

Name: _____

Math 152 Calculus II – Crawford

Quiz 3

30 October 2018

Books, notes (in any form), and calculators are not allowed. *Show all your work.* Good Luck!

1. (4 pts) Determine whether the following series is convergent or divergent. If it is convergent, find the sum.

$$\sum_{n=1}^{\infty} 2^{n-1} 5^{-n}$$

2. (11 pts) Determine whether the following series converge or diverge. [Show all your work and clearly indicate any tests that you use.]

(a). $\sum_{n=1}^{\infty} \sqrt{\frac{2n^2 + 4n}{9n^2 + 1}}$

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Determine whether the following series converge or diverge. [Show all your work and clearly indicate any tests that you use.]

(b). $\sum_{n=1}^{\infty} n^2 e^{-n^3}$

(c). $\sum_{n=1}^{\infty} \frac{2n^2 - 3n}{(1 + n^2)^2}$