Temporal Logic and Model Checking

Write down temporal logic formulae that capture the meanings of the properties described in English below (p and q are atomic properties, i.e. properties of states). In each case say which logic you are using and briefly justify your choice.

(a) “on every path there is a point after which p is always true”  [5 marks]
(b) “from every state it is possible to get to a state where p is true”  [5 marks]
(c) “if p is true for 100 successive states then eventually q will be true”  [5 marks]
(d) “if p is true infinitely often along a path then so is q”  [5 marks]