \times 125 = 64 - 10$

$\frac{144}{\sqrt[4]{?}} + 30 = 54$

$\sqrt[4]{?} = 6$

$? = 1296$

S57. Ans.(a)

Sol.

$\frac{?}{100} \times 250 + 64 = 216 - 2$

$2.5 \times ? = 150$

$? = 60$

S58. Ans.(c)

Sol.

$28 \times ? + \frac{13}{100} \times 2000 = 484$

$28 \times ? = 484 - 260$

$28 \times ? = 224$

$? = 8$

S59. Ans.(b)

Sol.

$648 + ?^4 = 961 - \frac{19}{100} \times 300$

$648 + ?^4 = 904$

$?^4 = 256$

$? = 4$

S60. Ans.(a)

Sol.

$\frac{32}{100} \times ? + 324 = \frac{76}{100} \times 500$

$\frac{32}{100} \times ? = 380 - 324$

$\frac{32}{100} \times ? = 56$

$? = 175$

S61. Ans.(c)

Sol.

Unsold bikes of company-C in 2017 & 2018 together = [(2500–2000) + (4000–3600)]

= 500 + 400

= 900

Unsold bikes of company – E in 2017 & 2018 together = [(3000–2500) + (4000–3000)]

= 500 + 1000

= 1500

Required% = $\frac{1500-900}{1500} \times 100$

= $\frac{600}{15}$%

= 40%

S62. Ans.(a)

Sol.

Sold bikes of company– B & E together in 2017 = 3500 + 2500 = 6000

Sold bikes of company – A & D together in 2018 = 6500 + 4700

= 11200

Required ratio = $\frac{6000}{11200}$

= 15 : 28

S63. Ans.(e)

Sol.

Unsold bikes of company – A & E together in 2018= [(8000–6500) + (4000–3000)]

= 1500 + 1000

= 2500

Required % = $\frac{2500}{(6000+4000)} \times 100$

= $\frac{2500}{10000} \times 100$

= 25%

S64. Ans.(d)

Sol.

Average number of unsold bikes of company – A, C & E in 2017

= $\frac{1}{3}$[(5000–4200) + (2500–2000) + (3000–2500)]

= $\frac{1}{3}$ [800 + 500 + 500]

= 600

Average number of sold bikes of company – B, C & E in 2018

= $\frac{1}{3}$ [4800 + 3600 + 3000] = 3800

Required difference = 3800 – 600 = 3200

S65. Ans.(b)

Sol.

Required % = $\frac{4800+3000}{5000+7000} \times 100$

= $\frac{7800}{12000} \times 100$

= 65%

S66. Ans.(b)

Sol.

Let additional quantity of milk & water added in vessel 'Q' be 2q & 3q respectively

Total milk in vessel 'Q' = $36 \times \frac{7}{9} + 2q$ = (28 + 2q) liters

Total water in vessel 'Q' = $36 \times \frac{2}{9} + 3q = (8 + 2q)\ liters$

ATQ –

$\frac{(28+2q)}{(8+3q)} = \frac{20}{13}$

364 + 26q = 160 + 60q

34q = 204

q = 6 liters

additional milk added = $2 \times 6 = 12\ liters$

S67. Ans.(c)

Sol.

Let four years ago age of Neeraj = 2a

So, age of Veer = a + 6

ATQ –

(2a + 12) + (a + 18) = 84

3a = 54

a = 18 years

Age of Veer = (18 + 10) = 28 years

Age of Neeraj = $2 \times 18 + 4 = 40\ years$

Required ratio = 28 : 40 = 7 : 10

S68. Ans.(c)

Sol.

$\frac{30a}{100} = 720 \times \frac{40}{100}$

a = 960

$\frac{15b}{100} = 1080 \times \frac{25}{100}$

b = 1800

$(960 + 1800) \times \frac{40}{100} = \frac{4c}{5}$

c = 1380

20% of (a + c − b) = $(960 + 1380 - 1800) \times \frac{20}{100} = 108$

S69. Ans.(b)

Sol.

Let length of train be 'L' meters

ATQ –

$(144 + 18) \times \frac{5}{18} = \frac{L}{8}$

L = 360 meters

Length of platform = $360 + 360 \times \frac{2}{3} = 600\ meters$

Let train takes 't' sec to cross the platform

$144 \times \frac{5}{18} = \frac{360+600}{t}$

40 t = 960

t = 24 sec

S70. Ans.(b)

Sol.

Let speed of boat in still water and speed of stream be 2a km/hr & a km/hr respectively

ATQ –

$(2a + a) - (2a - a) = 8$

2a = 8

a = 4 km/hr

Downstream speed = $(2 \times 4 + 4) = 12\ km/hr$

Upstream speed = $(2 \times 4 - 4) = 4\ km/hr$

Required time = $\frac{48}{12} + \frac{32}{4} = 12\ hours$

S71. Ans.(a)

Sol.

Required ratio = $\frac{1240+720}{600+480}$

$= \frac{1960}{1080}$

= 49 : 27

S72. Ans.(c)

Sol.

Female employees in company

– A & C together = [(1240–640) + (880–480)]

= 600 + 400

= 1000

Required % = $\frac{(1000+600)-1000}{(1000+600)} \times 100$

$= \frac{600}{1600} \times 100$

= 37.5%

S73. Ans.(d)

Sol.

$$\text{Required \%} = \frac{(720+880)}{(640+280+480+600)} \times 100$$

$$= \frac{1600}{2000} \times 100$$

$$= 80\%$$

S74. Ans.(d)

Sol. Female employees in company – B, D & F together

= [(720-280)+(1000-600)+(480-280)]

=440+400+200

= 1040

Male employees in company – A, C & E together = 640 + 480 + 200 = 1320

Required difference = 1320 – 1040

= 280

S75. Ans.(c)

Sol.

Average number of male employees in company – C & F $= \frac{480+280}{2} = 380$

Female employees in company – D & E together

$= [(1000 - 600) + (600 - 200)]$

= 400 + 400

= 800

Required difference = 800 – 380

= 420

S76. Ans.(a)

Sol.

I. $x^2 - 11x + 30 = 0$

$x^2 - 6x - 5x + 30 = 0$

$x(x - 6) - 5(x - 6) = 0$

$(x - 6)(x - 5) = 0$

$x = 5, 6$

II. $y^2 - 15y + 56 = 0$

$y^2 - 8y - 7y + 56 = 0$

$y(y - 8) - 7(y - 8) = 0$

$(y - 8)(y - 7) = 0$

$y = 7, 8$

So, $x < y$.

S77. Ans.(e)

Sol.

I. $21x^2 + 43x + 20 = 0$

$21x^2 + 28x + 15x + 20 = 0$

$7x(3x + 4) + 5(3x + 4) = 0$

$(3x + 4)(7x + 5) = 0$

$x = -\frac{4}{3}, -\frac{5}{7}$

II. $7y^2 + 19y + 10 = 0$

$7y^2 + 14y + 5y + 10 = 0$

$7y(y + 2) + 5(y + 2) = 0$

$(y + 2)(7y + 5) = 0$

$y = -2, -\frac{5}{7}$

So, no relation.

S78. Ans.(a)

Sol.

I. $x^2 + 12x + 35 = 0$

$x^2 + 7x + 5x + 35 = 0$

$x(x + 7) + 5(x + 7) = 0$

$(x + 7)(x + 5) = 0$

$x = -5, -7$

II. $2y^2 + 13y + 18 = 0$

$2y^2 + 9y + 4y + 18 = 0$

$y(2y + 9) + 2(2y + 9) = 0$

$(2y + 9)(y + 2) = 0$

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

So, $x < y$

S79. Ans.(d)

Sol.

I. $35x^2 - 82x + 48 = 0$

$35x^2 - 42x - 40x + 48 = 0$

$7x(5x - 6) - 8(5x - 6) = 0$

$(5x - 6)(7x - 8) = 0$

$x = \frac{6}{5}, \frac{8}{7}$

II. $28y^2 - 53y + 24 = 0$

$28y^2 - 32y - 21y + 24 = 0$

$4y(7y - 8) - 3(7y - 8) = 0$

$(7y - 8)(4y - 3) = 0$

$y = \frac{8}{7}, \frac{3}{4}$

So, $x \geq y$.

S80. Ans.(e)

Sol.

I. $15x^2 - 22x + 8 = 0$

$15x^2 - 12x - 10x + 8 = 0$

$3x(5x - 4) - 2(5x - 4) = 0$

$(5x - 4)(3x - 2) = 0$

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

II. $20y^2 - 43y + 21 = 0$

$20y^2 - 28y - 15y + 21 = 0$

$4y(5y - 7) - 3(5y - 7) = 0$

$(5y - 7)(4y - 3) = 0$

$y = \frac{3}{4}, \frac{7}{5}$

So, no relation.

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