4. [12 points]   The following three parts of this problem have to do with the convergence of series.

(a) [4 points of 12] For $\Sigma \frac{5}{1+n+e^n}$:

   i. [2 points of 4] What is a good test to determine the convergence of this series? Explain, in 1–2 sentences only, why this is.

   ii. [2 points of 4] Determine if this series converges, diverges, or if we can't tell.

(b) [4 points of 12] For $\Sigma \frac{n}{n^2+5}$:

   i. [2 points of 4] What is a good test to determine the convergence of this series? Explain, in 1–2 sentences only, why this is.

   ii. [2 points of 4] Determine if this series converges, diverges, or if we can't tell.