QUIZEN – Electrostatics CCWS12P01.2

Learning Level 1	Learning Level 2	Learning Level 3
Q - Remembering (knowledge-based questions) U - Understanding (comprehension-based questions)	I - Applying (application-based questions) Z - Analyzing (analysis-based questions)	E - Evaluating (evaluation-based questions) N - Creating (creation-based questions)

Learning Level 1

1. State the definition of electric potential energy.

2. What is the unit of electric potential?

3. Define electric potential.

4. What is the SI unit of electric potential energy?

5. State the formula for electric potential energy.

Learning Level 2

6. A charge of +2C is moved through a potential difference of 5V. Calculate the work done by the external agent.

7. Calculate the electric potential at a point in space where the electric field is 4 N/C and the distance from the charge producing the field is 2 meters.

8. The electric potential difference between two points is 12 V. What is the change in potential energy of a charge of 5 C that moves between these points?

9. A charge of 5 µC is placed in an electric field. It experiences a force of 2×10^{-3} N. Calculate the potential difference between the two points that are 2 cm apart in the electric field.

10. Two charges of 3C and -4C are separated by a distance of 5 m. Find the electric potential energy of the system.

Learning Level 3

11. Derive the formula for electric potential at a point in space due to a point charge.

12. How does the electric potential energy of a system of two charges vary with their separation distance?

13. What is equipotential surface? Explain with an example.

14. How is electric potential related to electric field? Derive the expression for it.

15. How is electric potential energy related to work done? Derive the expression for it.