Do the following series converge conditionally, converge absolutely, or diverge?

1. $\sum_{n=4}^{\infty}(-1)^{n+1} \frac{n}{n^{2}-1}$
2. $\sum_{k=1}^{\infty}(-1)^{k+1} \frac{k^{2}}{k^{2}+1}$
3. $\sum_{k=1}^{\infty} \frac{\cos (k)}{k^{4}+1}$
