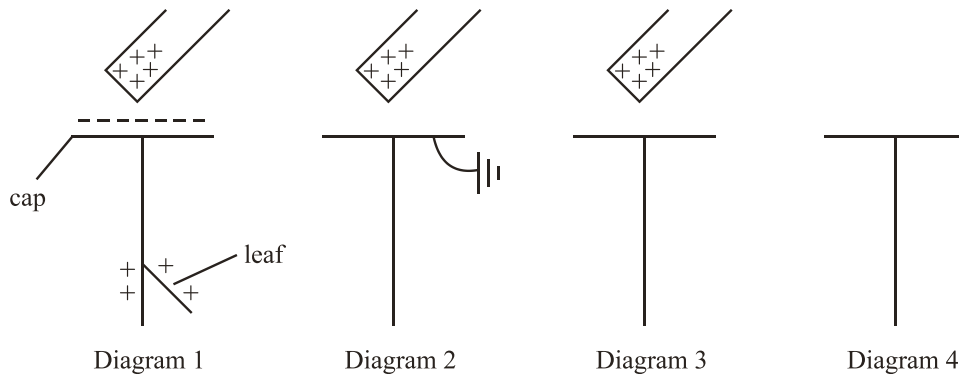


Circuitry I

1. A positively charged rod is brought near to the cap of an uncharged gold-leaf electroscope. The distribution of charge on the electroscope is illustrated in diagram 1. Diagrams 2, 3 and 4 are incomplete diagrams of the electroscope. L^AT_EX



- A. i. The cap of the electroscope is then earthed. On diagram 2, show the deflection, if any, of the leaf and the distribution of charge on the electroscope. [1]
- ii. The earth connection is now removed. On diagram 3, show the deflection, if any, of the leaf and the distribution of charge on the electroscope. [1]
- iii. Finally, the positively charged rod is removed. On diagram 4, show the deflection, if any, of the leaf and the distribution of charge on the electroscope. [1]
- B. i. Define electric potential difference between two points.

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..... [2]

- ii. Using your answers to A, explain whether a gold-leaf electroscope measures electric charge or electric potential difference.

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..... [2]