

NTS GAT General Past Paper

Analytical – Exam No. 12

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In a game, exactly six inverted caps stand side by side in a straight line, and each has exactly one paper hidden under it. The caps are numbered consecutively 1 through 6. Each of the papers is painted a single solid color. The colors of the papers are gold, mauve, olive, pink, silver, and white. The papers have been hidden under the caps in a manner that conforms to the following conditions:

The pink paper must be hidden under a lower-numbered cap than the olive paper cap.

The silver paper must be hidden under a cap immediately adjacent to the cap under which the mauve paper is hidden.

The gold paper must be hidden under cap 5.

Solution:

G M O P S W

R1: $P < O$

R2: $S = M \pm 1$

R3: $G = 5$

Questions:

1. If the mauve paper is under cap 4, the silver paper must be under cap ____.

- (A) 1
- (B) 2
- (C) 3
- (D) 5
- (E) 6

Solution:

Rules	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
Q				M		
R3				M	G	
R2			S	M	G	

So, option C is correct.

2. Which of the following could be the colors of the papers under the caps, in order from 1 through 6?

Options	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
(A)	Gold	White	Mauve	Silver	Pink	Olive
(B)	Mauve	Gold	Pink	Silver	Olive	White
(C)	Mauve	Silver	Pink	White	Gold	Olive
(D)	Olive	White	Silver	Mauve	Gold	Pink
(E)	Silver	Pink	Mauve	White	Gold	Olive

Solution:

Apply excluding rule:

R1 Option D is wrong.

R2 Option B and option E are wrong.

R3 Option A is wrong.

So, option C is correct.

3. A paper of which of the following colors could be under cap 6?

- (A) Gold
- (B) Mauve
- (C) Pink

(D) Silver

(E) White

Solution:

Rules	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
R3					G	?

R1 states that $P < O$; it means pink paper cannot be placed under cap 6, so option C is wrong. R2 states that $S = M \pm 1$; it means neither silver nor mauve paper can be placed under cap 6, so option B and option D are wrong. R3 states that $G = 5$; it means gold cannot be placed under cap 6, so option A is wrong. So, option E is correct.

4. If the pink paper is under cap 4, the olive paper must be under cap _____.

(A) 1

(B) 2

(C) 3

(D) 5

(E) 6

Solution:

Rules	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
Q				P		
R3				P	G	
R1				P	G	O

So, option E is correct.

5. Which of the following must be true?

(A) The gold paper is under a lower-numbered cap than white paper

(B) The olive paper is under a lower-numbered cap than gold paper

(C) The pink paper is under a lower-numbered cap than gold paper

- (D) The pink paper is under a lower-numbered cap than silver paper
- (E) The silver paper is under a lower-numbered cap than white paper

Solution:

Rules	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
R3					G	

R1 states that $P < O$; it means pink paper cannot be placed under cap 6; it also means that pink paper must be under a lowered numbered cap than gold paper. So, option C is correct.

6. If the olive paper is under cap 2, papers of which of the following colors could be under caps immediately adjacent to each other?
- (A) Gold and mauve
- (B) Gold and pink
- (C) Olive and white
- (D) Pink and silver
- (E) Silver and white

Solution:

Rules	Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
Q		O				
R3		O			G	
R1	P	O			G	
R2	P	O	S/M	S/M	G	
Remaining	P	O	S/M	S/M	G	W

So, option A is correct.

7. If the mauve paper is under cap 1, papers of which of the following colors must be under caps immediately adjacent to each other?

- (A) Gold and olive
- (B) Gold and white
- (C) Pink and silver
- (D) Pink and white
- (E) Silver and white

Solution:

Rules		Cap 1	Cap 2	Cap 3	Cap 4	Cap 5	Cap 6
Q		M					
R3		M				G	
R2		M	S			G	
R1	P1	M	S	P	O	G	
	P2	M	S	P		G	O
	P3	M	S		P	G	O
Remai- ning	P1	M	S	P	O	G	W
	P2	M	S	P	W	G	O
	P3	M	S	W	P	G	O

So, option A is correct.