## $QUIZ\sharp 3$ Math 102-sec 31.

## Net Time Allowed: 35 minutes

Name: **ID** #: Serial #:

Exercise1:(05 points)

Evaluate  $\int x^2 (\ln x)^2 dx$ (Justify clearly your answer!)

Exercise2:(05 points)

Write out the form of the partial fraction decomposition of

$$F(x) = \frac{2x^2 + 7}{x^3(2x - 1)(x^2 + 25)^2} \ . \ \ (\textbf{Do not evaluate the constants !})$$

Evaluate  $\int_0^{\sqrt[4]{\frac{\pi}{4}}} t^3 \sec^4(t^4) \tan^4(t^4) dt$  Justify your answer!