Why does the capacitor break when fully charged

What happens when a capacitor is not charged?
When a capacitor is not charged,there will not be any potential (voltage) across its plates. Therefore,when a capacitor is fully charged,it breaks the circuitbecause the potential of the power source (DC) and the capacitor are the same. Consequently,there will not be any current flowing in the circuit.

What happens when a capacitor is fully charged?
When a capacitor is fully charged,it will break the circuit as the potential of the power source (DC) and the capacitor will be the same. This means that no current will be flowing in the circuit. However,this condition can never be truly achieved as there is always some internal resistance in the circuit.

What happens when a voltage is placed across a capacitor?
When a voltage is placed across the capacitor the potential cannot rise to the applied value instantaneously. As the charge on the terminals builds up to its final value it tends to repel the addition of further charge. (b) the resistance of the circuit through which it is being charged or is discharging.

What happens when a capacitor is fully discharged?
As charge flows from one plate to the other through the resistor the charge is neutralised and so the current falls and the rate of decrease of potential difference also falls. Eventually the charge on the plates is zeroand the current and potential difference are also zero - the capacitor is fully discharged.

Why does a capacitor take a constant current?
As the potential difference across the capacitor is equal to the voltage source. The voltage is rising linearly with time,the capacitor will take a constant current. The voltage stops changing,the current is zero. The charging current drops to zero,such that capacitor voltage = source voltage.

How does a capacitor charge a battery?
The other plate of the capacitor,connected to the battery's negative,would receive the free electrons displaced from the other side of the capacitor,becoming negatively charged. The rate at which a capacitor is charged depends on the capacitance and the circuit resistance.

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No current flows in the circuit when the capacitor is fully charged. As the potential difference across the capacitor is equal to the voltage source. The voltage is rising linearly with time, the capacitor will take a constant current. The voltage stops changing, the current is zero.

When a capacitor is fully charged, no current flows in the circuit. This is because the potential difference across the capacitor is equal to the voltage source. (i.e), the charging current drops to zero, such that capacitor voltage = source voltage.

Since the capacitor goes from zero charge to better than 99% charged in 5? 5 ?, we typically use this as the time required to "fully" charge the capacitor. As others have mentioned, for all intents and purposes, yes it reaches %99 charge after 5 tau.

If the current is driven by a voltage source, then the circuit will behave as described in Niels Nielsen"s answer: The flowing current will cause the voltage on the ...

When the capacitor voltage equals the battery voltage, there is no potential difference, the current stops flowing, and the capacitor is fully charged. If the voltage increases, further migration of electrons from the positive to negative plate results in a greater charge and a higher voltage across the capacitor.

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