KFUPM – Department of Mathematics and Statistics – Term 161

MATH 102

QUIZ # 6 Code 1 (Duration = 20 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (4 points) Find the radius and the interval of convergence of the power series $\sum_{n-1}^{\infty} \frac{(x+2)^n}{n3^n}$

Exercise 2 (3 points)

Find the sum of the series $\sum_{n=0}^{\infty} \frac{(-\pi^2)^n}{(2n+1)(16)^n}$.

Exercise 3 (3points)

Find the coefficient of x^3 in the MacLaurin series of the function $f(x) = (\sin x)Ln(1+x)$

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MATH 102

QUIZ # 6 Code 2 (Duration = 20 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (4 points) Find the radius and the interval of convergence of the power series $\sum_{n-1}^{\infty} \frac{(x+1)^n}{(n+1)2^n}$

Exercise 2 (3points) Find the sum of the series $\sum_{n=0}^{\infty} \frac{(-\pi^2)^n}{(2n+1)!4^n}$.

Exercise 3 (3points)

Find the coefficient of x^3 in the MacLaurin series of the function $f(x) = (\sin x)\cos x$

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MATH 102

QUIZ # 6 Code 3 (Duration = 20 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (4 points)

Find the radius and the interval of convergence of the power series $\sum_{n-1}^{\infty} \frac{(x-1)^n}{n2^n}$

Exercise 2 (3 points) Find the sum of the series $\sum_{n=0}^{\infty} \frac{(-4)^n(\pi^2)^n}{(2n)!}$.

Exercise3 (3points) Find the coefficient of x^3 in the MacLaurin series of the function

$f(x) = (\sin x)\tan^{-1} x$

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MATH 102

QUIZ # 6 Code 4 (Duration = 20 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (4 points) Find the radius and the interval of convergence of the power series $\sum_{n-1}^{\infty} \frac{(x+5)^n}{(n+1)2^n}$

Exercise 2 (3 points) Find the sum of the series $\sum_{n=1}^{\infty} \frac{(-2)^n}{n3^n}$.

Exercise 3 (3points)

Find the coefficient of x^3 in the MacLaurin series of the function $f(x) = e^{x+1}\cos x$