

King Fahd University Of Petroleum and Minerals
Department of Mathematical Sciences

St Name:

Math 102 – 16

Serial #:

St ID #:

Quiz # 5

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Q1 : Classify the following series as absolutely convergent, conditionally convergent or divergent

a) $\sum_{k=1}^{\infty} (-1)^k \frac{(2k-1)!}{3^k}$

b) $\sum_{k=1}^{\infty} (-1)^{k+1} \frac{k!}{(2k-1)!}$

c) $\sum_{k=1}^{\infty} (-1)^{k+1} \frac{3^{2k-1}}{k^2 + 1}$

d) $\sum_{k=1}^{\infty} (-1)^k \frac{(k+2)}{k(k+3)}$

Q2 : Find the interval of convergence and the radius of convergence of the series

$$\sum_{k=1}^{\infty} (-1)^k \frac{x^k}{3^k (k+1)}$$