The figure below shows a graph of potential energy $U(x)$ versus position $x$ for a particle executing one-dimensional motion along the $x$ axis. The total mechanical energy of the system is indicated by the dashed line. At $t = 0$ the particle is somewhere between points A and G. For later times, answer the following questions.

a) At which point will the magnitude of the force be a maximum?

b) At which point will the kinetic energy be a maximum?

c) At how many of the labeled points will the velocity be zero?

d) At how many of the labeled points will the force be zero?