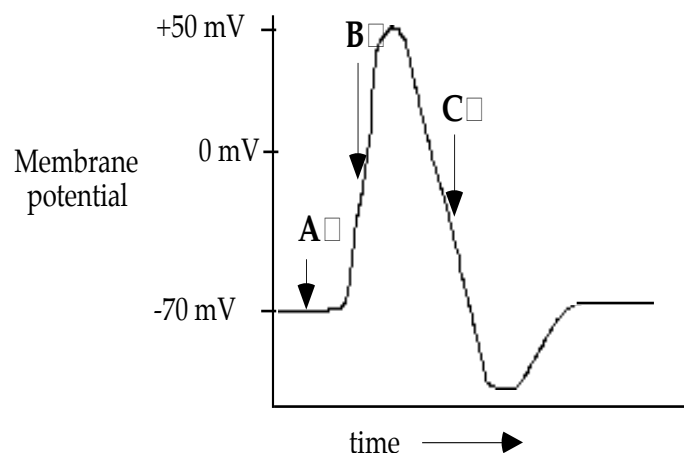


Solutions to: 7.013 Neurobiology Section Problem

Shown below is a plot of an action potential at a single point on an axon.



Fill in the table below, for each of the three timepoints (A, B and C) indicated by the arrows in the diagram above.

	Time Point		
	A	B	C
Na⁺ voltage-sensitive channel status (Inactivated, Closed, or Open)	Closed	Open	Inactivated
K⁺ voltage-sensitive channel status (Inactivated, Closed, or Open)	Closed	Closed	Open
Na⁺ flow through Na⁺ voltage-sensitive channels (In, None, or Out)	None	In	None
K⁺ flow through K⁺ voltage-sensitive channels (In, None, or Out)	None	None	Out

Solutions:

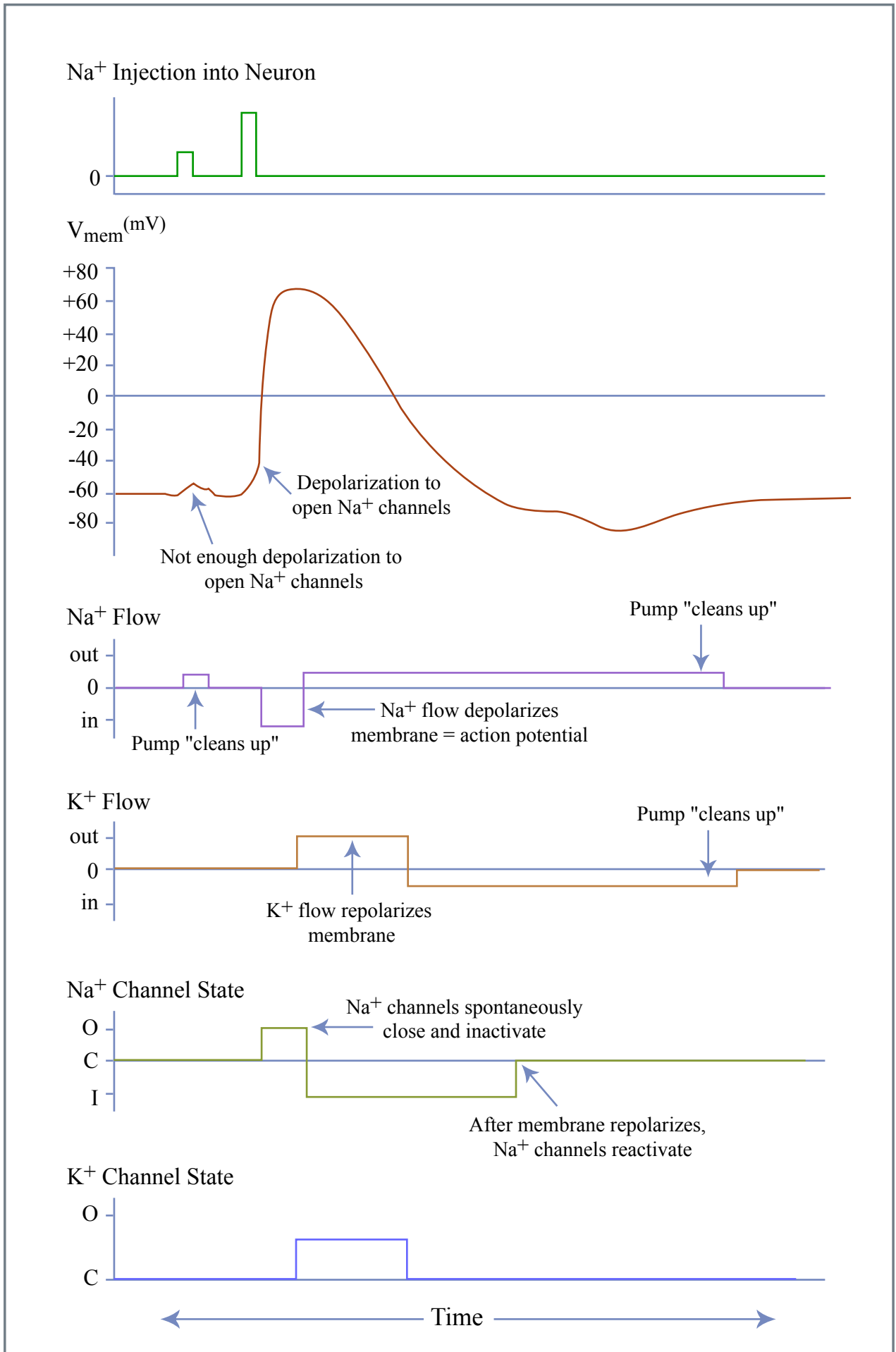


Figure by MIT OCW.

b)

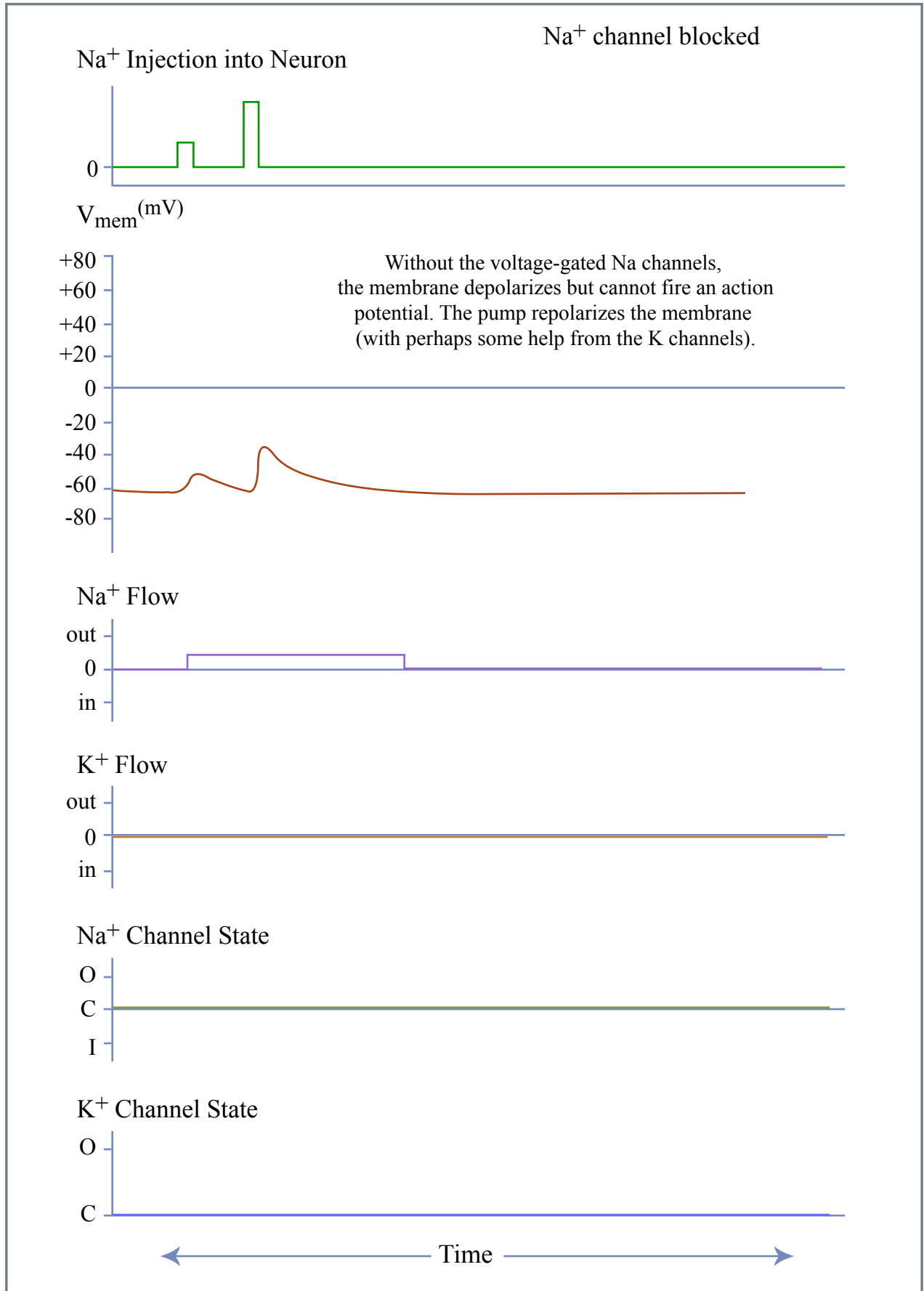


Figure by MIT OCW.

c)

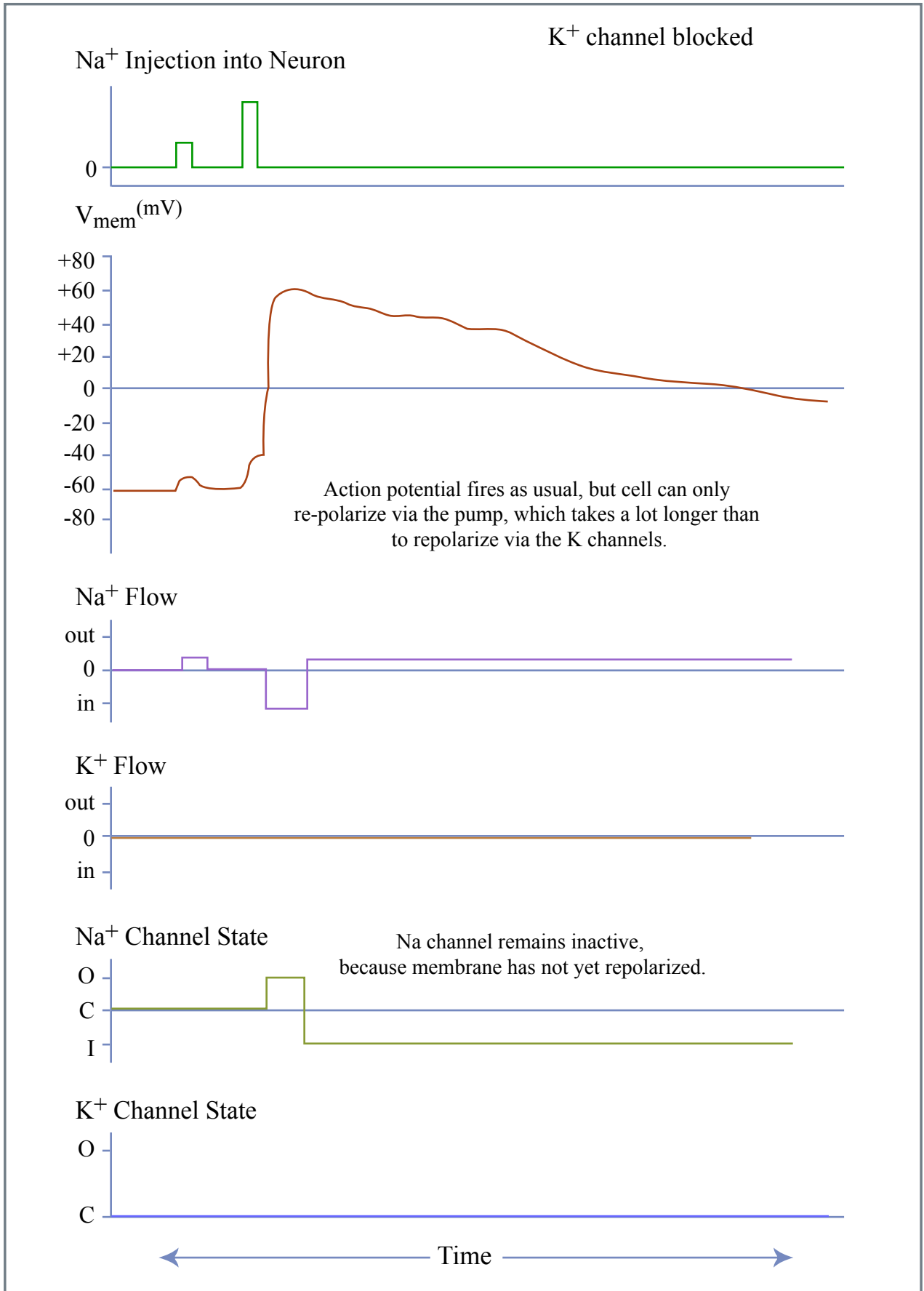


Figure by MIT OCW.