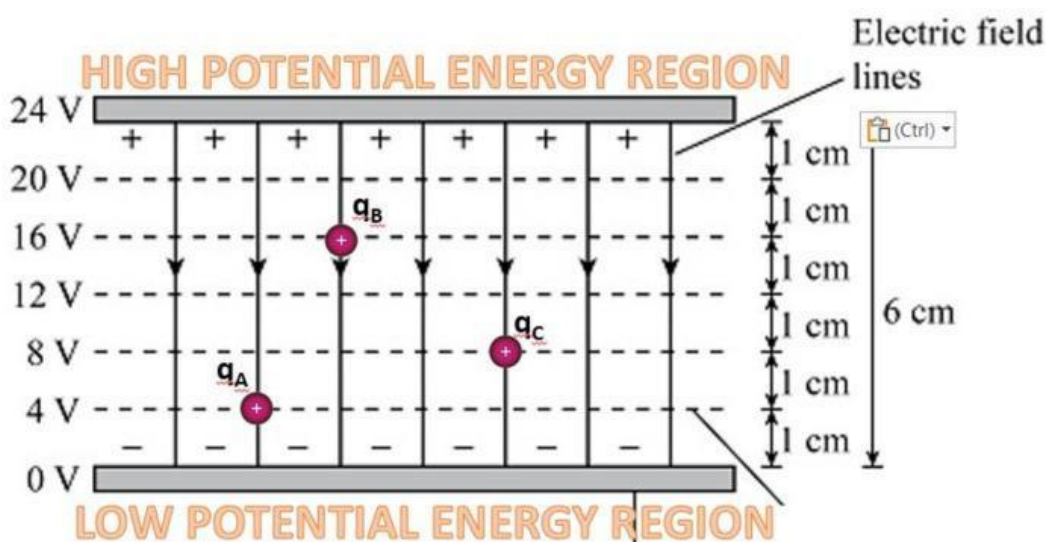


## Member 2: Electric Potential Energy

Directions: Analyze the picture below to answer the following questions. For nos., 1-4, choose your answers from the words enclosed with parentheses.

Electric potential is represented by the capital letter  $V$  and measured in Joules per Coulomb ( $J/C$ ) which is Volt ( $V$ ), where 1 Joule ( $J$ ) per 1 coulomb ( $C$ ) of charge is equal to 1 Volt ( $V$ ). So, the 24 V, 20 V, and up to 0 V are the electric potentials at specific positions of the charge in the electric field, as shown in the picture below.



The picture above shows two identical positive test charges,  $q_A$ ,  $q_B$ , and  $q_C$ , positioned at a certain location in the electric field between the two plates. Each charge possesses electric potential energy.

- Which of the 3 charges has the highest electric potential energy?  
Ans. \_\_\_\_\_ ( $q_A$ ,  $q_B$ , and  $q_C$ )
- Which of the 3 charges has the lowest electric potential energy?  
Ans. \_\_\_\_\_ ( $q_A$ ,  $q_B$ , and  $q_C$ )
- Which of the 3 charges has the highest and lowest electric potential?  
Ans. Highest : \_\_\_\_\_ ( $q_A$ ,  $q_B$ , and  $q_C$ ) Lowest: \_\_\_\_\_ ( $q_A$ ,  $q_B$ , and  $q_C$ )
- How is the electric potential energy of the charge related to the electric potential?  
Ans. The \_\_\_\_\_ (higher or lower) the electric potential energy the charge has, the \_\_\_\_\_ (higher or lower) the electric potential of the charge.
- What is electric potential?  
Ans. The electric potential is the \_\_\_\_\_ (electric potential energy or charge) per \_\_\_\_\_ (electric potential energy or charge) at a specific point in an electric field.