NTS GAT General Past Paper

Analytical – Exam No. 06 (PP)

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A new kind of lock is opened by pushing symbols in sequence on a keyboard. The sequence is called combination. All acceptable combinations must consist of exactly five symbols four letters and of single-digit number. Acceptable combinations must also conform to the following rules:

The number must be either the second or third symbol in the combination.

The fourth and fifth symbols in the combination must not be the same.

If the third symbol is a number, then the fifth must be either B or D.

If the third symbol is a letter, then there must be no Fs or Gs in the combination.

The first symbol must be a letter closer to the beginning of the alphabet than any other symbol in the combination.

Solution:

Lock = 5 symbols = 4(alphabets) + 1(digit)

R1: Digit = $2^{nd}/3^{rd}$

R2: $4^{th} \neq 5^{th}$

R3: $(3^{rd} = \text{Digit}) \rightarrow (5^{th} = \text{B/D})$

R4: $(3^{rd} = \text{Alphabet}) \rightarrow (\text{Lock} \neq \text{F, G})$

R5: 1st = Closer to start of alphabets

Questions:

1. Which of the following sequences of symbols is an acceptable combination?

    (A)   E, R, 2, X, B

    (B)   F, 6, T, T, Y

    (C)   B, W, 4, G, G

(D)   C, 7, M, Q, D

(E)   A, X, L, 3, P

Solution:

Apply excluding rule:

R1   Option E is wrong.

R2   Option C is wrong.

R3   All okay.

R4   Option B is wrong.

R5   Option A is wrong.

So, option D is correct.

2. Which of the following could possibly be the first symbol in an acceptable sequence?

(A)   F

(B)   7

(C)   Y

(D)   3

(E)   E

Solution:

R5 states that the first symbol must be a letter closer to the beginning of the alphabet than any other symbol in the combination. From the available options, 'E' is the closest alphabet from the beginning, so option E is correct.

3. A combination whose first symbol is B and whose fourth symbol is G could have which of the following as its second, third, and fifth symbols, respectively?

(A)   J, 6, D

(B)   A, 9, T

(C)   9, Z, X

(D) 3, H, G

(E) M, 4, S

Solution:

Options	1	2	3	4	5	True/False
Option (A)	B	J	6	G	D	True
Option (B)	B	A	9	G	T	False as R5
Option (C)	B	9	Z	G	X	False as R4
Option (D)	B	3	H	G	G	False as R2
Option (E)	B	M	4	G	S	False as R3

So, option A is correct.

4. The combination C, Q, 8, P, F can be made acceptable by doing which of the following?

(A) replacing the F with a B

(B) reversing the C and the P

(C) reversing the Q and the 8

(D) replacing the F with a D

(E) replacing the C with an A

Solution:

Given that code is 'C, Q, 8, P, F'; apply excluding rule:

Options	C	Q	8	P	F	True/False
Option (A)	C	Q	8	P	B	False as R5
Option (B)	P	Q	8	C	F	False as R3
Option (C)	C	8	Q	P	F	False as R4
Option (D)	C	Q	8	P	D	True
Option (E)	A	Q	8	P	F	False as R3

So, option D is correct.

5. Which of the following sequences of symbols is an acceptable combination?

      (A)   F, S, 3, Y, B

      (B)   F, 7, U, U, Z

      (C)   B, X, 5, H, H

      (D)   C, 8, N, R, D

      (E)   A, Y, M, 4, Q

Solution:

Apply excluding rule:

R1   Option E is wrong.

R2   Option C is wrong.

R3   All okay.

R4   Option B is wrong.

R5   Option A is wrong.

So, option D is correct.