

Name:	Signature:
Department:	Number:

- 1) (25 points) A particle of mass 2 kg moves along the x axis through a region in which the potential energy $U(x)$ varies as shown in the plot given below. When the particle is at $x = 2$ m its velocity is -2 m/s.
- Calculate the restoring force acting on the particle at $x = 4$ m.
 - Calculate the total energy of the particle.
 - Calculate the velocity at $x = 7$ m.

