KFUPM | Term 162 | Date: 14/5/2017
Mathematics & Statistics | MATH 102 | Duration: 25 minutes

Quiz# 6

Name: ID #: Section:

Q1. The power series representation of $\frac{1}{3+x^2}$

Q2. The series $\sum_{n=1}^{\infty} \frac{(-2)^{n+1}}{n+5^n}$ is

(a) Absolutely convergent
(b) Divergent by the integral test
(c) A convergent *p*-series
(d) A divergent geometric series
(e) Conditionally convergent

Q3. The interval of convergence of the power series $\sum_{n=0}^{\infty} \frac{(-5)^n x^n}{\sqrt{n+4}}$

Q4. The series $\sum_{n=2}^{\infty} \frac{\sqrt{n}+\ln n}{n^2+1}$

a. converges by the limit comparison test with $b_n = \frac{1}{n^{3/2}}$

b. diverges by the limit comparison test with $b_n = \frac{1}{\sqrt{n}}$

c. diverges by the integral test

d. diverges by the comparison test with $b_n = \frac{1}{\sqrt{n^2+1}}$

e. diverges by the comparison test with $b_n = \frac{1}{\ln n}$