NTS GAT General Past Paper

Analytical – Exam No. 07 (PP)

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In a certain emergency rescue service, seven workers F, G, H, I, J, K, and L are assigned to accompany three mobile trauma vans during a single 12-hour shift. Each worker must be assigned to just one of the vans according to the following rules:

At least two workers must be assigned to van 1.

At least three workers, one of whom must be J, must be assigned to van 3.

If F is assigned to van I, I must also be assigned to van 1.

G must be assigned to van 2.

L cannot be assigned to van 3.

Solution:

F G H I J K L

R1: Van $1 \geq 2$ workers

R2: Van $3 \geq 3$ wrokers

R3: $J = \text{Van } 3$

R4: $F_1 \rightarrow I_1$

R5: $G = \text{Van } 2$

R6: $L \neq \text{Van } 3$

Questions:

1. Which of the following is a possible assignment of the seven workers to the three vans?

	Van 1	Van 2	Van 3
(A)	F	G, H, I	J, K, L
(B)	F, I	G, J	H, K, L
(C)	F, G	I, L	H, J, K

(D) I, L G, F H, J, K

(E) I, G H, L F, J, K

Solution:

Apply excluding rule:

R1 Option A is wrong.

R2 All okay.

R3 Option B is wrong.

R4 Option C is wrong.

R5 Option E is wrong.

So, option D is correct.

2. If I is assigned to van 2, which of the following must be true?

(A) F is assigned to van I.

(B) K is assigned to van 3.

(C) H is assigned to van 1.

(D) H is assigned to van 3.

(E) L is assigned to. van 1.

Solution:

Rules	**Van 1**	**Van 2**	**Van 3**
Q		I	
R3		I	J
R5		I, G	J
R1+R2+R6	L	I, G	J

So, option E is correct.

3. If F and L are assigned to van 1, all of the following must be true EXCEPT:

(A) H is assigned to van 2.

(B) K is assigned to van 3.

(C) Exactly one worker is assigned to van 2.

(D) Exactly three workers are assigned to van 1.

(E) Exactly three workers are assigned to van 3.

Solution:

Rules	Van 1	Van 2	Van 3
Q	F, L		
R4	F, L, I		
R3	F, L, I		J
R5	F, L, I	G	J
R2	F, L, I	G	J, H, K

In this question, we have to find the false option. Option B states that K is assigned to van 3, which is true. Option C states that exactly one worker is assigned to van 2, which is also true. Option D states that exactly three workers are assigned to van 1, which is also true. Option E states that exactly three workers are assigned to van 3, which is also true. We are left with only one option i.e., option A, so it must be false. Hence, option A is correct.

4. If I and L are the only workers assigned to van 1, which of the following is the largest group of workers that could possibly be assigned to van 3?

(A) G, H

(B) H, K

(C) F, J, K

(D) F, H, J, K

(E) G, H, J, K

Solution:

Rules	Van 1	Van 2	Van 3
Q	I, L		
R3	I, L		J
R5	I, L	G	J
Q+Remaining	I, L	G	J, F, H, K

So, option D is correct.

5. If exactly three workers are assigned to van 1, which of the following must be true?

(A) F is assigned to van 3.

(B) I is assigned to van 1.

(C) K is assigned to van I.

(D) F is assigned to the same van as I.

(E) G alone is assigned to van 2.

Solution:

Rules	Van 1	Van 2	Van 3
Q	3 workers		
R2	3 workers		3 workers
Remaining	3 workers	1 worker (G as R5)	3 workers

So, option E is correct.

6. If I is the only worker not yet assigned, and if, at this point, I could be assigned to any one of the three vans, which of the following must be true?

(A) F is assigned to van 1.

(B) H is assigned to van 1.

(C) H is assigned to van 3.

(D) K is assigned to van 3.

(E) L is assigned to van 1.

Solution:

It is stated that I can be assigned to any van. As we know that van 2 has a maximum limit of two workers, and I can also join van 2, so van 2 will have only one other worker i.e., G as R5

Rules	Van 1	Van 2	Van 3
R5		G	
R3		G	J
R6	L	G	J

So, option E is correct.