King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 202 (112) - Quiz 3

Name: ID: Serial No.:

1. Use variation of parameters method to find a particular solution of

$$(x^2-1)y'' - 2xy' + 2y = (x^2-1)^2$$

given that a complementary function is $y_c = c_1 x + c_2(1+x^2)$.

2. The solution of the Cauchy-Euler DE is given by

$$y = c_1 x^2 + x^2(c_2 \cos(\ln x) + c_3 \sin(\ln x))$$

Find the differential equation itself.