

## 2006 Paper 12 Question 12

### Complexity Theory

Suppose that  $f(n)$  is a sensible function (you may like in some part of your answer to comment on what the term “sensible” might mean in this context), then show that the class  $DTIME(f(n))$  is strictly contained in  $DTIME(f(n)^4)$ .

[20 marks]