

- 2 Two identical capacitors were connected in series and charged. They were then discharged through a resistor and ammeter.

A student investigated how the current in the resistor varied as the capacitors discharged.

- (a) Draw an appropriate circuit diagram for this investigation.

(3)

- (b) State **one** safety precaution the student should take.

(1)



(c) The student had a stopwatch.

Describe how the student should determine an accurate value for the total capacitance of the capacitors.

(6)

(d) The student repeated the investigation but used a data logger instead of a stopwatch and an ammeter.

Suggest why using a data logger would improve this investigation.

(2)