

**Name:** \_\_\_\_\_ **Student Number:** \_\_\_\_\_

**Department:** \_\_\_\_\_ **Signature:** \_\_\_\_\_

**Question.**(10 points) Let  $f(x) = x|x - 4| + x - 3$ . Find the absolute maximum and absolute minimum values of  $f$  on  $[2, 5]$ . (Explain your work in detail to receive full credit.)