April 26,2016

QUIZ♯4 Math102-sec .

Net Time Allowed: 25 minutes

Name: **ID ♯ :** **Serial ♯:**

Exercise1:(05 points)

Determine whether the series $\sum_{n=1}^{\infty} \frac{(-1)^n + 2^n}{3^n}$, is convergent or divergent. If it is convergent, find its sum. (**Justify clearly your answer!**)

Exercise2:(05 points)

Test the series: $\sum_{n=1}^{\infty} (\frac{1}{5})^{\frac{1}{n^5}}$. **Justify clearly your answer!**

Exercise3:(05 points)

Let $\{S_n\}$ be the sequence of partial sums of the series $\sum_{n=1}^{\infty} \frac{1}{n^2+3n+2}$.

a)- Find a formula for S_n.

b)- Use part (a) to find the sum S of the series.