MAC 2311 Hybrid Calculus I

Name Quiz # 10 **4.1-4.2** Take-Home. Show all your work.

1. Find the absolute Maximum and Minimum of $f\left(x\right)=x^{3}-2x^{2}-5x+6$ on [0,3]

Absolute Max: \_\_\_\_\_\_, Absolute Min: \_\_\_\_\_\_\_\_.

2. Find the critical value(s) of $g\left(x\right)=\frac{x-1}{x^{2}-x}$ .

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Find the local maximum and minimum value(s) of $f\left(x\right)=3-2x^{2}+x^{4}$ using:

(a) the 1st derivative test

Answer(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(b) the 2nd derivative test

 Answer(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 4. Find the inflection point(s) of$ f\left(x\right)=\frac{x}{x^{2}+1} $, if any. Check for concavity change.

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