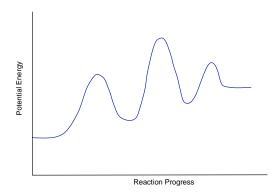
## Potential Energy Diagrams

1. Consider the following potential energy diagram for the reaction  $\mathsf{A}+\mathsf{B}\to\mathsf{P}$ 



- a) How many reaction steps?
- b) How many intermediates?
- c) How many transition states?
- d) Which is the rate determining step?
- e) Which is the fasted step in the forward reaction?
- f) Which step has the smallest rate constant in the forward direction?
- g) Is the overall reaction endothermic or exothermic?
- h) What is the difference between an intermediate and a transition state?
- i) How many elementary reactions?