Math101 Term191
Sec17 Quiz 1

Name	ID	Sr

Instruction: CIRCLE one answer and SHOW all your work to get full mark

Q1) Which of the following functions

$$f(x)=\frac{\ln(x^2-1)}{x-5}\ ,\quad g(x)=\frac{x^4-1}{x-1}\ ,\quad h(x)=\frac{\frac{1}{x}-3}{x^2+3x-4}$$

has a vertical asymptote at $x=1$

a) $f(x)$ only

b) $g(x)$ only

c) $h(x)$ only

d) $f(x)$ and $g(x)$ only

e) $f(x)$ and $h(x)$ only

f) $g(x)$ and $h(x)$ only

g) $f(x)$, $g(x)$ and $h(x)$

Q2) $\lim\limits_{x\to 2^-}\frac{|x-1|+|x-2|+x^2-5}{|x^2+x-6|}=$

a) $\frac{6}{5}$

b) $\frac{2}{5}$

c) $\frac{4}{5}$

d) $-\frac{4}{5}$

e) $-\frac{2}{5}$

Q3) $\lim_{x\to 1} \frac{\sqrt{x^2+3x} - \sqrt{6x-2}}{\sqrt{7+2x} - 3} =$

a) $\frac{5}{4}$

b) $\frac{5}{2}$

c) $-\frac{3}{4}$

d) $-\frac{5}{2}$

e) $\frac{3}{4}$

Q4) $\lim_{x\to 3} \left([\![3 - x]\!] + [\![x + 2]\!] \right)$

a) is equal to 6

b) is equal to 4

c) is equal to 3

d) is equal to 5

e) does not exist