Calculus II - Fall 2014 - Mr. Clontz - Quiz 05
Fill in the circle for the correct answer for each of the following problems.

Name: _____ 9am / 10am

1. (10 points) Find the radius of convergence for the series $\sum_{n=0}^{\infty} \frac{2n\,(x-1)^n}{5^{n+1}}$

- ◯ $R=2$
- ◯ $R=\frac{1}{2}$
- ◯ $R=5$
- ◯ $R=\frac{1}{5}$
- ◯ None of these.

2. (10 points) Find a power series representation for $\ln(1+x)$.

- ◯ $\sum_{n=0}^{\infty} \frac{(-1)^n x^{2n}}{(2n)!}$
- ◯ $\sum_{n=0}^{\infty} \frac{x^n}{n!}$
- ◯ $\sum_{n=0}^{\infty} \frac{x^{n+1}}{n+1}$
- ◯ $\sum_{n=0}^{\infty} (-1)^n x^{2n+1}$
- ◯ A different series. (Write your answer for credit.)

3. (5 points) Find the Maclaurin Series for $f(x)=e^x$.

- ◯ $\sum_{n=0}^{\infty} \frac{(-1)^n x^{2n}}{(2n)!}$
- ◯ $\sum_{n=0}^{\infty} \frac{x^n}{n!}$
- ◯ $\sum_{n=0}^{\infty} \frac{x^{n+1}}{n+1}$
- ◯ $\sum_{n=0}^{\infty} (-1)^n x^{2n+1}$
- ◯ A different series. (Write your answer for credit.)