

## Seating Arrangement for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

SA Set No 147
Directions: Study the following information carefully and answer the questions given beside.
Seven persons namely N, C, D, R, S, J and K are sitting around a circular table, which has ten seats, but not necessarily in the same order. All of them are facing towards the centre. Each of them has a different weight in kg among 32 kg , 35 kg , $40 \mathrm{~kg}, 46 \mathrm{~kg}, 51 \mathrm{~kg}$, 55 kg , and 60 kg , but not necessarily in the same order. Three seats are vacant.
$N$ is the first person to the right of $J$ and is facing $R$, whose weight is 60 kg .

S is the first person to the left of R and is the third person to the right of J , whose weight is 32 kg .

The person, whose weight is 35 kg , is the second person to the right of S .

The one, whose weight is lowest, is sitting to the immediate right of the one, whose weight is second highest.

S's weight is 5 kg more than K .
Neither K nor S's weight is divisible by 5.

N's weight is less than C but more than D.

Among three vacant seats, only two vacant seats are adjacent to each other.

K is neither an immediate neighbor of vacant seat nor faces the vacant seat.

No vacant seat is there between $D$ and $C$, towards the right of $D$.

## Questions :

## 1. Who is facing $D$ ?

A,. Vacant seat
B. K
C. C
D. S
E. Can't be determined
2. What is the position of the one, whose weight is 40 kg from C ?
A. Second to the right B. Fifth to the left
C. Third to right
D. Sixth to the left
E. Can't be determined
3. $J$ is $\qquad$ person to the right of the one, whose weight is 51 kg .
A. Sixth
B. Fifth
C. Fourth
D. Third
E. Can't be determined
4. What is the sum of the weights of the persons, who are immediate neighbors of $C$ ?
A. 75 kg
B. 87 kg
C. 72 kg
D. 67 kg
E. Can't be determined

## 5. Which among the following statement is true?

A. $C$ is the third person to the right of $R$.
B. $K$ faces the one, whose weight is 55 kg .
C. No vacant seat is facing another vacant seat.
D. $D$ sits third to the left of the one, whose weight is 40 kg .
E. None of these

## Correct Answers:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- |
| B | C | C | D | E |

## Common explanation :

## References:

$N$ is the first person to the right of $J$ and is facing $R$, whose weight is 60 kg .
S is the first person to the left of R and is the third person to the right of J , whose weight is 32 kg .

Among three vacant seats, only two vacant seats are adjacent to each other.

## Inferences:

From above statements,

Let the positions of seats be numbered as 1 to 10 in clockwise direction as shown below,
$N$ is facing $R$ and $N$ is the $1^{\text {st }}$ person to the right of $J$. $R^{\prime}$ s weight is 60 kg .
$S$ is the $1^{\text {st }}$ person to the left of $R$ and $S$ is $3^{\text {rd }}$ person to the right of J. J's weight is 32 kg .

Totally 3 seats are vacant and only 2 vacant seats are adjacent to each other.

By using above information we get following possibilities as shown,
Case-1: If there is no vacant seat between $J$ and $N$ (towards right of J) \& then $J(32 \mathrm{~kg}), N$ and $R(60 \mathrm{~kg})$ will sit at $2^{\text {nd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively. Similarly if there is no vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $7^{\text {th }}$ position. This implies that someone must sit at $8^{\text {th }}$ (then $9^{\text {th }}$ and $10^{\text {th }}$ seat must be vacant) or $10^{\text {th }}$ (then $8^{\text {th }}$ and $9^{\text {th }}$ seat must be vacant) position since S is $3^{\text {rd }}$ person to the right of J.

Case-1-A: If there is no vacant seat between J and N (towards right of J ) \& then $\mathrm{J}(32 \mathrm{~kg}), \mathrm{N}$ and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $2^{\text {nd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively. Similarly if there is 1 vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $8^{\text {th }}$ position (here, $7^{\text {th }}$ seat is vacant). This implies that someone must sit at either $9^{\text {th }}$ (then $10^{\text {th }}$ seat is vacant) or $10^{\text {th }}$ position (then $9^{\text {th }}$ seat is vacant) since $S$ is $3^{\text {rd }}$ person to the right of $J$.

Subsequently, given that 2 of 3 vacant seats are adjacent to each other and this condition can't be satisfied in anyway. Therefore this case-1-A can be eliminated.

Case-1-B: If there is no vacant seat between J and $N$ (towards right of J) \& then $\mathrm{J}(32 \mathrm{~kg}), \mathrm{N}$ and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $2^{\text {nd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively. Similarly if there are 2 vacant seats between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $9^{\text {th }}$ position (here $7^{\text {th }}$ and $8^{\text {th }}$ seas are vacant). This implies that someone must sit at $10^{\text {th }}$ position since S is $3^{\text {rd }}$ person to the right of J .

Case-2: If there is 1 vacant seat between J and $N$ (towards right of J) \& then J ( 32 kg ) , N and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $3^{\text {rd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively and $2^{\text {nd }}$ seat is vacant. Similarly if there is no vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $7^{\text {th }}$ position. This implies that someone must sit at $8^{\text {th }}$ (then $9^{\text {th }}$ and $10^{\text {th }}$ seat must be vacant) or $10^{\text {th }}$ (then $8^{\text {th }}$ and $9^{\text {th }}$ seat must be vacant) position since $S$ is $3^{\text {rd }}$ person to the right of J.

Case-2-A: If there is 1 vacant seat between J and N (towards right of J) \& then J ( 32 kg ), N and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $3^{\text {rd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively $\& 2^{\text {nd }}$ seat is vacant. Similarly if there is 1 vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $8^{\text {th }}$ position (here, $7^{\text {th }}$ seat is vacant). This implies that someone must sit at either $9^{\text {th }}$ (then $10^{\text {th }}$ seat is vacant) or $10^{\text {th }}$ position (then $9^{\text {th }}$ seat is vacant) since $S$ is $3^{\text {rd }}$ person to the right of J .

Subsequently, given that 2 of 3 vacant seats are adjacent to each other and this condition can't be satisfied in anyway. Therefore this case-2-A can be eliminated.

Case-2-B: If there is 1 vacant seat between J and $N$ (towards right of J) \& then J ( 32 kg ), N and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $3^{\text {rd }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively and $2^{\text {nd }}$ seat is vacant. Similarly if there are 2 vacant seats between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $9^{\text {th }}$ position (here $7^{\text {th }}$ and $8^{\text {th }}$ seas are vacant). This implies that someone must sit at $10^{\text {th }}$ position since S is $3^{\text {rd }}$ person to the right of J .


Case-3: If there are 2 vacant seats between J and N (towards right of J$)$ \& then $\mathrm{J}(32 \mathrm{~kg}), \mathrm{N}$ and $\mathrm{R}(60 \mathrm{~kg})$ will sit at $4^{\text {th }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively $\&$ here $2^{\text {nd }}$ and $3^{\text {rd }}$ seats are vacant. Similarly if there is no vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $7^{\text {th }}$ position. This implies that someone must sit at either $8^{\text {th }}$ or $9^{\text {th }}$ or $10^{\text {th }}$ seat since $S$ is $3^{\text {rd }}$ person to the right of J .

To satisfy above said condition ( S is $3^{\text {rd }}$ person to the right of J ), and then there must be 4 vacant seats which is not possible. Therefore this case- 3 can be eliminated.
Case-3-A: If there are 2 vacant seats between J and $N$ (towards right of J) \& then J ( 32 kg ), N and R ( 60 kg ) will sit at $4^{\text {th }}, 1^{\text {st }}$ and $6^{\text {th }}$ position respectively $\&$ here $2^{\text {nd }}$ and $3^{\text {rd }}$ seats are vacant. Similarly if there is 1 vacant seat between $R$ and $S$ (towards left of $R$ ), then $S$ will sit at $8^{\text {th }}$ position. This implies that someone must sit at either $9^{\text {th }}$ or $10^{\text {th }}$ seat since $S$ is $3^{\text {rd }}$ person to the right of $J$.

To satisfy above said condition ( S is $3^{\text {rd }}$ person to the right of J ), and then there must be 4 vacant seats which is not possible. Therefore this case-3-A can be eliminated.


Note: Among 8 cases, case-1-A, case-2-A, case-3 and case-3-A gets eliminated. Remaining cases case-1, case-1$B$, case-2, case-2-B are there to continue further.

## References:

Each of them weight is different in kg among $32 \mathrm{~kg}, 35 \mathrm{~kg}, 40 \mathrm{~kg}, 46 \mathrm{~kg}, 51 \mathrm{~kg}, 55 \mathrm{~kg}$, and 60 kg .

S's weight is 5 kg more than K .
Neither K nor S's weight is divisible by 5 .
The one, whose weight is lowest, is sitting to the immediate right of the one, whose weight is second highest.

The person, whose weight is 35 kg , is the second person to the right of S .
$K$ is neither an immediate neighbor of vacant nor faces the vacant seat.
Among three vacant seats, only two vacant seats are adjacent to each other.

## Inferences:

From above statements,

The one, whose weight is 32 kg (lowest), is sitting to the immediate right of the one, whose weight is 55 kg (second highest).

Given, S's weight $=$ K's weight +5 kg
Given, $K$ and $S^{\prime}$ s weight is not divisible by 5 .
Therefore among given weights there is only possibility i.e.
K's weight is 46 kg and S 's weight is $51 \mathrm{~kg}(46 \mathrm{~kg}+5 \mathrm{~kg}=51 \mathrm{~kg})$
Case-1 \& Case-1 (I): as per 4th reference point, the one, whose weight is 55 kg , sits at $3^{r d}$ position.
We know ( $9^{\text {th }}$ and $10^{\text {th }}$ ) or ( $8^{\text {th }}$ and $9^{\text {th }}$ ) seat is vacant [ 2 vacant seats are adjacent to each other and S is the $3^{\text {rd }}$ person to the right of J]

As per $5^{\text {th }}$ reference point, if the one, whose weight is 35 kg , sits at $5^{\text {th }}$ position and then $4^{\text {th }}$ seat is vacant ( $1^{\text {st }}$ possibility, case-1)

As per $5^{\text {th }}$ reference point, if the one, whose weight is 35 kg , sits at $4^{\text {th }}$ position and then $5^{\text {th }}$ seat is vacant (2 $2^{\text {nd }}$ possibility, case-1 (I))

Given, $K$ is not an immediate neighbor of vacant seat and $K$ doesn't face any vacant seat (reference point-6)
Subsequently K, whose weight is 46 kg sits at $8^{\text {th }}$ position (if $9^{\text {th }}$ and $10^{\text {th }}$ seat is vacant) or $10^{\text {th }}$ position (if $8^{\text {th }}$ and $9^{\text {th }}$ seat is vacant) [ 2 possibilities for $K$, for both cases]. Anyway this violates the given condition ( K is not an immediate neighbor of vacant seat). Therefore this case-1 \& case-1-(I) can be eliminated.



Case-1-B: as per 4th reference point, the one, whose weight is 55 kg , sits at $3^{\text {rd }}$ position.
As per $5^{\text {th }}$ reference point, if the one, whose weight is 35 kg , sits at $5^{\text {th }}$ position and then $4^{\text {th }}$ seat is vacant (only possibility) since if the one, whose weight is 35 kg , sits at $4^{\text {th }}$ position and then $5^{\text {th }}$ seat is vacant. Here K's weight is 46 kg and sits at $10^{\text {th }}$ position and faces the vacant seat ( $5^{\text {th }}$ seat) which is not possible.

Therefore $K$ 's weight is 46 kg and sits at $10^{\text {th }}$ position and faces the one whose weight is 35 kg ( $5^{\text {th }}$ seat). All the above said reference points get satisfied and we get the following seating as shown,


Case-2: as per 4th reference point, the one, whose weight is 55 kg , sits at $4^{\text {th }}$ position.
We know ( $9^{\text {th }}$ and $10^{\text {th }}$ ) or ( $8^{\text {th }}$ and $9^{\text {th }}$ ) seat is vacant [ 2 vacant seats are adjacent to each other and S is the $3^{\text {rd }}$ person to the right of J]

As per $5^{\text {th }}$ reference point, the one, whose weight is 35 kg , sits at $5^{\text {th }}$ position (only possibility)
Given, $K$ is not an immediate neighbor of vacant seat and $K$ doesn't face any vacant seat (reference point-6)
Subsequently K , whose weight is 46 kg sits at $8^{\text {th }}$ position (if $9^{\text {th }}$ and $10^{\text {th }}$ seat is vacant) or $10^{\text {th }}$ position (if $8^{\text {th }}$ and $9^{\text {th }}$ seat is vacant) [ 2 possibilities for $K$ ]. Anyway this violates the given condition ( $K$ is not an immediate neighbor of vacant seat). Therefore this case-2 can be eliminated.

Case-2-B: as per 4th reference point, the one, whose weight is 55 kg , sits at $4^{\text {th }}$ position.
As per $5^{\text {th }}$ reference point, the one, whose weight is 35 kg , sits at $5^{\text {th }}$ position (only possibility)

Finally, $K^{\prime}$ s weight is 46 kg and sits at $10^{\text {th }}$ position and faces the one whose weight is 35 kg ( $5^{\text {th }}$ seat). All the above said reference points get satisfied and we get the following seating as shown,


## References:

Each of them weight is different in kg among $32 \mathrm{~kg}, 35 \mathrm{~kg}, 40 \mathrm{~kg}, 46 \mathrm{~kg}, 51 \mathrm{~kg}, 55 \mathrm{~kg}$, and 60 kg .

N's weight is less than C but more than D.

No vacant seat is there between $D$ and $C$, towards the right of $D$.

## Inferences:

From above statements,

Given, $\mathrm{N}<\mathrm{C}$ \& $\mathrm{N}>\mathrm{D}$; by combining we get $\mathrm{C}>\mathrm{N}>\mathrm{D}$

## Remaining weights left are $\mathbf{3 5 k g}$, 40kg and 55 kg

This implies C's weight is 55 kg , N's weight is 40 kg and D's weight is 35 kg (only possibility)
Case-1-B: Given, no vacant seat is there between $D$ and $C$, towards the right of $D$. In this case there is 1 vacant seat between $D$ and $C$, towards the right of $D$. Therefore this violates the given condition and hence this case-1-B can be eliminated.

Case-2-B: All the above said reference points get satisfied i.e. C ( 55 kg ) and D ( 35 kg ) will sits at $4^{\text {th }}$ and $5^{\text {th }}$ position respectively. Seat numbers 2,7 and 8 are vacant. By using above information we get the completed seating as shown below,


1. Following the common explanation, we get " $D$ faces $K$ ".

Hence, option B is correct.
2. Following the common explanation, we get "Third to the right of C".

N 's weight is 40 kg and N sits 3 rd to the right of C .

Hence, option C is correct.
3. Following the common explanation, we get "Fourth".

S's weight is 51 kg and J is the 4 th person to the right of S
Hence, option C is correct.
4. Following the common explanation, we get "Fourth".
$J$ and $D$ are the immediate neighbors of $C$. J's weight is 32 kg \& $D^{\prime} s$ weight is 35 kg .
Sum $=67 \mathrm{~kg}$
The Question Bank
Hence, option D is correct.
5. Following the common explanation, we get "None of these".

All the statements are false

Hence, option E is correct.

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