Math 19B Group Work

Directions: Work with your group to determine if these series converge absolutely, conditionally, or are divergent. Think carefully about what test(s) to use. If there are multiple ways to test for convergence ask yourself which is the easiest. Make sure to indicate which test you use and be sure to verify the hypothesis of the test.

1. $\displaystyle\sum_{n=1}^{\infty}(-1)^n\frac{n}{n^2+1}$
2. $\displaystyle\sum_{n=1}^{\infty}n^2e^{-n^3}$
3. $\displaystyle\sum_{n=1}^{\infty}\frac{n!}{e^{n^2}}$
4. $\displaystyle\sum_{n=1}^{\infty}\frac{5^n}{3^n+4^n}$
5. $\displaystyle\sum_{n=1}^{\infty}\frac{(-2)^{2n}}{n^n}$
6. $\displaystyle\sum_{n=1}^{\infty}\frac{\sin(n)}{1+n^2}$
7. $\displaystyle\sum_{n=1}^{\infty}\frac{n^2+1}{5^n}$
8. $\displaystyle\sum_{n=1}^{\infty}\left(\frac{n}{n+1}\right)^{n^2}$
9. $\displaystyle\sum_{n=1}^{\infty}(\sqrt[n]{2}-1)$