Student: Arfaz Hossain	**Instructor:** Muhammad Awais	**Assignment:** HW-6 [Sections 10.4, 10.5 & 10.6]
Date: 03/07/22	**Course:** Math 101 A04 Spring 2022	

16. Does the series $\sum_{n=1}^{\infty} (-1)^{n+1}(0.5)^n$ converge absolutely, converge conditionally, or diverge?

Choose the correct answer below and, if necessary, fill in the answer box to complete your choice.

- **A.** The series converges absolutely since the corresponding series of absolute values is a p-series with p = ____.
- **B.** The series converges conditionally since the corresponding series of absolute values is a geometric series with r = ____.
- **C.** The series diverges per the nth-Term Test.
- **D.** The series converges absolutely since the corresponding series of absolute values is a geometric series with r = 0.5.
- **E.** The series converges conditionally since the corresponding series of absolute values diverges, but the series passes the Alternating Series Test.