KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS AND STATISTICS
MATH 102 - QUIZ 6

Name:
Student ID #:

Question 1. Determine whether the sequence $a_n = \sqrt{n} \sin \dfrac{1}{\sqrt{n}}$ converges or diverges.

Question 2. Find the 20th term of the recursively defined sequence $a_1 = -4$ and $a_{n+1} = \dfrac{2a_n + 4}{\sqrt{a_n + 5}}$.

Question 3. Find the sum of the series $\displaystyle\sum_{n=1}^{\infty} \left(\dfrac{1}{2n-1} - \dfrac{1}{2n+1} \right)$.

Your Solution.