KFUPM | Term 181 | Date: 11/12/2018

Mathematics & Statistics | MATH 102 | Duration: 40 minutes

Class Test 3

Name: | ID #: | Section: 4 | Serial #:

1. $a_n = \left\{\frac{n}{n-m}\right\}^{\frac{n}{k}}$ is (divergent / convrgent to _____)

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2. $\sum_0^\infty 2^{2n+1}\cos\left(\frac{2n+1}{2}\pi\right)3^{-n}$ is (abs. conv. / cond. conv. / div.) using _____ test.

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3. $b_k = (-1)^k(1-\frac{1}{k})$ is (divergent / convrgent to _____)

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4. $\sum \ln\left(\frac{1}{n}\right)$ is (abs. conv. / cond. conv. / div.) using _____ test.

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5. $\sum_0^\infty \frac{4^k\, k!k!}{(2k)!}$ is (abs. conv. / cond. conv. / div.) using _____ test.

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6. $\sum \frac{(-1)^{n+1}(x+2)^n}{n2^n}$ has a center = ____ , conv. Interval = _____ , and R = __.

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7. Show that $\sum_0^\infty \frac{(-1)^k\, \pi^{2k-1}}{2^{2k+1}(2k)!} = 0$.

With My Best Wishes