

Reasoning Ability

Directions (1-5): Study the following information carefully and answer the questions given below

Twelve persons – O, P, Q, R, S, T, U, V, W, X, Y and X are living in a five floored building from bottom to top, such that the lowermost building is marked as 1 and the top most building is marked as 5, Each floor has three flats-A, B and C, where flat A is to the west of Flat B and Flat B is to the west of flat C. One of the floors in each flat is vacant.

Y lives three floors above S and both of them live in different flats. The number of floors above Y is the same as the number of floors below V, where both lives in the same flat. X lives immediate north-east flat of Z, who lives in an even numbered floor. The number of floors between V and S is same as the number of floors between Y and R, who lives above Y and lives in the same flat where S is living. X doesn't live in same floor as R and same flat as V lives. U lives immediately above Q, and both live in the same flat. One of the flats on the floor in which Q lives is vacant. P lives above both Q and T. The number of floors between S and T is one more than the number of floors between P and T, who lives in flat A. W lives in neither same flat nor same floor of T. P and W live in different flats. X lives two floors below O, who doesn't live on the floor which has vacant flat.

1. Which floor is vacant in flat C?

- a) The floor where T lives
- b) The floor where P lives

- c) Third
- d) Fifth
- e) Can't be determined

2. Who among the following person lives in the same flat where P lives?

- a) Y
- b) T
- c) W
- d) U
- e) R

3. How many floors are between the vacant flat in B and the floor in which W lives?

- a) One
- b) Two
- c) Three
- d) Four
- e) None

4. Four of the following five are alike in a certain way as per the given arrangement and hence form a group. Find the one who does not belong to that group?

- a) R
- b) The one who lives immediate east of Y
- c) Z
- d) T
- e) The one who lives immediate west of Q

5. If the rent paid by the person who lives in flat A is Rs.5000, flat B is Rs.7000 and flat C is

Rs.8000 per month. Then what is the total rent paid by P, W and O per month?

- a) Rs.20000
- b) Rs.22000
- c) Rs.18000
- d) Rs.21000
- e) Rs.16000

Directions (6-10): Study the following information carefully and answer the below questions.

In a multi-floored building of 20 floors marked 0 to 20 in such a way that the ground floor is marked as 0, the floor immediately above it is marked as 1, and so on till the topmost floor is marked as 20. There are four lifts namely – Lift A, Lift B, Lift C, and Lift D on the ground floor. The stoppage of lifts is based on certain rules and follows upward movement only. At least one lift stops on each floor and initially lifts start from the ground floor.

Note:- Lift A stops only on an odd-numbered floor, no lifts stop on the same floor along with lift D, lift B stops at an interval of at least two floors, lift C and B are not stopped on the same floor. All the lifts stop only on the floors in which persons are living.

Lift D is stopped for the first time on the second floor. Lift B is stopped second time on the Floor number which is a square value. Lift D is stopped on the ninth floor and sixteenth floor. Lift C is stopped second floor from the top. Lift A and Lift B are stopped on the seventeenth floor. Only three floors are there between Lift B's third and fourth stoppage and there is less than three

floors interval between lift B's other stoppage floors. Lift B has stopped only six floors. The total stoppage of Lift C is equal to the total stoppage of B whereas the total stoppage of Lift A is one more than the total stoppage of Lift B. The number of floors below A's fourth stoppage is one more than the number of floors above A's sixth stoppage. The first four stops of Lift A must be below 10th floor. Lift D stops on the thirteenth floor. Lift C is stopped along with Lift A on two stops. Lift D is not stopped between the Second floor and ninth floor. The number of stoppage of Lift C below 9th floor is 3. A is the only lift stopped on the fifth floor. D does not stop on the 12th floor. the total stoppage of Lift D is one more than the total stoppage of Lift B.

6. For how many times lift D stopped on consecutive floors?

- a) One
- b) Three
- c) None
- d) Two
- e) Four

7. For how many times Lift A and Lift B are stopped together?

- a) One
- b) Three
- c) None
- d) Two
- e) Four

8. Which of the following lifts stops at floor number 13?



- a) Only lift C
- b) Both lift A and B
- c) Only lift B
- d) Both lift C and A
- e) Only lift D

9. Lift D's last stoppage will be on __ floor.

- a) 17th
- b) 18th
- c) 20th
- d) 19th
- e) None of these

10. Which of the following floor that Lift B does not stop?

- I. The fourth stoppage of Lift A's floor.
- II. Fourteenth floor.
- III. Sixteenth floor

- a) Both II and III
- b) Only III
- c) Only I
- d) Both I and II
- e) None of these

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Answer Key with Explanation

Directions (1-5)

- 1. Answer: B
- 2. Answer: E
- 3. Answer: A
- 4. Answer: D (all persons are living in flat B except for option d)
- 5. Answer: A (desired total = 7000+8000+5000=20000)

Floor	FlatA	FlatB	FlatC
5	O	R	W
4	Y	P	-
3	T	-	X
2	V	Z	U
1	-	S	Q

We have,

- Y lives three floors above S and both of them lives in different flats.



- The number of floors above Y is the same as the number of floors below V, where both lives in same flat.
- X lives immediate north-east flat of Z, who lives in an even numbered floor.
- The number of floors between V and S is same as the number of floors between Y and R, who lives above Y and lives on the same flat where S is living.
- X doesn't live in same floor as R and same flat as V lives.

From the above conditions, we have four possibilities:

	Case 1			Case 2			Case 3			Case 4		
Floor	Flat A	Flat B	Flat C	Flat A	Flat B	Flat C	Flat A	Flat B	Flat C	Flat A	Flat B	Flat C
5		R				R	R				R	
4	Y			Y					Y			Y
3			X			X		X			X	
2	V	Z		V	Z		Z		V	Z		V
1		S				S	S				S	

Again we have,

- U lives immediately above Q, and both live in the same flat.
- One of the flats on the floor in which Q lives is vacant.
- P lives above both Q and T.
- The number of floors between S and T is one more than the number of floors between P and T, who lives in flat A.

After applying above conditions, case 2 and 4 gets eliminated.

	Case 1			Case 1.a			Case 3		
Floor	FlatA	FlatB	FlatC	FlatA	FlatB	FlatC	FlatA	FlatB	FlatC
5		R			R		R		
4	Y	P		Y		P	P/	/P	Y
3	T		X	T		X	T	X	
2	V	Z	U	V	Z	U	Z	U	V
1	-	S	Q	-	S	Q	S	Q	-

Again we have,

- W lives in neither same flat nor same floor of T.
- P and W lives in different flats.
- X lives two floor below O, who doesn't live in the floor which has vacant flat.

After applying above conditions, case 1.a and 3 gets eliminated.

	Case 1			Case 1.a			Case 3		
Floor	FlatA	FlatB	FlatC	FlatA	FlatB	FlatC	FlatA	FlatB	FlatC
5	O	R	W	O	R	-	R	W	O
4	Y	P	-	Y	W	P	P	-	Y
3	T	-	X	T	-	X	T	X	-
2	V	Z	U	V	Z	U	Z	U	V
1	-	S	Q	-	S	Q	S	Q	-

Thus, case 1 gives the final arrangement.

Directions (6-10):

6. Answer: A

7. Answer: E

8. Answer: E

9. Answer: C

10. Answer: B

Final Arrangement

Floors	Lift1	Lift2	Lift3	Lift4
20				D
19			C	
18				D
17	A	B		
16				D
15	A		C	
14		B		
13				D
12			C	
11	A	B		
10				D
9				D
8			C	
7	A	B		
6			C	
5	A			
4		B		
3	A		C	
2				D
1	A	B		

Floors	Lift1	Lift2	Lift3	Lift4
20				
19			C	
18				
17	A	B		
16				D
15				
14				
13				
12				
11				
10				
9				D
8				
7				
6				
5				
4		B		
3				
2				D
1		B		

We have,

- Lift D is stopped for the first time on the second floor.
- Lift B is stopped second time on the Floor number which is a square value.
- Lift D is stopped on the ninth floor and sixteenth floor. Lift C is stopped second floor from the top.
- Lift A and Lift B are stopped on the seventeenth floor.

Again we have,

- Only three floors are there between Lift B's third and fourth stoppage and there is less than three floors interval between lift B's other stoppage floors.
- Lift B has stopped only six floors.
- The total stoppage of Lift C is equal to the total stoppage of B but the total stoppage of Lift A is one more than the total stoppage of Lift B.
- The number of floors below A's fourth stoppage is one more than the number of floors above A's sixth stoppage.
- The first four stops of Lift A must be below 10th floor.



- Lift D stops on the thirteenth floor.
- the total stoppage of Lift D is one more than the total stoppage of Lift B.

Floors	Lift1	Lift2	Lift3	Lift4
20				
19			C	
18				
17	A	B		
16				D
15	A			
14		B		
13				D
12				
11	A	B		
10				
9				D
8				
7	A	B		
6				
5	A			
4		B		
3	A			
2				D
1	A	B		

Again we have,

- Lift C is stopped along with Lift A on two stops. Lift D is not stopped between the Second floor and ninth floor.
- The number of stoppage of Lift C below 9th floor is 3. A is the only lift stopped on the fifth floor. D does not stop on the 12th floor.

Floors	Lift1	Lift2	Lift3	Lift4
20				D
19			C	
18				D
17	A	B		
16				D
15	A		C	
14		B		
13				D
12			C	
11	A	B		
10				D
9				D
8			C	
7	A	B		
6			C	
5	A			
4		B		
3	A		C	
2				D
1	A	B		