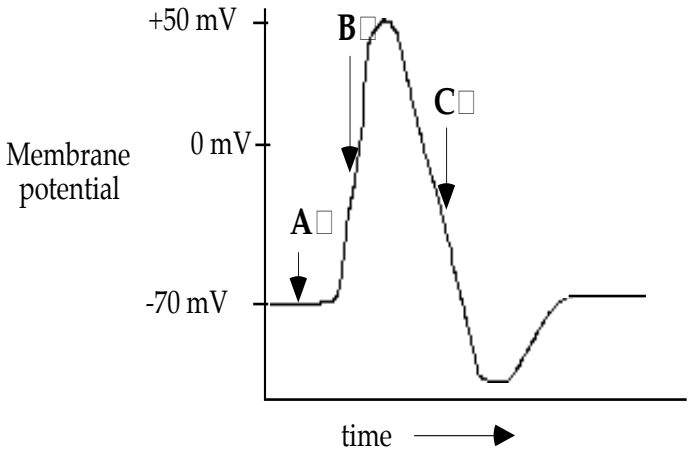
MIT Department of Biology
7.013: Introductory Biology - Spring 2005
Instructors: Professor Hazel Sive, Professor Tyler Jacks, Dr. Claudette Gardel

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:

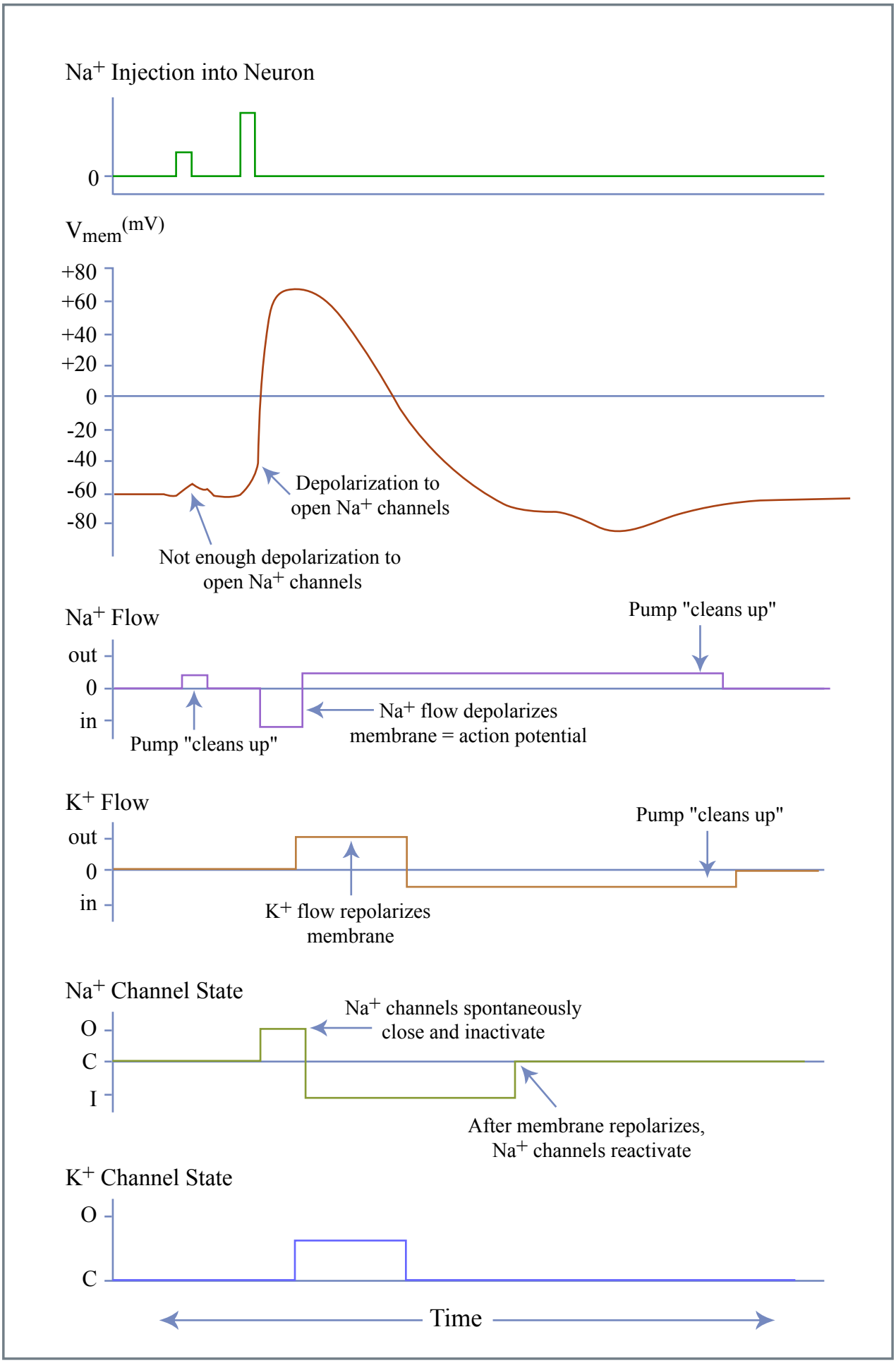


Figure by MIT OCW.

b)

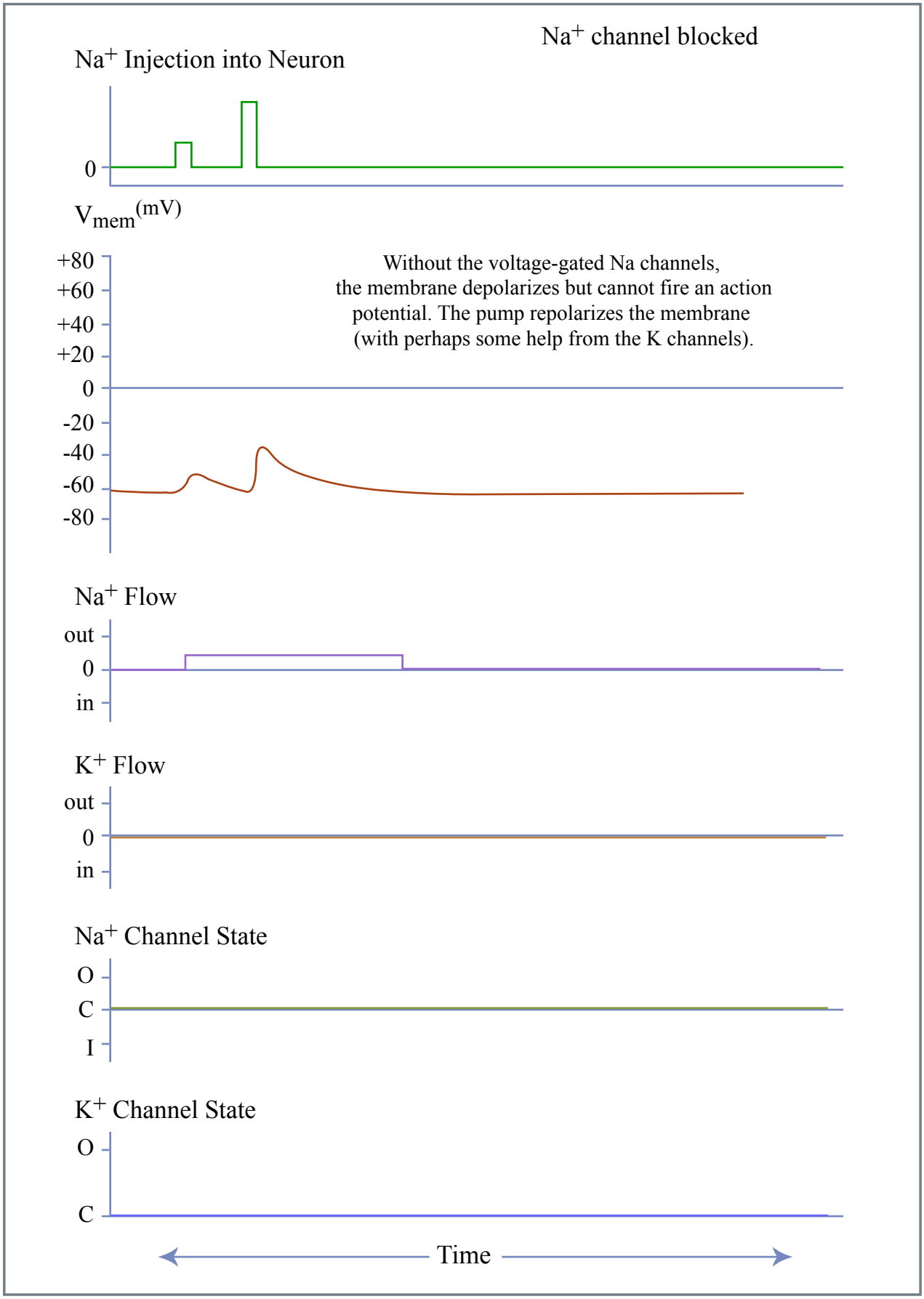


Figure by MIT OCW.

c)

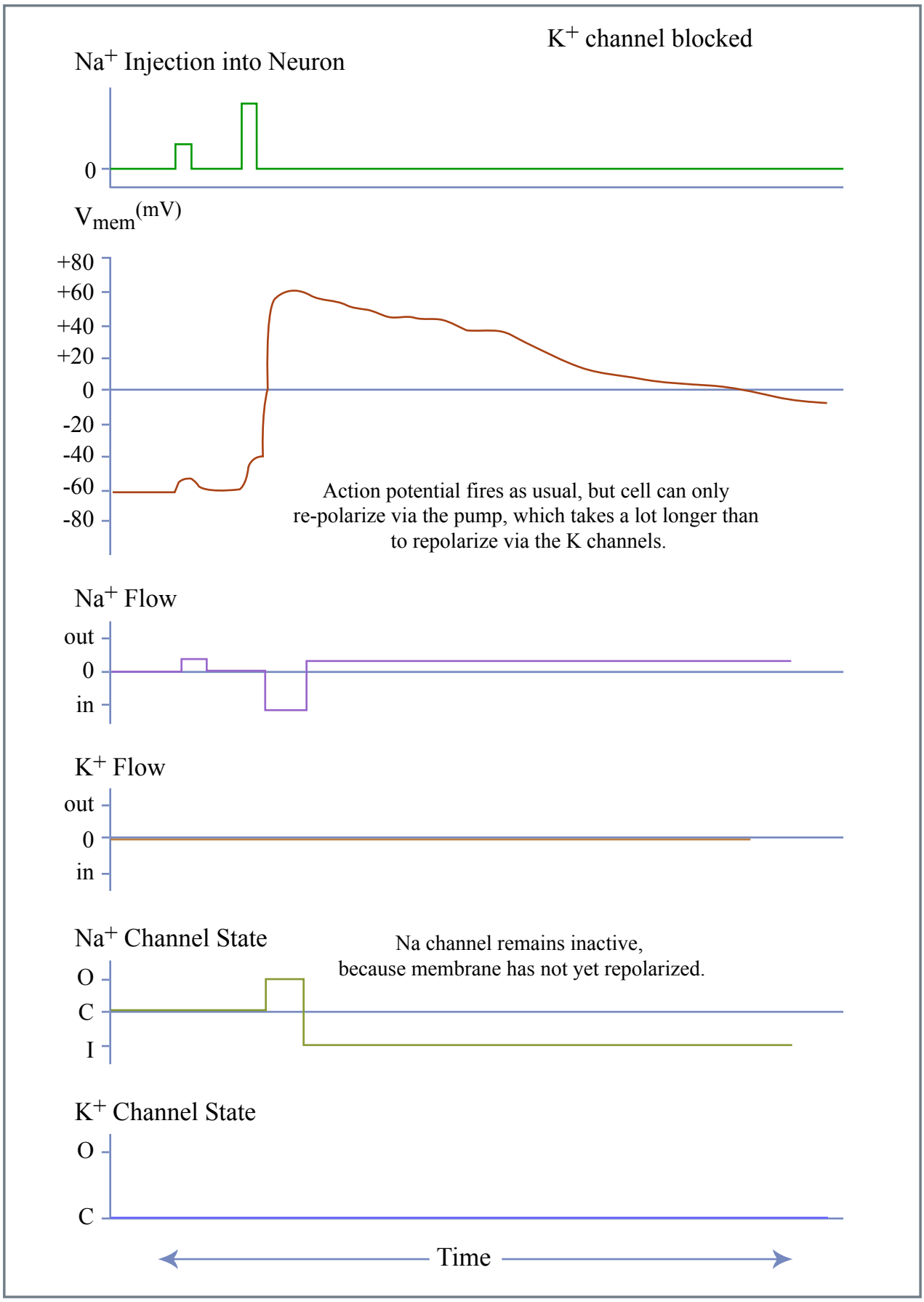


Figure by MIT OCW.